

CADTH Horizon Scan

An Overview of Direct-to-Patient Virtual Visits in Canada

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ISSN: 2563-6596

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Funding: CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

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Key Messages

- Direct-to-patient virtual visits are a way of providing health care to patients in their location of choice, using technology (e.g., phone, text messaging, video conferencing).
- The use of virtual visits has the potential to overcome many of the barriers associated with in-person care, including improved access, convenience, and cost savings.
- Many communities that are underserved by in-person care also face barriers to virtual care. There is a risk that current health inequities will be exacerbated if barriers such as, for example, reliable access to an internet-connected device, technology literacy, and language barriers are not addressed.
- Virtual visits have been used safely and effectively for many types of health care visits.
- There is a lack of evidence on the cost-effectiveness of virtual visits.
- Regulations regarding the provision of virtual visits are needed to uphold equitable access to publicly funded health care as mandated by the *Canada Health Act*.

Abstract

The purpose of this report is to provide an overview of virtual visits – including a description of how virtual visits are delivered and how virtual visits are used – in Canada, including potential benefits and challenges.

A virtual visit is an electronic exchange whereby 1 or more health care providers delivers health care services to a patient in a second location using videoconferencing, secure messaging, or audio digital tools (e.g., telephone). Virtual visits have the potential to improve the delivery of health care in Canada. Potential improvements include cost savings and improved access.

A research information specialist completed a literature search of relevant databases and grey literature. Search results were screened and potentially relevant full-text publications were reviewed by 1 author. Included literature was synthesized by 1 author and reviewed by 2 internal reviewers and 1 external reviewer.

At the time of publishing, virtual visits were recommended in all provinces and territories in Canada, when possible, to reduce close contact between people to limit community spread of COVID-19. Jurisdictions differ in the approaches being taken to deliver virtual visits. Virtual visits in the public health care system and the private delivery of virtual visits are described. Recommendations regarding the types of conditions that can be addressed using virtual visits, costs, and administration issues, and evidence regarding safety and effectiveness, are discussed.

Operational issues have been raised regarding the implementation of virtual visits. Costs and payment issues, training, and licensure and quality of care have been identified as main barriers to the successful uptake of virtual visits. Clinician-patient relationships, technology requirements, and privacy, social, and ethical considerations have also been raised.

Virtual visits have the potential to improve the delivery of health care. Issues related to standards, licensure, equity, quality care provision, payment, and medical education remain to be addressed.

Methods

This report presents an overview of information related to direct-to-patient virtual visits, a description of some of the published clinical studies, and a summary of some important considerations related to the potential implementation of technology. This report is not intended to provide recommendations for or against the use of virtual visits.

A limited literature search was conducted by an information specialist on key resources including MEDLINE via OVID, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The main search concept was virtual visits. No filters were applied to limit the retrieval by study type. Comments, newspaper articles, editorials, and letters were excluded. Where possible, retrieval was limited to the human population. The search was also limited to English-language documents published between January 1, 2018 and November 11, 2020.

Regular alerts updated the search until project completion; only citations retrieved before February 22, 2021 were incorporated into the analysis.

One author screened the literature search results and reviewed the full text of all potentially relevant studies. For studies examining the effectiveness and suitability of virtual visits, studies were considered for inclusion if the intervention was virtual visits and a comparator group was included. Grey literature reports were included when they provided additional information to that available in the published studies. For information on other aspects of direct-to-patient virtual visits, information from the grey literature and from other published information was selected as relevant.

Peer Review

A draft version of this report was reviewed by a clinical expert.

Background

Virtual care is a model of care where a practitioner provides health care to a patient in another location using an electronic medium that includes 1 or more of videoconferencing, secure messaging (text), or audio digital tools (e.g., telephone). Virtual care can improve health care by empowering Canadians to manage how and where they securely communicate with health care providers.¹ Improved access to virtual care has the potential to reduce wait times, increase referral speeds, and improve health care outcomes.¹ Although the technology needed to provide virtual visits exists and most Canadian households have internet access, before the emergence of the novel coronavirus disease identified in 2019 (i.e., COVID-19), progress toward the widespread adoption of virtual visits had been slow.² The COVID-19 pandemic has accelerated the uptake of virtual health care across the Canadian health system, as in-person visits and procedures have been limited. Virtual care has made it possible for practitioners to continue to deliver many health services while physically distancing to limit the further spread of COVID-19.

Even before the pandemic, the use of virtual visits was on the rise in Canada. The Canadian Medical Association's Virtual Care Task Force reported on 2014 data collected by the

Canadian Institute for Health Information that indicated there were 411,778 virtual visits held by videoconference in 2014.² The Virtual Care Task Force also noted that, from 2018 to 2019, the OTN—Ontario Telemedicine Network reported there were more than 1 million video visits.² This number is expected to continue to grow exponentially larger due to the rapid increased reliance on virtual care in response to the COVID-19 pandemic.

Current Canadian guidelines and recommendations on virtual care have been compiled by various organizations including the Royal College of Physicians and Surgeons of Canada³ and Health Quality Ontario (now Ontario Health).⁴ Details regarding the approaches taken to virtual visits are presented in the Availability of Virtual Visits in Canada section of this document.

What Are Virtual Visits?

Virtual visits, also called direct-to-patient virtual care or e-visits, are defined as “an electronic exchange via videoconferencing, secure messaging, or audio digital tools, where one or more health care providers deliver health care services to a patient.”⁴ Virtual visits consist of synchronous or asynchronous virtual interactions between health care providers and their patients.¹

Virtual visits offer patients a way of connecting with health care providers when face-to-face visits are being limited (e.g., during the COVID-19 pandemic), when it is difficult for patients to get to appointments (e.g., when patients live far from their health care providers), or when patients face barriers to getting to and from appointments). Even where barriers to accessing health care aren't present, virtual visits can offer increased convenience.

Scope of This Bulletin

This bulletin focuses on clinical applications of direct-to-patient virtual visits as they affect the care of patients in a location of their choosing. It does not extend to hosted virtual visits (where patients travel to a site that hosts the virtual health care encounter, potentially with clinical support services available at the site). It is intended as an overview of the virtual visit, its implementation issues, its effectiveness, and its use in Canada, and not as a comprehensive review of the literature. Discussion of issues such as cyber security, compensation and fee structure, and etiquette of virtual visits are important considerations. However, they are beyond the scope of this bulletin.

The Technology

A virtual visit is a type of virtual health care encounter conducted using 1 or more of the modalities that follow.

