



The Expansion of Virtual Care in Canada

New Data and Information



Canadian Institute
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For permission or information, please contact CIHI:

Canadian Institute for Health Information
495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6
Phone: 613-241-7860
Fax: 613-241-8120
cihi.ca
copyright@cihi.ca

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Executive summary

Since the onset of the COVID-19 pandemic, Canada's health care systems have launched new or expanded virtual care offerings. In this report, survey data and case studies show how Canada responded to the sudden rise in demand for virtual care. Provinces and territories can use the information to learn from each other as they consider the future of safe, equitable virtual care.

While virtual care has long been a part of the Canadian health care landscape, Canada has historically lagged behind its international peers in its adoption of information technologies.^{1, 2, 3} New data from the 2022 Commonwealth Fund (CMWF) International Health Policy Survey of Primary Care Physicians shows that recent efforts to increase uptake of virtual care technologies have been effective. Canadian primary care physicians also reported being more satisfied with practising virtual care than their international peers. The growth in Canadian physicians' adoption of information technology revealed by the CMWF survey indicates the potential for further gains in the coming years.

Following new investments and growth in virtual care during the COVID-19 pandemic, the Canadian Institute for Health Information (CIHI) invited provincial and territorial representatives to participate in semi-structured interviews, which were used to develop the case studies included in this report. Where possible, case studies are complemented by additional data provided by participants.

The case studies are grouped according to their focus — strategy, governance and direction-setting; and programs and initiatives:

Strategy, governance and direction-setting

- **Northwest Territories:** An EHR strategy paves the road to improved health care delivery and outcomes
- **Nova Scotia:** Developing a comprehensive virtual care policy
- **Ontario:** Digital and Virtual Care Secretariat
- **Prince Edward Island:** Patient and provider engagement to support appropriate and equitable access to virtual care

Programs and initiatives

- **British Columbia:** Health Gateway improves the public's access to their own health information
- **New Brunswick:** Expanding access to virtual care
- **Newfoundland and Labrador:** Expansion and enhancement of virtual care services

- **Nunavut:** High patient satisfaction with Virtual Nurse Practitioner Chronic Disease Program
- **Saskatchewan:** Adoption of a provincial clinical videoconferencing program
- **Yukon:** Remote patient monitoring supports patients with chronic conditions in their communities

These case studies illustrate the wide range of virtual care priorities across the country as services expanded during the pandemic. The diversity in priorities reflects the fact that each jurisdiction had a different starting point, since virtual services have existed in several provinces and territories for decades. Despite these differences, 4 themes are common across the case studies:

- **Equity:** Provinces and territories have taken various approaches to support equitable access to virtual care or to avoid exacerbating existing inequalities.
- **Data standards and interoperability:** High-quality virtual care relies on a foundation of seamless data-sharing to support continuity of care. Interview participants recognized the importance of data standards to provide this seamless care, though most have not yet achieved standardized data collection. The importance of interoperable health care information systems was also acknowledged, and expanding virtual care provides an impetus to improve connectivity within and across systems.
- **Health human resource challenges:** Expansion of virtual service offerings contributed to personnel challenges due to the demands of adapting to virtual delivery. Interview participants also recognized that virtual care was key to new models of care in order to optimize available resources.
- **Patient and provider engagement:** Interview participants recognized the importance of engaging patients and providers early in the development and implementation of virtual care. This included working together to address challenges such as digital health literacy and change management.

As provinces and territories consider how virtual care can become an integrated part of their health services beyond the pandemic, there is a role for CIHI to support them in standardizing virtual care data, measuring the delivery and impact of virtual care services, and continuing to learn from each other.

Introduction

Virtual care is showing its value across Canada’s health care sectors, following its rapid escalation due to the COVID-19 pandemic.^{4, 5} Health systems are recognizing how virtual care can address the diverse needs of patients and health care providers to deliver safe, timely and equitable care. In March 2022, about half of Canadians reported that they had been offered a virtual visit alongside other non-virtual modalities.⁶ Between January 2021 and March 2022, about one-third of all patient-reported visits were virtual, and 38% of family doctor visits, 27% of specialist visits and 16% of visits with other health care providers (e.g., dentists, physiotherapists) continued to be conducted virtually.⁶ Virtual care activity in this period remained above its pre-pandemic level,⁷ though the proportion of visits that were virtual decreased compared with 2020,⁶ when many in-person health services were unavailable.

Virtual care is defined as “any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care.”^{8, (p. 4)} It includes services carried out using a variety of digital technologies, both synchronously (occurring in real time, such as telephone and video communication) and asynchronously (occurring at different times, such as secure messaging).

Since the onset of the pandemic, health systems have leveraged existing infrastructure and programs to launch new or expand existing virtual care offerings. This report presents case studies from across Canada that show the diversity of these initiatives and highlights the common themes among the provincial and territorial approaches. Exploring how virtual care has evolved provides a valuable opportunity for provinces and territories to learn from each other to support continued improvements in delivering virtual care.

While virtual care has long been a part of the Canadian health care landscape, Canada has historically lagged behind its international peers in its adoption of information technologies.^{1, 2, 3} This report showcases new findings from the 2022 Commonwealth Fund (CMWF) International Health Policy Survey of Primary Care Physicians, which show that during the pandemic, Canadian physicians increased their adoption of certain information technologies — gains that now approach the CMWF country average. These findings highlight the health system gains resulting from a concerted focus on virtual service delivery.

How Canada compares with its international peers

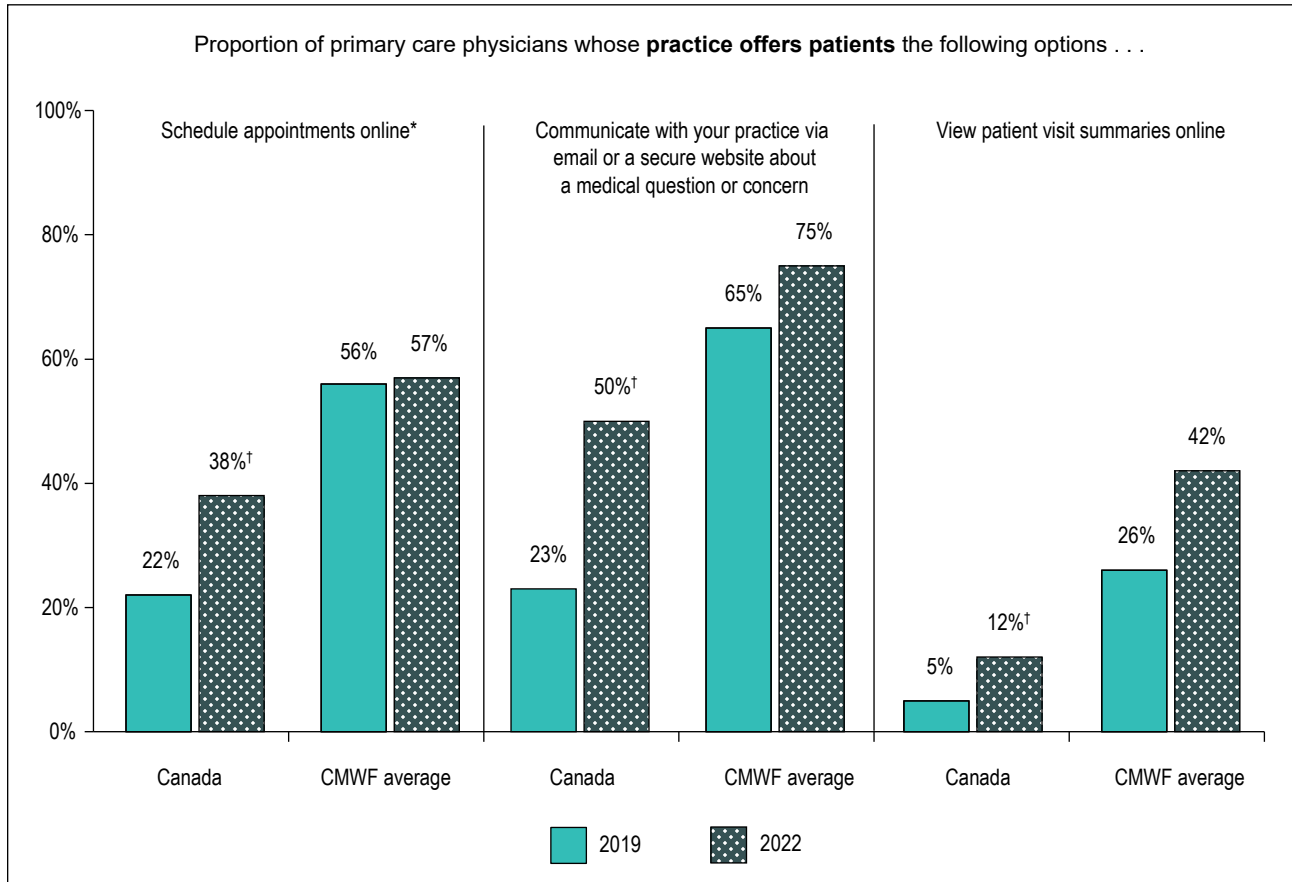
The 2022 CMWF International Health Policy Survey of Primary Care Physicians examines the similarities and differences in access to care between Canada and 9 peer countries.ⁱ The latest responses from Canadian physicians reflect that recent efforts to increase uptake of virtual care technologies have been effective.