Video Visits

A video visit is a synchronous (also called real-time or live) videoconference between a health care provider and a patient. During a direct-to-patient video visit, the patient can be at home or in another chosen location. Video visits are suitable for back-and-forth communications of detailed conversations. They can be conducted via web browser or app from a patient's home computer or mobile device.⁵

Video visits conducted with a patient at a host site (i.e., hosted video visit) that may be supported by a health care professional are also considered video visits but are not discussed in this review.⁴

Secure Messaging

Secure messaging has been described as:

...an asynchronous, written clinical encounter, typically without any visual input (except for optional image attachments), accessible by patients via web browser or mobile application. Secure messaging provides security safeguards, like patient authentication, that are not available with regular email and other unsecure forms of communication.⁴

Secure messaging includes “store and forward” technology, where messages, images, or data are collected at 1 point in time and interpreted or responded to later.⁵ It is suitable for the back-and-forth communication of simple messages and requests.⁴ Patient portals can facilitate this type of communication between provider and patient through secure messaging.⁵ Secure messaging was shown to enhance efficiency, access to care, and continuity of care in the 2015 eVisit Primary Care pilot study conducted in Ontario.

Audio Visits

An audio visit is a type of synchronous visit that can be conducted by telephone or using audio digital tools and without video or text messaging.

Availability of Virtual Visits in Canada

Interest in virtual visits in Canada is driven by the need to connect people who have challenges travelling (e.g., due to limited mobility or limited access to transportation) and those who live in rural, remote, and isolated locations with limited availability of health care practitioners.

Although Canada was an early pioneer of virtual visits, widespread adoption has been slow to roll out. Some jurisdictions have been implementing virtual visits for several years. In 2018, 3% of Canadians surveyed for the Access Health Survey indicated they had used synchronous video consultations, while 6% had used email or messaging to consult with their regular doctor.¹ In contrast, most people in Canada expressed wanting to use email (63%), text messaging or app (58%), or video (44%) to communicate with their regular doctor.¹ With few available publicly funded options for virtual visits in Canada, private services outside of provincial medical care plans have proliferated. These have been criticized for being inconsistent with the principles of the *Canada Health Act*.²

With the declaration of the COVID-19 pandemic, the adoption of virtual care in the publicly funded health care system was fast-tracked because of a need to physically distance. For example, in Ontario, virtual visits accounted for 71.1% of all primary care visits during the first 4 months of the pandemic compared with 1.2% of all primary care visits during the same period in 2019.⁶ Between January and April 2021, virtual visits accounted for 38% of all the most recent patient-reported visits (52% for most recent visits with family physicians).⁷ All provinces and territories have recommended the use of virtual visits, when possible, to reduce

close contact between people and thus limit community spread of COVID-19.⁸ There is little consistency between provincial and territorial jurisdictions, however, regarding government guidance to implement virtual visits.⁸ Government guidance differs regarding virtual visit service providers and platforms to be used, billing processes, and types of health care eligible for a virtual visit. Federally, the government of Canada announced new funding in May 2020 to “create digital platforms and applications, improve access to virtual mental health supports, and expand capacity to delivery health care virtually.”⁹

Virtual Visits in the Public Health Care System

Please note that the information in this section is, to CADTH’s knowledge, current as of publication.

Health care providers across Canada have been advised by their respective provinces and territories to provide virtual visits, when possible, during the COVID-19 pandemic. Based on the available information, this is occurring in the provinces as described here.

Alberta

Technologies approved for clinical use include AHS Zoom and Connect Care.¹⁰ AHS Zoom by Zoom Video Connections Inc. (zoom.us) was offered by Alberta Health Services (AHS) in response to the COVID-19 pandemic to enable video visits between AHS clinicians and physicians with AHS appointments and privileges, and their patients.¹¹ Connect Care is available through the AHS patient portal, where providers (physicians and clinical support staff) can send and receive patients secure messages 90 days before or after a scheduled visit. Messages are linked with the relevant patient chart and any associated questionnaires, images, or documents attached. Messages can also be attached to test results.¹⁰

British Columbia

The position of the College of Physicians and Surgeons of British Columbia is that its role is to regulate physicians, not technology.¹² Therefore, the College provide practice standards regarding virtual visit use but does not specify a platform to use.¹² The Provincial Health Services Authority Office of Virtual Health, and the Ministry of Health endorse the use of Zoom for Healthcare for delivery of virtual visits and provides clinicians across the province with access to the service.¹³ Access Virtual (accessvirtual.ca) is a platform available to support virtual visits in British Columbia.¹⁴ Those who live within the Island Health catchment area (Vancouver Island, the islands in the Salish Sea and the Johnstone Strait, and the mainland communities north of Powell River and south of Rivers Inlet) can access non-urgent medical care through the MyVirtualVisit website or mobile app provided by Island Health (islandhealth.ca).¹⁵ Medically necessary virtual visits are covered for eligible residents of British Columbia by the province’s Medical Services Plan.¹⁶

Manitoba

Manitoba initially responded to the pandemic by providing guidance regarding platforms that would be preferred (IT-supported and secure) or acceptable short-term solutions (i.e., not necessarily supported or secure) while the province worked toward a uniform solution.¹⁷ It is unclear how much progress has been made toward identifying a uniform provincial solution. Residents of Manitoba experiencing mild to moderate anxiety as a result of the pandemic were able to access 2 free sessions of video or telephone virtual counselling as of October 13, 2020 (ongoing as of publication) through AbilitiCBT by Morneau Shepell.¹⁸

Newfoundland and Labrador

Doctors in Newfoundland and Labrador are permitted to bill the province for virtual care visits of up to 40 visits per day.³ Virtual visits can be conducted via audio (telephone), video (secure video conferencing), or text (via mobile phone or secure messaging application).¹⁹ The Cisco Jabber platform for instant messaging, audio calls, and video calls is the recommended platform and its use is covered through the Newfoundland and Labrador Centre for Health Information.²⁰ Cisco Jabber reports that it meets privacy and security standards (although the standards are not specified).²⁰ A limited number of eligible virtual visits per day using Medcurio (Medcurio.ca), a private virtual visit service, are funded by the Newfoundland and Labrador Medical Care Plan during the COVID-19 pandemic.²⁰

New Brunswick

At the time of publishing, there does not appear to be a platform provider offering publicly funded virtual visits in New Brunswick.

Northwest Territories

Physicians outside of the Northwest Territories (NWT) who do not have privileges and credentials with the NWT Social Services Authority are temporarily able to provide telemedicine to patients in the NWT if referred by an NWT physician during the COVID-19 pandemic.²¹ Platforms currently being used to conduct virtual visits are telephone, telemerge (telemerge.ca) and Zoom for Healthcare.²² To make an appointment, patients call the centre or clinic they would normally visit to book an appointment.²²

Nova Scotia

Regulations regarding who may practice medicine in the province were relaxed due to the COVID-19 pandemic. Doctors licensed in Nova Scotia no longer require approval from the College of Physicians & Surgeons of Nova Scotia to practice telemedicine (including direct-to-patient virtual visits), physicians outside of Nova Scotia who are licensed in Canada can provide telemedicine in Nova Scotia if permitted by their licensing body, and telemedicine provided in Nova Scotia is regulated by each physician's licensing College.²³ Doctors are advised to use 1 of the virtual care solutions the province has made available on an interim basis during the COVID-19 pandemic.²⁴ It is not clear if this will be extended as the pandemic continues and, with it, the need to limit close contact between individuals (a review of compensation for virtual care was published in March, 2021).²⁵ Stand-alone platform options available for virtual visits in Nova Scotia are Zoom for Healthcare and QHR Medeo. Platforms integrated with the Med Access EMR are Telus EMR Virtual Visit, Health Myself, and QHR Accuro.

Doctors using other platforms for synchronous virtual care have been encouraged to transition to 1 of the recommended platforms.

Nunavut

Doctors in Nunavut — who are paid per diem rates for services — are encouraged to provide virtual visits when possible.³

Ontario

A specific platform hasn't been mandated for the conducting of virtual visits in Ontario. However, the OTN—Ontario Telemedicine Network recommends technical and security standards to guide platform selection²⁶ and physicians are encouraged to use platforms by 1

of the 2 vendors of record, Novari Health and Think Research, both of which are funded by the Government of Ontario.

VirtualCare by Think Research (thinkresearch.com/ca/products/virtualcare/) supports virtual visits between patients with an Ontario Health Insurance Plan (OHIP) card and health care providers through text messaging, audiovideo conferencing, and secure document sharing. It is adaptable to various workflows (e.g., scheduled or walk-in visits, discharge and follow-up visits) and can be integrated with the electronic health records systems in use in the seniors care sector (i.e., PointClickCare and MED e-care). Ontario Virtual Care Clinic using eVisit software by Novari Health (seethedoctor.ca) is intended as a virtual drop-in clinic to address simple, non-urgent health concerns and is not meant to replace usual care. Patients with a family doctor are still advised to seek care from their family doctors first. Service is available in French and English.

Prince Edward Island

Health care providers are directed to use the telephone or Zoom for Healthcare.²⁷ Zoom for Healthcare is available on Prince Edward Island (PEI) for virtual visits between patients and community-based physicians and nurse practitioners, mental health and addictions care providers, long-term care and home care providers, and primary care programs. Patients without a family physician can access care through pilot projects using Maple and Telemerge. A virtual care clinic by Maple (<https://app.getmaple.ca/login>) is covered until March 31, 2022 to improve access to care for PEI patients currently waiting on the provincial patient registry for a family doctor.²⁸ Patients must have a PEI health card and download the application to access care.

Quebec

Virtual care in Quebec includes telephone and video visits.²⁹ Doctors must be located in Quebec and licensed to practice medicine in the province, or be registered with the Quebec College of Physicians, to be able to provide telemedicine in Quebec.³⁰

Saskatchewan

The province of Saskatchewan allows patients the option of receiving virtual care by phone or by secure video visit during the COVID-19 pandemic.³¹

Pexip (pexip.com) is the Saskatchewan Health Authority's approved video visit software to be used for synchronous virtual visits.³² The use of Pexip is covered by the Medical Services Branch for residents of Saskatchewan with a valid Saskatchewan Health Services Card during the pandemic. In addition to supporting virtual visits, Pexip can be used to manage workflows (e.g., schedule visits to allow transition time between visits), can be integrated into existing tools (e.g., Microsoft Teams, Skype for Business, soon to be compatible with Epic), is customizable (e.g., branding), and secure (compliant with the *Health Insurance Portability and Accountability Act*, or HIPAA, and encrypted). Lumeca by Lumeca Health (lumeca.com) is a virtual visit platform available for patients who do not have a family doctor or who cannot reach their family doctor.³³ Audio and video visits can be hosted on Lumeca using web browsers or mobile apps. The list of Saskatchewan physicians seeing patients using Lumeca is available, so that patients can choose their physicians on a first-come, first-served basis or by appointment. Lumeca is secure, compliant with HIPAA and the *Personal Information Protection and Electronic Documents Act*, or PIPEDA, and data are encrypted.

Yukon

Patients in the Yukon are able to receive virtual care by phone or by video visit using the doxy.me (as in “Doc see me”) platform during the COVID-19 pandemic.³⁴ The platform supports physicians in hosting virtual video visits. The basic platform is freely available and additional features (e.g., high-definition video visits, audio-only calls, room passcode, text and email notifications, photo capture, group calling, screenshare, file transfer) are available for a cost for physicians and clinics who purchase a licence. Appointments are booked as usual with physicians’ offices; the list of physicians using the platform is provided on the Doxy.me website. Doxy.me is compliant with the *Personal Health Information Protection Act*, or PHIPA, and with PIPEDA, and features standard workflows (e.g., patient check-in and waiting room, patient queue, meeting history, browser notifications, synchronous text chat, and low-definition video visits).

Commercial Virtual Care Services

Private sector virtual care services offer virtual visits to customers for a fee. Fee structures include fee-per-visit paid by the individual (potentially reimbursed to the patient by provincial coverage), a monthly subscription paid by the individual, and central coverage through extended health benefits or provincial coverage.

The following summarizes the brand name, the provider, and the location where patients must reside to access the service (i.e., in Canada, a specific province, territory, or city) of many of the available commercial virtual care services available in Canada. The services are listed alphabetically, the information from this section drawn from the companies’ websites, and is, to CADTH’s knowledge, current as of publication.

[Access Virtual](#) by Equinoxe LifeCare is a Canadian service that provides access to virtual visits with family doctors and specialists (including mental health professionals).