Canadian primary care physicians (84%) were more satisfied with practising virtual care compared with international peers (68%). They generally did not find the implementation of a virtual care platform in their practice to be challenging, compared with their CMWF peers. They also noted that it has had a positive impact on certain aspects such as the timeliness of care, and effective assessment of mental and behavioural health needs of their patients.

Increases were seen in the proportion of Canadian physicians whose practices offer patients options to communicate electronically. More practices offered options to schedule appointments online, to communicate via email or secure website about a medical concern, and to view patient visit summaries online in 2022 compared with 2019, but all of these areas remained below the CMWF average (see Figure 1).

i. Countries surveyed are Australia, Canada, France, Germany, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States. The survey was conducted by mail and web. The total number of Canadian respondents was 1,459. Survey weighting methodology was used to ensure that the outcome was representative of the primary care physician population, based on the population parameters and selected specialty types.

Figure 1 Proportion of primary care physicians whose practice offers patients options to communicate with their practice electronically



Notes

* The wording of the question in the 2022 survey was modified slightly from “Request appointments online” in the 2019 survey.

† The 2022 results were found to be significantly different from the 2019 result.

CMWF: Commonwealth Fund.

Source

The Commonwealth Fund, 2022 International Health Policy Survey of Primary Care Physicians in 10 Countries. 2022.

Similarly, improvements were seen in the proportion of Canadian primary care physicians who can electronically exchange information with any doctors outside their practice. Exchange of patient clinical summaries with other doctors increased to 38% in 2022 (25% in 2019), exchange of laboratory and diagnostic test results increased to 55% (36% in 2019) and patient medication lists increased to 51% (33% in 2019). However, all of these areas continue to be below the CMWF average, which ranged between 67% and 72%, despite most Canadian physicians (76%) having access to regional, provincial or territorial information systems.

Demonstrating the impact of focused efforts on technology adoption, uptake of electronic medical records (EMRs) and remote monitoring devices has increased to approach or exceed the CMWF average. EMRs are important tools that facilitate the flow of information and communication between health care providers, and between providers and patients. Some EMRs include integrated virtual care tools, such as secure messaging capabilities. More Canadian primary care physicians were using EMRs in 2022 (93%) than in 2015 (73%), similar to the CMWF average (93%). About 1 in 4 Canadian primary care physicians (27%) use remote monitoring or connected medical devices to monitor patients with chronic conditions, which is higher than the CMWF average of about 1 in 5 physicians (19%).

These findings reflect the positive impact of focused efforts to increase technology adoption and virtual care during the pandemic, and bring Canada more in line with its international peers. Given the growth trends demonstrated through the CMWF survey and supported by high physician satisfaction with practising virtual care, there are likely further gains to be made.

Virtual care case studies

Approach

Federal, provincial and territorial governments have been investing in digital health for many years, supported by funding from multiple sources including Canada Health Infoway (see [Appendix A](#) for an overview of recent provincial/territorial project activities supported by Infoway). In 2020–2021, the Government of Canada provided new funding to provinces and territories to advance virtual care in response to COVID-19.⁹ ⁱⁱ This funding could be used to enhance technology and infrastructure that would facilitate virtual care, to evaluate the impacts of virtual care or to establish policy supports for virtual care. As a result, provinces and territories implemented a wide range of initiatives — some of which are featured in the next section.

To share the successes and challenges of these initiatives and to inform future virtual care policy and delivery, the Canadian Institute for Health Information (CIHI) asked each province and territory to highlight 1 newly funded initiative during a semi-structured interview (see [Appendix B](#) for a list of participants). The case studies resulting from these interviews do not cover all the initiatives outlined in each jurisdiction’s action plan, nor longer-standing initiatives. Where available, complementary quantitative data was used to support the case studies.

The case studies are grouped according to their focus: strategy, governance and direction-setting; and programs and initiatives. They reflect that jurisdictions had different starting points and priorities, and showcase examples of progress, share learnings and reveal commonalities across the different approaches.

The case studies are presented in the next section, followed by a summary of the common themes across the initiatives.

ii. The federal and Quebec governments have agreed to a distinct asymmetrical arrangement.

Case studies focused on strategy, governance and direction-setting

Northwest Territories: An EHR strategy paves the road to improved health care delivery and outcomes

Background

The Northwest Territories uses a variety of information systems to deliver health care in primary and specialty care, diagnostic imaging and pharmacy services, and many of these systems are approaching retirement. Some areas, such as acute care, record almost entirely on paper.

The Northwest Territories recognizes the need to approach the replacement of its information systems as a foundational step toward a more comprehensive patient record and to meet the future information needs to support the delivery of virtual care.¹⁰ To prepare for this transition, an overarching electronic health record (EHR) strategy will support efforts to ensure that new technologies will work successfully toward creating a comprehensive patient record, address technical shortcomings and enable providers with the right information at the right time to enhance patient services.

Overview of new EHR strategy

The goal of a new EHR strategy is to enable seamless, integrated, patient-centred health care delivery for patients and providers. The EHR strategy consists of 3 workstreams that encompass several initiatives and projects:

- **Foundational:** Activities relating to leadership, governance, funding, staffing and resources, infrastructure, data and process standardization, communication and change management;
- **Execution and deployment:** Activities relating to defining requirements, procurement and acquisition, testing and deployment; and
- **Ongoing operations:** Activities relating to maintenance and support enhancements.

The EHR strategy not only provides a roadmap to achieving cohesive client care records, but also paints a picture of services applicable to virtual care and identifies targets for consistent data collection across programs.

Challenges and opportunities

Throughout the pandemic, the health system in the Northwest Territories has been challenged to meet the demand for real-time data to support rapid decision-making. Technical limitations meant that data could not be linked across services to provide a full picture of a patient's health care journey. For example, data related to immunizations or to the number of patients requiring follow-up care for chronic conditions would typically be stored in a data warehouse; however, such a warehouse does not yet exist in the Northwest Territories.

Like other jurisdictions, the Northwest Territories was also challenged in its ability to recruit and retain staff with the technical skills to support the data collection and analytics required to ensure ongoing quality improvements.

With the development of the new EHR data strategy, leaders will have a systematic approach to guidance and decision-making to complement new technologies that will help to overcome these challenges, including opportunities to organize planned work and to identify internal staffing capacity for future priorities.

Lessons learned



If you don't understand the challenges presented by the current landscape, you can never identify the opportunities to improve the future landscape.

The pandemic highlighted the importance of pairing information with a strategy to enable meaningful usage of that information. It also demonstrated that when resources are focused and governance structures are in place, rapid solutions are possible.

The Northwest Territories' work throughout the pandemic also highlighted the importance of having the right people at the table to ensure that challenges can be identified and then suitably addressed. When service providers and patients work together, priorities are identified and person-centred solutions are brought into focus.

The Community, Culture and Innovation group of the Health and Social Services department works on ensuring cultural sensitivity in program delivery and engagement with diverse populations. They relayed lessons on the appropriateness of patient care delivery, particularly in the wake of prioritizing rapid access during the pandemic. Engagement with this group will be key to addressing issues around appropriate care delivery.

Future priorities

Looking ahead, the Northwest Territories has identified 3 key priorities: supporting digital health equity; supporting continuity of care; and ensuring adequate resources to support data collection and analyses.

Despite recent advancements in internet access in northern regions, inequities persist in smaller, remote communities. Digital health equity remains a priority, and the territory is steadfast in its commitment to working toward long-term solutions to benefit all patients, regardless of location or socio-economic difficulties.

The Northwest Territories also recognizes that patients want a consistent practitioner, one with whom they have established a trusting relationship, and that virtual care, like in-person care, requires a consistent flow and availability of information to ensure continuity of care.

Aligning core principles at a pan-Canadian level to support this vision while allowing provinces and territories to tackle issues within local contexts would be welcome as jurisdictions continue to address this emerging priority.

Finally, another opportunity for potential pan-Canadian collaboration would be the creation of an available pool of human resources with the technical skills and expertise to support digital health and digital health equity goals.

Nova Scotia: Developing a comprehensive virtual care policy

Background

Nova Scotia has long recognized the value of virtual care offerings: the Nova Scotia Telehealth Network was established over 20 years ago as the first of its kind in Canada to use videoconferencing to deliver patient care between health care facilities within the province.¹¹ Prior to the COVID-19 pandemic, in 2019, the province's *Blueprint for Mental Health and Addiction* report suggested evidence-based virtual care solutions to enhance access to mental health and substance use services.¹¹

Early on in the pandemic, Nova Scotia quickly set up province-wide programs enabling the virtual delivery of many services (e.g., primary care, acute care, mental health, pharmaceutical care) to patients who had limited access to in-person care. These programs were shaped by a virtual care policy that was launched in March 2020 to ensure access to care during the pandemic; however, it was time-limited and set to expire in March 2023.

With that in mind, health care leaders in Nova Scotia have been focused on developing a policy for the future delivery of health care services that goes beyond new remuneration models, which were the focus of the first policy. The new policy will consider patient- and provider-informed guidance to support the equitable and appropriate delivery of health care, including virtual care.

Overview of virtual care policy

When Nova Scotia launched its new virtual care policy in 2020, it was primarily focused on ensuring the availability of health care services for Nova Scotians and ensuring that new billing codes were in place to compensate providers for this care. For example, effective March 13, 2020, all physician services that were normally rendered in a face-to-face setting were permitted to be billed as synchronous patient encounters that were “virtual,” with the majority taking place by telephone.

With the easing of pandemic-related pressures and the expiry of the initial policy, the focus of the new policy has expanded to other priorities including guidance on the appropriate use of virtual care, implementation of tools to support digital health equity, and opportunities for patient and provider input on the future of virtual care delivery in the province.

Since spring 2022, the province has prioritized extensive engagement with health authorities, patients and providers to improve and expand the existing policy. This included consultation on the impacts of new technology acquisition, the appropriateness of virtual care for first-time interactions between patient and provider, and the benefits and challenges with synchronous versus asynchronous service delivery.

Figure 2 shows some of the results of an evaluation conducted by Nova Scotia to understand the quality impacts of funding family physicians to provide virtual care. These results indicate that there is still some work to be done to align clinical appropriateness and patient preferences.

Other feedback received during the evaluation indicated that patients preferred telephone or text-based interactions over video visits and that more than 90% of patients who received care via telephone, text or video found that the modality used was right for them. A survey of providers also found that over 90% of interactions by providers using either telephone, text or video were logged as appropriate for that purpose.

Challenges and opportunities



In virtual care, we focus a lot on technology; however, most virtual care is still delivered via telephone. Understanding that virtual care can be simple in its delivery is important.

Nova Scotia is among Canada's most rural provinces and broadband connectivity can be a challenge for many residents. While low-tech solutions such as telephone and text messaging have supported more equitable access to virtual care, Nova Scotia is exploring whether community centres, libraries and other community-based settings could be leveraged to improve internet and computer access.

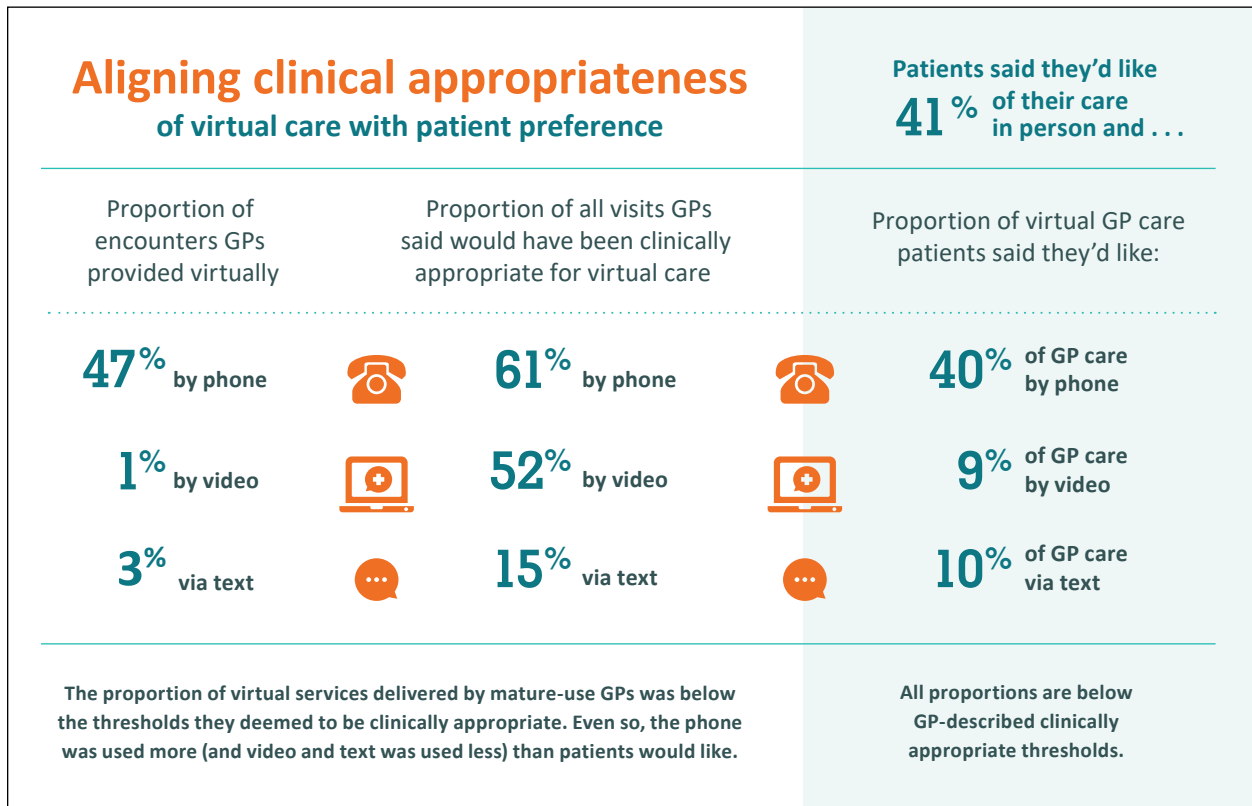
Since the start of the pandemic, the province has worked to leverage existing resources to better address emerging health system priorities. It was able to identify simple solutions such as telephone services to meet the demands of its citizens. The Nova Scotia Health Authority has also piloted translation support services and closed captioning in video to further support linguistic minorities in the province.