- Location: available to residents of British Columbia
- Type of virtual visit: video
- Access: mobile app
- Monday to Friday 8:00 a.m. to 8:00 p.m., and weekends 9:00 a.m. to 5:00 p.m.
- Costs: centrally funded (i.e., provincial coverage) for all medically necessary appointments

[TELUS Health MyCare](#) by Telus Health

- Location: Available to residents of British Columbia, Alberta, Quebec, and Saskatchewan, and Ontario practitioners located in Canada; in the patient’s province, when required
- Type of virtual visit: video and audio visit with practitioner
- Access: website or mobile app; includes evenings and weekends
- Costs: subscription-based, pay-as-you-go payments, or centrally funded (i.e., provincial coverage or private insurance); doctors are paid a flat rate per appointment

[AbilitiCBT](#) by Morneau Shepell

- Location: Manitoba
- Type of virtual visit: video visit

- Costs: free to residents of Manitoba who are experiencing mild to moderate anxiety as a result of the pandemic

[Cloud DX Connected Health](#) is a Health Canada-licensed tool that combines remote patient monitoring and Zoom-enabled telemedicine.

- Location: available across Canada
- Type of virtual visit: video and 2-way text messages
- Access: mobile app
- Costs: unclear, described as “reimbursable in Canada”

[EQ Care](#) (eqcare.com) by Equinoxe Virtual Clinic Corp has been providing virtual visits since 2014 and health care for more than 30 years.

- Location: available across Canada
- Costs: membership plan
- Type of virtual visit: video visits
- Access: website or mobile app

[EQ Care \(by Quebec Blue Cross\)](#)

- Location: Quebec
- Type of virtual visit: video visit
- Costs: centrally funded (i.e., eligible Quebec Blue Cross clients with a health care plan or disability insurance)
- Access: mobile app

[Maple](#)

- Location: available across Canada
- Type of virtual visit: text, audio, or video
- Costs: subscription-based (various), pay-as-you-go payments (\$49 on weekdays, \$79 on weekends and holidays, \$99 overnight), or centrally funded (i.e., private insurance; provincial coverage for British Columbia)
- Access: “instant” appointment, mobile application

[Medeo](#) by QHR Technologies/Loblaw Companies Ltd.

- Location: available to residents of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and Nova Scotia
- Type of virtual visit: secure video, messaging
- Access: website, mobile app

[Medicuro Online Clinic](#)

- Location: Newfoundland and Labrador
- Type of virtual visit: video visit
- Costs: subscription-based (various), pay-as-you-go (\$39 per appointment)
- Access: website, mobile app

[WELL Health VirtualClinic+](#) is a platform by WELL Health Technologies Corp (virtualclinics.ca), where patients can choose to see their own doctor, or any family doctor, and are invited to suggest the platform to their own family doctors.

- Location: across Canada and expanding internationally
- Type of virtual visit: video, phone, and secure messaging visits
- Costs: centrally funded (i.e., provincial coverage); visits are covered in British Columbia (Medical Services Plan), Alberta (Alberta Health Care Insurance Plan), and Ontario (OHIP); fee-for-service in other jurisdictions; appointments starting at \$30 per visit

[Wello](#) (wello.ca) offers private virtual visits through employee benefits programs.

- Location: across Canada
- Type of virtual visit: video, phone, secure messaging
- Access: 24 hours, 7 days a week, for urgent care
- Costs: centrally funded (i.e., private insurance, employee benefits programs)

[Tia health](#) by WELL Health Technologies Corp.

- Location: Montreal
- Type of virtual visit: phone, video, secure messaging
- Access: web browser
- Costs: centrally funded for patients with a valid Quebec health card

Billing

Please note that the information in this section is, to CADTH's knowledge, current as of publication.

Apart from Nunavut, all provinces and territories have introduced fee code changes during the COVID-19 pandemic to support the transition from face-to-face to virtual visits.³⁵ In Alberta, temporary billing codes were made permanent in the Schedule of Medical benefits by the Alberta Medical Association.³⁶ It appears that, as of this writing, Alberta is the only province to have made the billing codes permanent, while approaches to paying physicians vary across other jurisdictions.

In British Columbia, codes already in place for telehealth (i.e., a virtual visit where the patient joins from a designated facility) have been temporarily extended to apply to direct-to-patient telephone and video visits for designated telehealth services for patients covered by the British Columbia Medical Services Plan.³⁷ For other services that are not designated as telehealth services (e.g., consultations, office visits, and non-procedural interventions), virtual visits are temporarily covered by the face-to-face billing codes, with instructions to note that the service was a virtual visit.³⁷

Temporary billing codes were created in Manitoba, Newfoundland and Labrador, Nova Scotia, PEI, and Saskatchewan. In Manitoba, new codes for telephone and video visits were effective as of March 14, 2020, and were planned to last for the duration of the COVID-19 pandemic, only.³⁸ Newfoundland and Labrador also initiated temporary codes for telephone and video visits as of March 18, 2020, set to continue until an end is decided by the Department of

Health and Community Services.²⁰ Nova Scotia's codes went into effect on April 1, 2020. Synchronous telephone and video visits between a patient and a provider (i.e., a physician, a resident, or a licensed post-graduate medical trainee under the direct supervision of a physician) are covered by Nova Scotia Medical Services Insurance during the pandemic.³⁹ PEI's temporary billing codes cover synchronous or asynchronous virtual visits by email or text message in addition to telephone and secure videoconferencing.⁴⁰ Saskatchewan introduced temporary billing codes as part of a pilot program in response to the pandemic.³¹ It is unclear if these temporary billing codes will be extended following the pandemic.

Most provinces and territories limit the number of times a care provider can bill for a visit with a single patient at 1 visit per day. In contrast, providers in Nova Scotia can claim up to 2 virtual visits per patient, per day.³⁹ Daily volume caps on virtual visits have been temporarily suspended in British Columbia and permanently suspended in Alberta.³ In Newfoundland and Labrador, a cap of 521 virtual visits per year was replaced with 40 per day.³ As part of a pilot program in Saskatchewan, the previous cap of 3,000 billable Virtual Care Pilot services payable per physician, per calendar year, was temporarily suspended until further notice, beginning January 1, 2021.³¹

Cost and Administration

Public Health Care System Costs

Estimates from the Centre for Health Services and Policy Research and Canada Health Infoway (published in 2017 using data from 2011 to 2014) show that virtual visits in British Columbia have the potential to decrease primary care costs per patient by \$3.79 per quarter ($P < 0.001$) in that province, with the greatest benefit associated with seeing a known provider ($-\$8.68$, $P < 0.001$).⁴¹ No estimates of the health care costs of ambulatory care, emergency care, or specialist care were identified.