Like other provinces and territories, Nova Scotia has faced health human resource challenges, resulting in a redeployment of staff and resources throughout the health system. This caused delays in work on long-term strategic policy initiatives.

Future priorities

Nova Scotia is focused on having its new comprehensive virtual care policy approved by March 2023. This policy will inform new approaches to the organization and delivery of virtual care services in the future. Parallel initiatives will also support system improvements aimed at giving patients access to their own health information and enabling them to engage more actively in their health care. Like other provinces and territories, Nova Scotia will also work to provide a combination of virtual and in-person care to ensure that Nova Scotians without a primary care provider can still access health care when and where they need it.

Figure 2 Aligning clinical appropriateness of virtual care with patient preference



Note

"Mature use" means that the physician had demonstrated use of virtual care in their practice prior to the pandemic. This cohort is largely represented in previous virtual care demonstration/pilot projects across Nova Scotia.

Source

Adapted with permission. Nova Scotia Department of Health and Wellness, *Understanding the Quality Impacts of Funding Family Physicians to Provide Virtual Care in Nova Scotia — Final Report*. September 2022.

Ontario: Digital and Virtual Care Secretariat

Background

Ontario's experience with providing virtual care services, supported by the Ontario Telemedicine Network (OTN), predates the pandemic. Beginning in 2006, the Ministry of Health's Ontario Virtual Care Program, supported by OTN, introduced virtual visits to help patients in remote locations access care.¹² The COVID-19 pandemic fuelled renewed interest in expanding virtual care services.

Ontario's virtual care funding priorities in 2020–2021 targeted immediate COVID-19 response measures, while funding in 2021–2022 focused on COVID-19 recovery and virtual care technologies to enable integrated care models. Many of Ontario's digital and virtual care initiatives were organized by the Ontario Digital and Virtual Care Secretariat, which includes members from Ontario Health, the Ministry of Health and the health care sector. The complexity of Ontario's health system, which includes over 50 Ontario Health Teams (OHTs), called for a body to govern the distribution of funding to virtual care projects.

The Secretariat was set up to review and approve investments in innovative virtual care models to achieve more connected and patient-centred services. The Secretariat ensured that funding was made available to enable OHTs and other eligible health care organizations to support the care of priority populations (e.g., Indigenous Peoples; Francophones;

those receiving mental health and substance use services; frail seniors; people with chronic disease; unattached, underserved or marginalized communities). An example is the support of projects that had a community device-lending component in order to avoid exacerbating existing inequalities among communities lacking access to technologies required for virtual care.

Overview of Ontario's Digital and Virtual Care Secretariat

When the pandemic hit, there was a need and an opportunity to expand Ontario's virtual care service offerings and models. To achieve this, the Secretariat invited proposals for projects from OHTs and other eligible health care organizations with a focus on improving access to COVID-19 assessment and care and other integrated virtual care models in the community.

Early Secretariat projects focused on COVID-19 response measures such as enabling health care organizations to set up COVID-19 self-assessment and access to virtual visits for assessment and care. Learnings from these early projects and the associated Secretariat processes informed the development of further initiative funding streams under the Secretariat. An example is enabling

OHTs to work with Ontario Health to co-design new COVID-19 monitoring pathways to support patients who tested positive for COVID-19. The COVID-19 monitoring programs allowed patients and providers to connect through an app, with patients being supported in their community as they recovered from COVID-19. The app helped detect when patients were not feeling well and could help them connect virtually with a care provider.

Apart from COVID-19 patient-focused programs, a number of other virtual care initiatives were funded through the Secretariat. 2 of these other initiative streams are highlighted below (see Table 1).

Virtual surgical care programs ensure that patients receive the most appropriate care before surgery and monitor their recovery after surgery to optimize clinical outcomes and to help address hospital capacity and surge challenges. The number of funded program sites increased from 21 in 2020–2021 to 29 in 2021–2022, as did the number of patients enrolled (approximately 1,800 and 16,000, respectively). The significant increase in the volume of patients served in 2021–2022 was due to the programs being operational for a much longer duration within the fiscal year and to the maturity of the programs. Over 80% of surveyed patients reported that they were satisfied or very satisfied with their care experience.

Virtual urgent care centres also saw increased usage over the 2 fiscal years in operation. Visit volumes rose from close to 8,000 in 2020–2021 to over 27,000 in 2021–2022 due to an increased duration of operation within the fiscal year as well as to increased awareness and use of the service. The program also saw a high degree of patient satisfaction, with over 90% of surveyed patients reporting that they were satisfied or very satisfied with their care experience.

Challenges and opportunities

Launching new projects in 2021–2022 was challenging due to pandemic pressures. Despite funding availability and a willingness to make progress on many of these new projects, the timing of the funding meant that human resources were constrained, which posed challenges to sites developing, implementing and reporting on many of these newly funded projects. The sustainability of many of these initiatives continues to be challenged as special purpose funding draws to an end and human resources continue to be stretched.

Another challenge faced by the Secretariat and funded teams was the need for capacity building and supports for writing proposals and for collecting and reporting project data. This was particularly true of smaller OHTs in rural and remote communities that had limited resources to support this work on top of providing patient care.

Lessons learned

The need for the design of virtual care models and support with implementation, as well as the need for standardized data collection and reporting to support monitoring and evaluation, emerged as common barriers. To address these barriers, standardized reporting templates and guidance documents were created to support project data collection and reporting requirements. Regular follow-up sessions with project teams were scheduled to discuss challenges and provide coaching support to ensure that project sites were on track.

Future priorities

Many projects were supported through the Secretariat over the last 2 years of the pandemic. The next steps will be to review and assess how best to further enable the high-potential virtual care models, such as through best practice standardization, and enhancement and scaling of effective models.

Table 1 Virtual care initiative metrics

Initiatives	Outputs	2020–2021	2021–2022
COVID-19 self-assessment and virtual care access	Number of COVID-19 self-assessments	183,317	n/a
	Number of virtual visits delivered	23,115	n/a
Virtual pre-/post-surgical care	Number of sites participating across Ontario	21	29
	Number of patients enrolled	1,792	16,041
	Percentage of patients satisfied or very satisfied with their care experience*	83%	84%
Virtual urgent care	Number of sites participating across Ontario	15	16
	Number of patients who received a virtual visit	7,066	23,364
	Number of virtual visits	7,928	27,432
	Percentage of virtual visits referred to the emergency department	15%	14%
	Percentage of patients satisfied or very satisfied with their care experience*	94%	91%

Notes

* Based on patient survey data.

n/a: Data is not available.

Source

Data submitted to CIHI from Ontario Health based on the program-level reporting of virtual care initiatives, 2022.

Prince Edward Island: Patient and provider engagement to support appropriate and equitable access to virtual care

Background



Virtual care was in P.E.I. before COVID-19, but it exploded overnight.

As of 2022, virtual care in P.E.I. included ambulatory care, primary care, surgical services, and specialty services such as supports for mental health and substance use and chronic disease management. Given the breadth of virtual care programming available, Health PEI committed to working with patients and providers to identify strategies to improve equity of access to virtual care.

One of the outcomes of this work was the initiation of a consolidation plan to move from multiple platforms delivering virtual care to a few overarching platforms for all virtual care services.

This consolidation will help standardize the collection of key metrics such as the number of visits and the time spent in appointments, and will ensure the accuracy of the type of visit (telephone, video, messaging) being captured and reported. This data will support ongoing system management and future planning activities.

Overview of virtual care projects

A number of virtual care projects are in place across P.E.I. to support expanded access to care, including the following:

Virtual care specialty clinics: Islanders can meet off-island specialists virtually, without needing to leave the province.¹³

Remote Patient Monitoring (RPM): Before the pandemic, P.E.I. had an RPM system in place to support patients with chronic obstructive pulmonary disease (COPD) and congestive heart failure that has shown benefits in reducing hospital admissions and managing chronic conditions.¹⁴ Islanders can access easy-to-use, SIM-enabled tablets that measure health metrics, which are automatically sent to a nurse for daily review. These tools do not require the patient to have access to the internet and are simple to use, improving equitable access to care. RPM programs have expanded to other service areas (e.g., home care) and are available to patients across the province.

Unaffiliated Program: This offers patients without a primary care provider access to publicly funded virtual care services to ensure they receive the care they need. There were close to 10,000 unaffiliated patients registered in the program by the end of November 2022. If in-person care is needed, patients can receive care through the newly opened Primary Care Access Clinics.¹⁵

Patient and provider engagement

Patient and provider consultations were undertaken to better understand experiences with virtual services delivered to date and to identify opportunities for improvement. Voices of the Community was a patient engagement strategy to understand the experiences of adult users and non-users of virtual care through a provincial survey and a series of community meetings. It focused on understanding the patient journey and the benefits and challenges with existing platforms, and on identifying strategies for improving patient care.

Additional provider, patient and family partner advisory groups helped to identify opportunities to improve the patient journey and support providers in delivering better care. The outcomes of those discussions identified the need for

- A clear communications plan to ensure that Islanders have a better understanding of virtual care, including when and how it can be used, and what services are available to them;

- A toolbox of [plain language resources](#) for patients and providers to ensure they have the supports they need to enhance and improve their digital health literacy; and
- A [support desk](#) for patients and providers who need help with digital health tools (e.g., connecting to videoconferencing technology, registering for specific programs).

Health PEI has also implemented [a learning series](#) to support internal teams' understanding of the technologies being implemented and how they can support health system decision-making. These sessions are modelled after similar programs in Nova Scotia focused on improving providers' digital health literacy.

Future priorities



While all the benefits won't be immediately realized, in the next 5 years virtual care will be in all program areas, building on the foundational work we're doing right now.

Since the start of the pandemic, Health PEI has been committed to engaging with patients and providers to identify what works, what can be improved and how that advice can inform future work.

By engaging patients and providers in discussions and streamlining virtual care platforms, the team can then shift their attention to ensuring continued commitment to support plain language communication with patients about virtual care options available to them.

Case studies focused on programs and initiatives

British Columbia: Health Gateway improves the public's access to their own health information



By empowering the public, we're shifting the dynamics and the model of health care service delivery.

Background

British Columbia has used personal health information tools in the past; however, these tools were limited to residents of specific regions.¹⁶

B.C.'s Health Gateway was designed in 2019 as a provincial tool that provides British Columbians with access to their health information, regardless of location. Over 1.2 million B.C. residents now use the website.¹⁷

Overview of Health Gateway

Through Health Gateway, patients age 12 and older can access their medication history, lab results, proof of vaccination, COVID-19 test results, health visit details, immunization records and status of special coverage requests for drugs or medical supplies or devices.

In response to the COVID-19 pandemic, B.C. accelerated the expansion of the initiative, which served to promote people's access to and ownership of their own health information, finding efficiencies on how to accomplish this within a health care system that has been taxed during the pandemic.

Data submitted to CIHI shows that Health Gateway registrations peaked in September 2021 at over 300,000 registrations that month, coinciding with the availability of the BC Vaccine Card on the platform at that time. Since then, the flow of registrations has continued, averaging about 21,000 per month between February and July 2022.

Challenges and opportunities

There were a few challenges with the expansion of Health Gateway: questions and concerns around the privacy and security risks associated with how quickly the initiative was rolled out; and sensitivities about offering access to private health information to patients as young as 12.

Another challenge, which arose later in the pandemic, was the attempt to understand the value and effectiveness of virtual care for the health system. Data systems were disconnected from each other, which made it difficult to get a provincial overview of data that could be analyzed to provide a meaningful system-wide understanding of the impacts of the new virtual care programs.

The success of projects like Health Gateway depends on improved access to broadband internet for rural and remote residents. In spring 2022, an agreement was announced between the provincial and federal governments to provide up to \$830 million to support the expansion of high-speed internet services across the province, which aligns with the target to provide access to internet services for all households in B.C., including those in First Nations communities, by 2027.¹⁸ To ensure equitable access to care, digital options must also be accompanied by non-digital options.

To enhance health equity in rural, remote and First Nations communities across B.C., Real-Time Virtual Support (RTVS) pathways were set up to connect rural health care providers and patients with RTVS virtual physicians via Zoom or telephone. The volume of both rural physicians and patients accessing the program to connect with virtual physicians increased between May 2020 and July 2022 (see Figure 3).

There is still work to be done to improve the access to and use of virtual care services in a way that is meaningful for rural/remote and new British Columbians. For example, new residents of the province, whether moving from other provinces and territories or other countries, do not have an interoperable patient record, preventing providers from having a health history for all residents.

Lessons learned

Collecting data for its own sake, without a clear perspective of the desired outcomes and considerations of what is achievable, has limited value. Purposeful data collection enables the goals of the initiative to be successfully assessed.

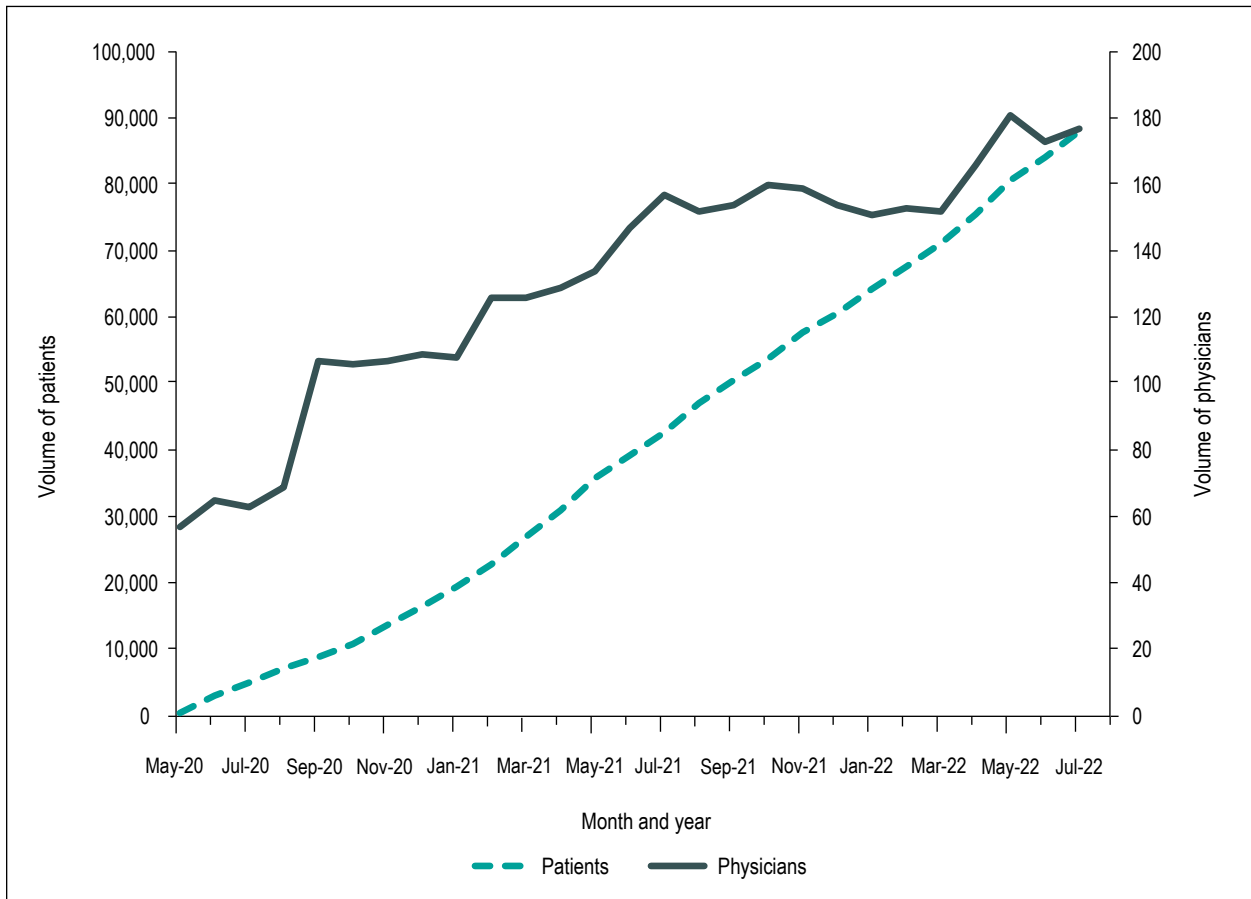
Health Gateway is managing the private health information of patients and is responsible for correcting erroneous data that it receives from the source. Data maintenance practices ensure that data corrections are applied in a timely way and that data quality is maintained.