Provider Costs

There are costs for Canadian physicians to implement virtual visits into their practices,⁵ which vary depending on several factors (e.g., whether the physician has a stand-alone practice or is part of a larger organization, the type of virtual visit offered, and the extent to which the necessary infrastructure is already in place).

Hardware

There may be costs to comply with the Canadian Medical Association Virtual Care Task Force recommendations outlined in its *Virtual Care Playbook* regarding the size and number of screens to optimize productivity, video camera and microphone specifications, speakers or headphones, and secure USB drive if it is not possible to save and edit through the electronic medical records.⁴² Some physicians may already have all or some of these components as part of their workstations. Over time, this equipment will have to be replaced or upgraded.⁵

Depending on the purpose of the virtual visit, a telemedicine device (also called clinical peripherals, such as, for example, a tablet, a remote monitoring device⁴) may also be provided to the patient by the health care provider. This would also be associated with a cost.⁴³

Software

Some provinces and territories have covered the costs of the software or platforms they have approved for use.³ Elsewhere, the responsibility for identifying and paying for a virtual visit program or platform must be covered by the physician if there are associated costs. In addition to upfront costs, ongoing licensing fees may be required.⁵

Bandwidth and Internet Connection

The physician may have sufficient connectivity already. However, depending on location and size of the organization providers may benefit from purchasing a business-grade service to ensure consistent bandwidth capability.⁵

Training

There may be costs to providers associated with training to use, install, and troubleshoot virtual visit software and equipment.⁵ There may also be costs associated with a continued need to train clinician and patient users.⁵

Support

Providers may incur costs related to IT support.⁵

Patient Costs

Costs to patients may include an internet-connected device and may include specialized remote monitoring equipment. Patients may already be paying these costs, or these costs may be offset by other savings (e.g., transportation, parking, decreased need for paid personal assistance services).^{5,44} In the 2019 data collected by Canada Health Infoway, rural-dwelling patients self-reported travel savings of \$12 per visit compared with \$11 per visit travel savings for urban-dwelling patients.¹

Who Might Benefit?

Efforts underway to more fully integrate the health care system are likely to benefit patients by increasing convenience, personalization, and efficiency of health services.⁴⁵ During the COVID-19 pandemic, virtual visits allow providers to continue to provide patient care while physically distancing. Guidelines, including the Canadian Medical Association's *Virtual Care Playbook*, differentiate between the types of medical concerns that can be safely assessed using virtual visits and those that require in-person visits.⁴²

In some cases, virtual visits may be an improvement to the quality of care received in person. For example, some children are afraid of hospitals and physicians' offices, as are some patients with sensory issues (e.g., autism).⁴⁶ The ability to see and understand how children function in their own environments is an important benefit for those diagnosing and managing neurodevelopmental and behavioural issues for children.⁴⁶ Typical in-person visits for children with autism create a disruptive break in the normal routine and place the child in a foreign space with novel stimuli, which can be overwhelming.⁴⁶ Pediatricians who see children with autism make extra accommodations, such as booking extra time and arranging appointments to ensure there are fewer other children. These accommodations are not needed with virtual visits.⁴⁶

Summary of the Evidence

Effectiveness

One systematic review examined barriers and facilitators of synchronous virtual visits for a wide range of health conditions, diseases, and treatments (e.g., diabetes, HIV, stutter and speech therapy, wound care, rehabilitation services for the elderly, cardiovascular disease, plastic surgery, behavioural therapy).⁴³ Authors reported that 44 of 45 studies (98%) supported the effectiveness of video visits for assessing and improving patients' overall health conditions.⁴³ Additionally, motivation and engagement were positively associated with virtual visits in the 8 studies that examined these outcomes and compliance, adherence, and accountability to the treatment were positively associated in 5 studies, which was favourably associated with faster recovery.⁴³ The authors of the review did not report on safety or adverse events.

Cost-Effectiveness

In a presentation to the May 2020 conference of Deputy Ministers of Health regarding the national strategy for digital health evaluation, Health Canada identified a critical need for a cost-benefit analysis of virtual care.

For this report, 1 study was identified that examined the societal cost-effectiveness of telehealth for transition-age young adults (18 to 25 years) in Colorado who were living with type 1 diabetes.⁴⁷ In this study, a routine diabetes virtual clinic appointment using videoconferencing software was compared with a face-to-face appointment with a diabetes care provider.⁴⁷ All patients participated in a group appointment facilitated by a certified diabetes educator. Quality-adjusted life-years did not differ significantly between the virtual visits group and the face-to-face visits group.⁴⁷ No other relevant cost-effectiveness studies were identified.

Perspectives and Experiences

Child Care

Research regarding patient-reported barriers and facilitators of virtual visits was narratively synthesized in a systematic review published in 2020.⁴³ Included studies suggested that virtual visits provide a benefit for patients who would otherwise have had to find child care to attend an in-person visit.⁴³ Virtual visits were also reported to present a potential barrier for those who found it difficult to engage in virtual visits with young children present.⁴³

Travel Time and Costs

Based on data from the Canada Health Infoway 2019 Access to Digital Health Services survey, 8.8 million total hours could be potentially saved by Canadian patients overall (in travel time and in-person visits) with the use of virtual visits. The average estimated time saved per patient per visit was 1.62 hours for people living in rural areas and 1.5 hours for those living in urban settings.¹ Self-reported benefits of virtual visits narratively synthesized in a 2020 systematic review included elimination of travel time, waiting time, and costs.⁴³ Fifteen included studies showed that virtual visits reduced travel time associated with doctors' appointments and 9 of those also showed that waiting time was reduced compared with in-person visits.⁴³

Saving costs was reported in 201 included studies based on the calculation of costs like travel mileage.⁴³ A limitation of the studies is the inconsistent use of an in-person comparison group.