Future priorities

Work will continue to provide B.C. residents with easy and secure access to personal health information through B.C.'s Health Gateway. Federal funding will be used to develop additional functionalities, potentially including lab results, diagnostic imaging reports, hospital and community

health visits, and personalized care plans. It will be important to recognize the full value of virtual care in conjunction with in-person care, particularly to address the health workforce challenges faced across the country.

Figure 3 Volumes of rural physicians and patients accessing the Real-Time Virtual Support pathways, May 2020 to July 2022



Source

Data submitted to CIHI from British Columbia's Real-Time Virtual Support (RTVS). 2022.

New Brunswick: Expanding access to virtual careⁱⁱⁱ

Background

Telehealth programs have been operating in New Brunswick since 1998. Virtual care was used by some family physicians prior to the pandemic, but the tools were limited and the functionality was specific to the provincial EMR.¹⁹ The COVID-19 pandemic provided the impetus to accelerate the implementation of virtual care for basic primary care services across the province. New Brunswick identified the Connected Health model as a critical need for the health system. It has the potential to enable better access to care for residents through timely and efficient sharing of patient health data, and by effectively connecting all involved stakeholders, particularly when the clinician and client are not in the same location.²⁰ Virtual care is an important component of the connected care approach.¹⁹

Overview of eVisitNB

eVisitNB is a virtual care platform that was launched prior to the pandemic, in 2019. The service was initiated as a partnership between 2 physicians and now includes a number of nurse practitioners and a care navigator who work to provide virtual primary care services.

At the start of the pandemic, the provincial government created temporary billing codes to enable patients to access virtual care through eVisitNB as well as other virtual platforms. This permitted physicians to bill virtually for services that were previously allowed for in-office settings only. A virtual visit location code was added to the physician billing codes to make virtual services easy to identify. Most virtual services are still provided by phone.

The eVisitNB platform provides data on the number of patient visits per month as well as average patient satisfaction scores.

In order to understand issues of digital health equity, the New Brunswick Health Council is conducting a primary care survey that includes questions regarding barriers to and difficulties in accessing virtual care services, as well as about experiences with connectivity and communication. The results of this survey are expected to be available in summer 2023.

ⁱⁱⁱ. Information for this case study was submitted in written form, not obtained during an interview.

Challenges and opportunities

Addressing the following challenges can foster improvements in how virtual care is delivered in New Brunswick:

- Gaps in digital literacy may exist among physicians, as well as a hesitancy to adopt new technology.
- Virtual care is not a part of the medical reciprocal payment agreement (where physicians can be compensated for providing care to patients from outside the province), creating challenges in terms of physicians working in the virtual environment.
- A lack of standardized definitions and measures of access and quality of virtual care makes operating in this space challenging.

Future priorities

Future priorities include improving data collection via the eVisitNB portal.

The New Brunswick Health Council is planning a citizen engagement initiative called the Patient Voices Network (PVN) to learn about New Brunswick residents' experiences with virtual care and to support a patient-centred system.²¹

Newfoundland and Labrador: Expansion and enhancement of virtual care services

Background

Newfoundland and Labrador has long used virtual care to deliver health services to residents, particularly to support its large rural population, which is distributed over a large geographic area.²² In particular, the provincial telehealth program has supported this delivery for decades. With the emergence of the COVID-19 pandemic came an urgency to expand and enhance this program, including increasing access to technologies, expanding virtual programs across health care sectors, and helping to build digital health literacy among the population. This broadened the scope of the existing telehealth program and it was renamed the Virtual Care Program.

Overview of expansion and enhancement activities

Newfoundland and Labrador's virtual care expansion work was critical in meeting citizens' health care needs in the wake of the pandemic and will support access across the continuum of care into the future. Investments in equipment to scale up existing service offerings were a key component. Telehealth equipment, for example, was extended to more locations to support patients' access to providers including those in primary

care and emergency departments (EDs), and specialists. This also supported the health and well-being of residents in long-term care facilities who were isolated from friends and family due to pandemic restrictions. Residents were provided with electronic devices to help mitigate these restrictions.

The types of equipment available were also enhanced; for example, virtual stethoscopes were added to sites and telehealth equipment was added to EDs to allow patients to connect with providers who were not on site. The addition of this ED equipment not only helped to address staffing pressures but will continue to support patients and their families to help mitigate the cost of travelling to urban centres for the care they need.

Expansion also supported patients receiving specialist care. For example, oncologists were able to use the province's new virtual care platform to conduct follow-up appointments not only from the traditional telehealth units in facilities but also from their homes, which helped patients avoid travelling to in-person appointments.

Newfoundland and Labrador has an aging population and recognizes the need to support patients in their uptake of and comfort with virtual care in parallel with its efforts to grow the program.

The province is supporting digital health equity by expanding the availability of user-friendly technological solutions that are accessible and functional regardless of a patient's ability to connect to the internet. It is committed to working with patients and caregivers to inform strategies to support digital health literacy across the province.

Challenges and opportunities

At the onset of the pandemic, new initiatives were put in place quickly, which resulted in some of them operating separately and in isolation from each other. Although this was necessary for service provision at the time, the province's goal is to build better governance structures to coordinate initiatives and to ensure consistent and integrated approaches to providing care. A key to achieving this goal is a new comprehensive digital care strategy, which is expected to be completed in the near future.

Virtual care has also presented challenges for both patients and providers who are learning how best to leverage these modalities to support appropriate care. For providers, virtual care has an impact on their workflow and workloads. And for this new mode of health care delivery to be successful, it is important that both patient and provider feel comfortable and confident in using the technology. Building a rapport,

committing to being seen in person when the need arises, and feeling overwhelmed with the speed and extent of acquiring new knowledge can impact patient and provider mental health.

Additionally, inequalities can present themselves, as some patients have limited access to technical means due to their skill level, to their economic situation or to limited internet access. Both patients and providers recognize the need for agreement on the most appropriate modalities (whether telephone, video, in-person) based on unique patient and provider needs.

While questions of appropriateness for virtual care visits will be an ongoing conversation, there is also recognition of the need for a consistent direction on the use of virtual care that considers the nuances of each jurisdiction.



We need to have some kind of standardized national approach in place to using virtual services so that we are using them in the same way and with the same criteria.

Future priorities

Patients and providers will drive the future of virtual care delivery in the province. Surveys of patients and providers are underway to support change management, digital health literacy and other initiatives to ensure that patients and providers are well supported with options to provide care in the right setting at the right time.

Nunavut: High patient satisfaction with Virtual Nurse Practitioner Chronic Disease Program

Background

Nunavut has deployed telehealth services to its 25 communities for over a decade, with equipment provided in every health centre to facilitate patient–provider communication. Virtual health care reduces the need for clinicians to travel to the territory and improves the care that patients can receive in their own communities.

Nonetheless, a strong foundation in primary care has been difficult to achieve due to challenges such as recruiting and retaining staff. Internet bandwidth also remains a challenge and patients may not have internet access or cell connectivity in their homes.

To address gaps, a new virtual chronic disease management program has been piloted to support patients at home. This program offers an adaptable model of care delivery that leverages nurse practitioners.

Overview of Virtual Nurse Practitioner Chronic Disease Program

The Virtual Nurse Practitioner (NP) Chronic Disease Program has a dedicated NP workforce providing chronic disease management in 9 communities across Nunavut. NPs meet patients virtually at minimum every 3 months and can have virtual specialist consults to support patient care.

Data collected over a 12-month period since October 2021 shows increasing registration in the program (358 new referrals rostered in October 2022, compared with 121 in December 2021). Nearly half of patients (45%) had 3 chronic diseases addressed per visit.

The program provides an opportunity for patients to be screened for chronic disease and cancer, including cervical and colorectal cancer, hypertension and diabetes. Between 27% and 42% of newly referred patients were not up to date with screening. Of these patients, more than 90% became up to date with screening after their first intake appointment.

Chronic disease biomarkers showed a statistically significant decrease following program enrollment. Patients at higher risk (e.g., uncontrolled diabetes, significantly overweight) saw the greatest benefit, with a larger average decrease in their biomarkers.

Patient-reported experience and outcome measures showed high satisfaction with the program.^{iv} 96% of patients were satisfied with their overall experience 93% of patients indicated that they had received the same quality of care with the virtual NP as with an in-person visit, and 94% felt that their cultural values had been respected during their appointment.

97% of patients replied that there has been a positive change to their quality of life, and 94% felt that their chronic disease was better managed since seeing the virtual NP.

High patient satisfaction with their experience and health outcomes, coupled with evidence of biomarker decreases, are indicators of the program's success in managing patients' chronic conditions.



I've been enrolled in the program a year, a year and a half. I wouldn't say my health is better, but my health is managed better. My diabetes has never been managed in all of the 16 years I've been in Nunavut. I have an eye appointment for the first time. Things are happening faster. My medication is being dispensed properly. I had a cardiology referral that I think happened faster because of the telehealth — they found an issue with my heart. The nurse practitioners, even if they are new, seem prepared and knowledgeable. I don't have to talk about a new thing over and over again — it's seamless. I would prefer if it was 1 nurse practitioner though.

Participant from Kinngait

^{iv}. Findings combine those who indicated they “strongly agree” or “agree” with survey statements.

Challenges and opportunities

Various challenges around data and its collection have been encountered:

- Data is often collected manually, on paper, which is time-consuming and presents a barrier to data standardization.
- Data can be lost for patients travelling for care outside the territory, as external systems are not interoperable with those within the territory.
- A large proportion of the population is unilingual, and translation is required for data collection.
- It is critical to protect the privacy of individuals in small communities during data collection and reporting. However, suppressing data due to small counts can hinder reporting on small populations within these communities, complicating an exploration of health inequities.

Lessons learned

Workforce challenges persist, and have been exacerbated by the pandemic. Staff shortages can result in temporary suspension of primary care services and in appointment delays, highlighting the need for dedicated and trained resources. Different care models offer options when resources are limited and can be adapted in other jurisdictions. It is helpful to think outside the box when determining who can deliver virtual care services, and to consider other models of care delivery (e.g., leveraging other health care professionals such as NPs, rather than doctors).

Additionally, leveraging existing community relationships can foster trust, while considerations of community variability should accompany implementation of new programs or technology.

Future priorities

Teams are striving to set up sustained, operationalized programs for the future and to expand to other clinics across the territory, which would require sustained funding and further improvements in internet bandwidth.

Physicians have also seen the value in these programs: there are plans to move to a blended model of both physician and NP involvement with rostered patients (both in-person and virtual). The goal is to remove disconnected primary care by integrating virtual care as an option.

The program's success highlights the value of integrating NPs within virtual care to improve access to primary health care, and provides an adaptable model for others across Canada delivering care to rural and remote populations.

Saskatchewan: Adoption of a provincial clinical videoconferencing program

Background

The Telehealth Network, which began in 1999, is Saskatchewan's largest and longest running virtual care service. Use of telehealth programs has grown steadily since its introduction, with a 49% growth in the number of patients seen for clinical services between 2016 and 2017.²³ Prior to the COVID-19 pandemic, Saskatchewan had been exploring options to modernize its virtual care system and the pandemic pressed the province to develop a virtual video platform (SK Virtual Visit). This system would provide reliable videoconferencing, work on multiple devices and meet the growing needs of patients and providers.

Saskatchewan is a largely rural province. Virtual care has the potential to improve access to health care for those living in rural and remote communities while also supporting the needs of those in urban communities.

Overview of videoconferencing initiative

The adoption of a provincial clinical videoconferencing system was a priority for Saskatchewan. The system was rapidly deployed at the start of the pandemic and was rolled out across the province with approximately 3,000 licences.

The province also enacted temporary phone and video virtual visit fee codes to support physician uptake of virtual care.

The rollout of the videoconferencing system was accompanied by ongoing evaluation efforts. The province's data collection goals were focused on uptake and evaluation of overall acceptability of the videoconferencing tool. Data submitted to CIHI shows that between April 2020 and August 2022, there were over 570,000 videoconferencing calls from providers to patients using the system. In the same period, there were 260,000 calls between providers.

Between April 2020 and March 2021, only 1 rural patient was served through the secure videoconferencing system. However, this number rose to 2,850 patients between April 2021 and March 2022, showing progress on the goal of increasing uptake.

Investments in expanding virtual care continue. Although in-person care is prioritized, virtual care is provided as an option when appropriate.

Challenges and opportunities

Improving access to care for rural and remote communities was important for the province from the start. However, these communities had more difficulty accessing videoconferencing due to a lack of infrastructure to support its use.

To address that gap, in November 2022 the Government of Saskatchewan announced an investment of an additional \$100 million in expanding fibre optic broadband to rural and remote communities in the province.²⁴

Providing a virtual care option can enhance equity by helping ease follow-up time without the need for travel time, which also supports equitable access to care for individuals who may be unable to travel. This can support better management of medical conditions. It also makes it easier for caregivers and family members to join appointments and support patients virtually.

There is also recognition that Saskatchewan relies not only on the videoconferencing system but on other services such as remote patient monitoring and MySaskHealthRecord, and there are opportunities to further link the systems to provide a more fulsome picture of the province's overall health system performance.

Lessons learned

Early engagement with patient advisors and health care providers to inform the procurement process for the new technology was challenging yet crucial. The collaborative approach was welcome, although it was more challenging because of the pandemic.

Providers had some challenges using the software for videoconferencing. This could be addressed by focusing on acquiring software systems that are designed by and for physicians who work within the Canadian health care environment.

Future priorities

In the shorter term, monitoring and evaluation efforts were primarily focused on uptake and use of the new videoconferencing system. Going forward, there will be a focus on monitoring and evaluating the impact of this new service for patients across the province, as well as a desire to see more interoperability both within the province and across the country.