Improved Access

Canada is a geographically large country, with most people and physicians clustered in urban and suburban settings.⁴⁸ Rural and remote areas experience shortages of primary care providers and often have limited access to primary care.⁴⁸ Access is also a problem in urban areas, where many Canadians do not have a regular primary care provider or cannot secure a health care appointment in a time frame that meets their needs.⁴¹

Nine of 10 studies included in a systematic review of barriers and facilitators of virtual visits reported that patients reported increased access to health care (specialist care in 2 studies, general care in 7 studies) with virtual visits.⁴³ One of the 10 studies indicated that patients self-reported less access to care with virtual visits; however, the authors concluded that these patients misinterpreted the lack of physical access to a clinician as lack of access.⁴³

Patient Satisfaction

Patient satisfaction with virtual visits has been assessed in a number of studies. In an Ontario Telemedicine Network eVisit pilot study in a high-volume stroke prevention clinic, all patients reported their health issue was addressed appropriately and were satisfied with the security and privacy of their health care information during the visit.⁴⁹ Most patients rated that their experience of care via the eVisit was better or the same as a previous in-person visit (36% and 58%).⁴⁹ Two patients (6%) were not sure how they compared and none rated the eVisit as worse than an in-person visit.⁴⁹ All patients indicated they would definitely (94%) or probably (6%) use eVisit again.⁴⁹

In 1 systematic review, data on patient satisfaction from 12 studies was narratively synthesized.⁴³ All included studies reported that patients self-reported high to very high levels of satisfaction with the experience.⁴³

Patient and physician preferences for a preferred mode of virtual visit (audio, video, or asynchronous secure messaging) were assessed in a 2020 retrospective cohort study conducted in 5 regions in Ontario.⁵⁰ After 18 months of access to virtual visits, patients and physicians in rostered practices preferred secure messaging over video visits.⁵⁰

With the increased use of virtual visits that has resulted from the COVID-19 pandemic, 43% of patients surveyed indicated they would prefer to have a virtual video (20%), telephone (19%), or text (4%) visit for their next health care visit, while 48% would prefer an in-person visit according to a June 2020 COVID-19 weekly tracking survey commissioned by Canada Health Infoway.⁵¹

Clinician Acceptance

A CADTH policy review of enablers of virtual visits published in 2020 highlighted factors involved in clinician acceptance of using technology to deliver care.⁵² Although the statistics were not provided regarding levels of clinician satisfaction, the report identified cultural factors (e.g., positive relationships between providers and the presence of technology champions) and health system factors (e.g., clinical workforce availability and having adequate technology in place) as factors influencing clinician satisfaction.⁵²

Practice Area Uses of Virtual Visits

Primary Care

Virtual visits are being used in primary care. In a 2020 rapid review, AHS reported evidence from a systematic review that concluded that telephone visits were an appropriate alternative to in-person visits for a wide variety of conditions in primary care.⁵³ There were more repeat visits with telephone versus in-person consultations, and telephone visits were shorter in duration by 1.5 minutes.⁵³

Ambulatory/Outpatient Care

Virtual visits have a potential role in the provision of ambulatory care for many types of conditions across the flow through the health care system (diagnosis, observation, consultation, treatment, intervention, and rehabilitation services).

Ambulatory care includes complex conditions, mental health and substance abuse, prenatal/antenatal and postnatal care, cancer care visits, pre- and post-operative consultations.⁵⁴

Specialist Care

Specialist care is another area where virtual visits have a potential role – specialist care often requires travel for those who do not reside in major urban centres.

Post-surgical care is 1 area where virtual visits have been studied – in an RCT, 66 adult patients recovering from elective arthroscopic rotator cuff repair surgery had their 2-, 6-, and 12-week follow-up visits with their operating surgeon conducted as a virtual video visit or in person.⁵⁵ There were no differences in clinical outcomes between the groups and no statistically significant difference in patient satisfaction between the virtual visit and in-person groups.⁵⁵ Patients who had experienced virtual visits, however, had a greater preference for having future virtual post-operative visits than did patients in the face-to-face group.⁵⁵

Urgent Care and Emergency Care

CHEO – the Children's Hospital of Eastern Ontario – serves pediatric patients and their families from Eastern Ontario, Western Quebec, Nunavut, and Northern Ontario. In May 2020, CHEO began to offer virtual appointments using secure video with a pediatric emergency physician for patients needing urgent care.⁵⁶ In-person care continues to be available for those requiring medically life-threatening care or choosing in-person visits.⁵⁶ Appointment requests are submitted online, a self- or proxy-triage checklist is completed to determine whether a virtual appointment or in-person visit is most appropriate, and then a secure online emergency department virtual care intake form is completed using MyChart.⁵⁶ A registration clerk calls patients to schedule virtual appointments.⁵⁶ Outcomes are being evaluated as virtual emergency department appointments continue to be offered.⁵⁷ The London Health Sciences Centre's Children's Hospital in London, Ontario also began offering a virtual emergency clinic in May of 2020 using Cisco's Webex platform to connect children, parents, and clinicians for video calls.⁵⁸

Operational Issues

Costs and Payment

The lack of appropriate physician remuneration for virtual visits before the COVID-19 pandemic was viewed as a barrier to its uptake in Canada's publicly funded health care system.⁵² Since then, the creation of virtual visit billing codes and the elimination of limits to the number of virtual visits that could be conducted has allowed physicians in most of the country to bill the public health system for certain types of virtual visits. In a 2020 CADTH Policy Insights report, evidence and expert analyses were summarized, which highlighted that the fee-for-service model allows physician reimbursement per virtual visit with a patient but does not account for time spent on related tasks like patient onboarding, time to troubleshoot the technology, or administrative work.⁵²

Virtual visits by text (e.g., email, secure messaging) are not covered under the new billing codes in most provinces and territories. The Virtual Care Task Force highlighted the need to decide how to address text virtual visits and outlined a series of recommendations to address this issue.

Duplication of Services

Primary health care models may affect the amount spent on the provision of virtual visits. For example, in Ontario, primary care physicians who work with the general population work in enhanced fee-for-service models or capitation-based models.⁵⁹ While physicians are compensated based on patient enrolment and on a fee-for-service basis to some extent in both models, the proportions differ, with physicians in capitation-based models paid, to a greater extent, through capitation payments.⁵⁹

It has been noted by physicians in the media that the creation of new virtual care fee codes could result in provinces and territories paying twice for many services. For example, physicians working in a capitation model are paid a set amount per patient, regardless of the number of times the patient is seen by their doctor. If the patient also seeks care from another doctor (e.g., an on-demand virtual clinic), the province will have essentially been billed twice for the same service.⁶⁰ Some service providers (e.g., Telus Health) target their virtual care services to patients who do not have a family physician and they recommend that patients who are on the roster of a family physician continue to seek care from that person.⁶¹

Service Overuse

Concerns have been raised regarding the potential for increased access to virtual care leading to higher volumes of unnecessary care.² The Virtual Care Task Force indicated there was no evidence to support that conclusion, citing research from an evaluation of virtual care pilots in Ontario.² Specifically, providers indicated that 81% of virtual visits required no follow-up for that issue.⁵⁰ Authors concluded that when patients connected with their own primary care provider, many virtual visits appeared to replace in-person visits and patients did not overwhelm physicians with requests.⁵⁰

Training Requirements

Medical education has been identified as a key barrier to virtual care by the Canadian Medical Association's Virtual Care Task Force.² It recommends including training on the appropriate

use of virtual tools and platforms into the medical curriculum and continuing professional development.²

Research supports the importance of training to the uptake of virtual visits. In a 2020 systematic review of barriers and facilitators to virtual visits, provision of some form of training with a virtual care system, equipment, and treatment procedures to clinicians and staff had a favourable effect on the uptake of virtual visits.⁴³ Patient training was also identified as being important. The systematic review showed that 20 studies that examined patient training provided in person before the visit via a video orientation or through manual documentation helped patients to use the virtual visit system and equipment easily.⁴³

The more complex the system and the less familiar patients are with the platform may dictate the need for patient training. Patients reported being more accepting of and better able to adapt to virtual visits when they were already familiar with the technology (e.g., Skype visits).⁴³ Alternatively, lack of familiarity, lack of knowledge, and fear of the unknown was associated with resistance to using virtual visit technology in 11 studies included in a systematic review of barriers and facilitators to virtual visits.⁴³

Licensure and Quality of Care

The Virtual Care Task Force identified the various physician licensing requirements across Canada as a barrier to widespread adoption of virtual visits² and the Canadian Medical Association identified restrictions on provision of care across boundaries as 1 of the main barriers to the widespread uptake of virtual care in Canada.⁶² Restrictions are in place federally (the *Canada Health Act*) and within jurisdictional boundaries.⁶² Data from the 2019 CMA Physician Workforce Survey referred to in the Virtual Care Task Force report indicated physicians reported experiencing 1 or more of the following obstacles to becoming licensed to practice in other jurisdictions: process complexity (62%), length of process (58%), cost (53%), credential verification (43%), letter of good standing (33%), reference letter (27%), and police check (22%).²

The Task Force recommends a simplified pan-Canadian registration and licensure processes to allow qualified physicians to provide virtual visits across provincial and territorial boundaries.² Some provinces have already relaxed restrictions for out-of-province physicians to hold virtual visits across provincial or territorial boundaries.⁸ However, poorly aligned policy environments are seen by some to prevent providers from sharing patient information between jurisdictions and has been reported as an issue for continuity of care.⁸

Lack of Clarity for Patients

Throughout the COVID-19 pandemic, there has been a proliferation of private virtual visit service providers. According to the *Canada Health Act*, medically necessary services provided by doctors must be covered by provincial health insurance plans.⁶⁰ In jurisdictions with virtual visit billing codes, many types of visits are covered by provincial or territorial public health insurance plans. For example, temporary billing codes made available by OHIP for video or phone visits are being used by doctors seeing patients virtually through Maple. Because secure messaging is not covered by OHIP, virtual visits that are predominately text-based are billed directly to patients.⁶⁰ According to the CEO of Maple, 70% of Maple customers choose secure text messaging visits when offered the choice between phone, video, and secure text messaging appointments.⁶⁰ However, it is not clear if Maple customers choose to pay out of pocket for text messaging services without realizing the visit would have been covered by their provincial health insurance plan had they chosen a phone or video visit.⁶⁰

Fragmented Care

Provincial and territorial health care systems are working toward providing patients with streamlined care. For example, the publicly funded health care system in Ontario is built around integrated, high-functioning teams, the central role of primary health care, and strong inter-organizational collaboration.⁴⁵ While the proliferation of private virtual care apps and platforms has addressed a demand and has been important for innovation, it is possible that a lack of integration with publicly funded health care will lead to further fragmentation in the system.⁴⁵ The Virtual Care Task Force noted that the increased corporatization of health information may not be aligned with quality care.²

Clinician-Patient Relationships

It has been noted by physicians that a move from in-person to virtual visits could be associated with a loss of connection between patients and physicians in the long term.⁴⁶ So far, this does not appear to be substantiated based on evidence identified in a rapid review by AHS, which showed that patients reported greater satisfaction and access to care when using virtual visits with a known provider or a known group of physicians.⁵³

The for-profit virtual visit care model has also been criticized by some health care professionals and academics for eroding the patient-doctor relationship and for taking doctors out of the primary care system.⁶³ It will be important for future research to capture these data.

Technology Requirements

Hardware Components

The CMA Virtual Playbook recommends that physicians conducting virtual visits ensure they have adequate screen space, a high-definition video camera with microphone, good-quality speakers or headphones, and a secure USB drive or electronic medical record that allows saving and editing.⁴²

The availability of a personal device (e.g., smartphone, tablet, or personal computer) or a telemedicine device provided by the health care provider to patients is a requirement of virtual visits.⁴³

Software Components

Prior to conducting virtual visits, it is recommended that physicians ensure they have software that secures text messages (either electronic medical records or third-party solutions) and secure videoconferencing tools (general videoconferencing tools with adequate security or software platforms designed specifically for health care).⁴²

Applications that involve health care experts in the development process have been effective.⁴³ For example, the TeleBurn App for the treatment of burn care in the home was developed with experts from pediatric burn care, health communication, nursing, public health, biostatistics, information technology, and clinical psychology.⁴³ The app uses a combination of text and image messaging, video conferencing, and instructional videos for the treatment of pediatric patients with partial thickness burn.⁴³

Infrastructure

Internet service availability is a requirement for video visits.⁴³ Poor network services and wireless signal coverage influence patient satisfaction with virtual visits.⁴³

Privacy, Social, and Ethical Considerations

Privacy and Security

According to a 2020 CADTH report, there is a large amount of literature available on information privacy and security for patients and providers.⁵²

For patients, a prominent concern is related to the potential for personal information or video to be intercepted during transmission.⁵² Another concern is related to the lack of a private setting from which to join a virtual visit, which is a particular concern faced by people with a low socioeconomic status.⁵² In the systematic review by Almathami et al., privacy concerns were reported in 5 included studies.⁴³ Concerns included patients who had not disclosed their health conditions to their families because of worry of being overheard during the virtual visit, and concerns about other members of their homes being observed in the background of the video visit.⁴³

Several groups have published recommendations regarding privacy and security during virtual visits.^{3,4,26,42}

Legal Issues

Noting that “widespread delivery of care via telephone and video is transforming medical practice,” the Canadian Medical Protective Association (CMPA) provides guidance to members considering offering virtual visits to patients.⁶⁴ Scenarios where providing patient care may be complicated when that care is provided virtually include when a physician is temporarily or permanently out of the country, when a patient is seeking medical assistance in dying services, or when a physician has been asked to complete an application for involuntary psychiatric assessment. The CMPA also advises members to be mindful of the limitations of virtual care and ensure that patients are provided the option for in-person care, where appropriate and necessary, with an understanding that virtual care is not a substitute for some types of in-person care (e.g., clinical examinations).⁶⁵ Finally, CMPA provides guidance to members on obtaining informed consent for virtual visits, including conversations about limitations of the service, privacy and confidentiality considerations, adopting a consistent approach to obtaining consent, and documenting the discussion.⁶⁶

Ethical Issues

Profits

Concerns have been raised regarding the increasing role of private virtual visit services in Canada’s health care system. It has been suggested that when health care is provided in for-profit settings where 1 focus is on making money, there may be an incentive to order tests and procedures that may not be medically necessary.⁶⁰

Health Equity

While virtual visits offer the potential to improve access to health care, there is a risk that some communities could be systematically excluded from the benefits.⁴⁵

A draft guidance document prepared by Health Quality Ontario included a list of questions to consider in selecting patients for virtual visits, suggesting that patients with language barriers, those who would not be considered technology savvy or without access to an internet-enabled device, and patients with limited cognitive capacity may not be best served by virtual visits.⁴ This is supported by research. For example, the authors of 1 study included in a systematic review reported they were not able to successfully implement a virtual rehabilitation program for older adults.⁴³ In other included studies, those with low mobility, complex social problems, hearing and vision impairment, and cognitive impairment had particular difficulty accessing virtual visits.⁴³ The nature of the relationship between low mobility and difficulty accessing virtual visits was not clear.

In a retrospective cohort study of patients scheduled for video visits early in the COVID-19 pandemic, patients older than 55 years, of Asian race, and those who were non-English-speaking were less likely to complete a scheduled virtual visit than their younger, White race, English-speaking counterparts.⁶⁷ Patients who were older than 55 years, female, of Black race or Latinx ethnicity, and those with a zip code-linked median household income below \$100,000 were more likely to complete the visit by phone rather than by video than their younger, White race, higher income-earning counterparts.⁶⁷

People with certain disabilities are at risk of missing out on the benefits of virtual visits. Video visit platforms tend not to include custom features to support communication for people who are blind or with hearing impairment, or for people with cognitive disabilities.⁵ Virtual visits may also present a challenge for patients with neurologic disorders, speech disorders, or autism spectrum disorders.⁵ A survey of direct-support professionals providing care to people with intellectual and developmental disabilities in Ontario during the first 5 months of the COVID-19 pandemic emphasized the importance of finding the “best fit” when determining if video, phone, or in-person visits are suitable for patients in their care.⁶⁸

Walk-in style virtual care businesses may disadvantage low-income and racialized people.⁶⁰ Many people will not have access to private virtual clinics, as they will not be able to afford to pay up front.⁶⁰ It is also possible that the hours physicians are available to work in the publicly funded health system may be reduced if some physicians shift to working in privately funded virtual clinics.⁶⁰

The results of surveys that asked about the digital health experiences of people in Canada during the COVID-19 pandemic align well with the existing literature.⁶⁹ Of note, these surveys found that younger people were using virtual care at a higher rate than their older counterparts, people living in rural areas were less likely to access digital health services compared with those living in urban areas, and people with higher incomes are more likely to access digital health services compared with lower-income individuals.⁶⁹

Despite these potential issues, a survey to assess interest in and barriers to virtual visits in an US urban “safety-net” clinic setting found a high interest in video visits regardless of factors such as language, race and ethnicity, and age, providing that device and data barriers to accessing virtual visits can be improved upon.⁷⁰

Digital Divide

The gulf between those who have access to technology and its benefits and those who are underserved is referred to as the “digital divide.”⁴⁵ Communities that tend to be underserved by technology (e.g., lack of access, poor infrastructure, have distrust of technology, or are not educated about technology) include Indigenous peoples, new Canadians, older adults, people

experiencing homelessness or precarious housing, those with below-average literacy, and those living in remote and rural areas.⁴⁵ Paradoxically, these underserved communities are the same groups of people that proponents of virtual care hope will receive the greatest benefits; instead, however, health inequities may be exacerbated.

Lack of reliable access to an internet-connected digital device is a barrier to accessing virtual visits.⁴⁵ In 2018, 34% of Canadians surveyed reported not owning a smart phone.⁴⁵ The Virtual Care Task Force reported that, overall, 86% of Canadian households have access to download speeds of at least 50 megabits per second and upload speeds of 10 megabits per second, whereas 41% of rural households have similar access.²

Evidence from a 2020 systematic review showed that slow internet speed, poor audio quality, poor video quality, and resistance to using technology were commonly identified barriers to using synchronous virtual visits.⁴³ In 16 of 20 studies that assessed connectivity, slow internet speed, or poor wireless signal during a virtual visit affected the quality of the call and increased frustration.⁴³ In 5 studies, fast internet speed or strong wireless signal strength had a positive effect on communication between patients and providers.⁴³ In addition, the incompatibility of virtual visit platforms with older operating systems was noted as a barrier to patients accessing virtual visits in 1 included study.⁴³

Digital health literacy may also have an impact on the use of digital health services such as virtual visits. This was indicated in the results of Canadian surveys of digital health experiences during the COVID-19 pandemic, which found that those with higher digital health literacy were more likely to use digital health services compared with those with lower digital health literacy.⁶⁹

Environmental Issues

Transitioning some health care encounters to virtual visits may also have a positive impact on the environment. For example, in 2020 it is estimated that the increase in virtual visits as a result of the COVID-19 pandemic led to an emissions savings of 212,000 metric tons of carbon dioxide equivalents.⁴⁴ This is an increase of more than 188,000 metric tons compared with 2019.⁴⁴

Final Remarks

Direct-to-patient virtual visits have the potential to change and potentially improve the delivery of health care in Canada. However, there are unresolved issues related to standards, licensure, equity, quality care provision, payment, and medical education that need to be addressed to prepare for a post-COVID-19 health care system that includes virtual visits. Understanding which patients stand to benefit most from virtual visits (and through which modality) could also improve future care. The Canadian Medical Association's Virtual Care Task Force has outlined a list of recommendations that Canadian physicians feel are necessary to address the issues in these key areas and optimize the use of virtual visits.²

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