Yukon: Remote patient monitoring supports patients with chronic conditions in their communities

Background

Between 2010 and 2020, the number of telehealth sessions remained relatively low in Yukon, ranging between 450 and 892 per year, while the use of virtual care technologies increased annually across Canada in that same period.²⁵ The 2020 *Putting People First* final report recommended increasing virtual care and options for Yukoners to connect with care from their homes.²⁶ In response to the recommendations from this report, a number of initiatives are planned that use technology to increase access to care and improve its delivery and coordination, as well as to improve patient and provider experiences. Among these new projects, the territory has introduced new remote patient monitoring (RPM) programs to address the needs of those with chronic conditions, right in their own homes.

Overview of remote patient monitoring programs

Given the territory's dispersed population, an equitable solution was required for patients with chronic conditions in rural areas to access care. This solution needed to address challenges with internet access, and socio-economic difficulties, which make travel more difficult.

2 new RPM programs were piloted as an integrated solution to reach patients in rural or remote communities:

- Pulmonary rehab is an 8-week intervention program. It consists of weekly educational sessions, consultations with a certified respiratory educator and a pharmacist, physical assessments and exercise programs conducted via a tablet and monitoring equipment. Daily monitoring is completed by a clinic nurse.
- Chronic disease monitoring from home offers educational services to help patients with COPD, diabetes, hypertension or cardiovascular disease, also conducted via a tablet. The program aims to reduce hospitalizations, improve early recognition and identify flares.

Overall, patient feedback has been very positive for the program and met objectives around achieving greater disease knowledge, confidence and self-management of the patient's condition.

Since program launch, the territory has continued to develop and expand both virtual care and RPM services within the scope of chronic disease management.

All currently offered disease-specific educational programs are now available both in-person and virtually. In addition, all one-on-one exercise physical assessments, chronic disease nurse educator consults, certified respiratory educator and dietitian appointments can now be facilitated virtually. These services leverage RPM equipment in clients' homes, telehealth at the community health centres and Zoom for Healthcare (a secure web-based platform for health care providers) using existing client equipment in home.

As of December 2022, over 140 Yukoners have received RPM services, and many more have received services virtually through other channels.

Challenges and opportunities

Stressors introduced by the pandemic created a number of challenges. There has been a lack of an overarching digital health/virtual care strategy to guide the development of these virtual programs. This has posed challenges for identifying a data collection strategy and narrowing down the metrics collected, particularly given the extensive data and analytic possibilities offered by the software. Additionally, this made it difficult for the programs to align their goals and objectives with those of the Department of Health and Social Services.

Program administrators do not work in primary care, and there has been limited physician engagement during

early implementation — another consequence of resource constraints due to the pandemic. This disconnect between program administrators and the physician community introduced a barrier to service delivery and decreased the likelihood of expansion into other care settings.

Lessons learned



Virtual care will be best deployed by integrating it into currently offered programming. That's the biggest bang for buck: taking already offered programming and integrating it into a virtual delivery to expand access.

Ensuring that front-line staff, along with public- and private-sector stakeholders, are part of strategic direction discussions can support better integration across Health and Social Services and can improve service delivery.

Additionally, it is important to provide easy-to-use technology solutions with secure systems that do not rely on patients already having compatible technology. Providing tablets that had their own cellular data capabilities was critical to ensuring that technology availability and security, internet access and associated costs were not barriers to patients. While this introduces higher deployment costs than those associated with an app, for instance, it improves equity. Vendor-provided technical support for patients was also beneficial and saved program administrators considerable time.

Future priorities

There are plans to move to more goal-oriented care by defining the goals of patient monitoring (including the patient's) and considering the appropriateness of daily monitoring. Programs have become a blend of in-person and virtual, considering patient preference of modality. A pilot will be initiated in 2023 to expand the virtual chronic disease management program into cardiac rehab.

Common themes

Semi-structured interviews with key informants illustrated the diversity of starting points and the wide range of virtual care priorities across the country. Various limited forms of virtual service delivery have existed in most provinces and territories for decades. The pandemic provided the impetus for substantial changes to the virtual care landscape, as health systems expanded and enhanced existing services. Equity, standards and interoperability, health human resource challenges and patient and provider engagement were common themes across the interviews. All interview participants acknowledged the value of exchanging learnings on a range of virtual care topics, including new models of care delivery, engagement strategies, and recruiting and retaining hard-to-find resources.

Equity remains a key virtual care priority

Equity has been an important consideration for virtual care since the start of the pandemic.^{27–30} Through the range of projects spotlighted, interview participants shared how they have been thinking about and addressing the need to promote equitable access to virtual care. In some provinces and territories, the strategies focused on ensuring that individuals with different socio-economic means were not disadvantaged. In others, the focus was more structural in nature (e.g., ensuring internet access for rural and remote communities). Expanding internet access for patients in rural and remote settings was a key equity issue for most jurisdictions, and has also been noted in the literature.^{31, 32}

The case studies highlight how access barriers related to technology and connectivity are being addressed by

- Providing locations, such as community health centres, where patients can access the technology to engage in virtual care; and
- Developing device-lending programs where patients can obtain the necessary technology for virtual care programming with minimal out-of-pocket costs.

Equity issues — digital health literacy and ease of access to virtual care — are being addressed by

- Providing education and support to both patients and providers on using available virtual care technologies;
- Ensuring that digital access options are accompanied by non-digital options, to meet patients' needs and circumstances; and
- Providing translation services, and having technology platforms and information materials available in different languages so that patients can access virtual care in their primary language.

Data standards and interoperability

High-quality virtual care rests on a foundation of seamless data-sharing to support quality and continuity of care; however, interoperability is a long-standing system challenge. The expansion of virtual care provides an impetus for systems to become even more connected.^{1, 33}

Interview participants stressed the importance of having consistent and readily available information to ensure continuity of care, whether care was delivered in person, virtually or both.

They also recognized the importance of data standards to enable seamless sharing of information across in-person and virtual care. Most provinces and territories still have a way to go to achieve standardized data collection, and some are still identifying and defining their specific data needs. In some jurisdictions, certain regions, sectors or providers may still collect data using manual or paper methods or processes, hindering progress. Supporting the transition from paper records to digital systems is viewed as an integral part of health systems' digital maturation.

Most jurisdictions are focused on interoperability within their own province or territory. They recognize that a future priority must be broader Canadian interoperability. This is particularly relevant for jurisdictions where there is frequent patient travel for medical care outside their provincial/territorial borders, and where virtual services could reduce the need for travel.

Addressing health human resource challenges

The COVID-19 pandemic both exacerbated existing and introduced new challenges with health human resources (HHR).³⁴ Having sufficient staff to deliver front-line services was a common concern, but participants also highlighted the importance of having personnel to support policy, governance and strategic work. Some interview participants acknowledged that human resource challenges impacted the ability to plan, implement and support new virtual care initiatives. The increased uptake of virtual care may have contributed to a challenging HHR environment. Health care personnel across sectors were faced with the additional burden of adapting quickly to provide virtual services, such as by creating new protocols, changing patient pathways or launching new tools that may not have been well-integrated into existing workflows.

To address HHR challenges, provinces and territories are seeking to provide change management supports, further develop virtual care offerings, expand scopes of practice (e.g., for [pharmacists](#)) and leverage NPs and other health professionals to support the delivery of care. Virtual care offers new ways to optimize HHR and can allow a redistribution of available resources by reducing the constraints imposed by provider location. Most jurisdictions are trying to find the optimal balance of in-person and virtual care delivery to meet the needs and preferences of providers, patients and the overall system.

Patient and provider engagement

Patient and provider engagement is a cornerstone of high-quality, evolving health systems.^{35–37} Many interview participants mentioned the importance of including both patient and provider engagement when developing, implementing and evaluating the virtual care policies, strategies and projects they focused on during the pandemic. For example, several jurisdictions launched patient and provider forums and advisory groups to inform their virtual care initiatives. Others conducted surveys and evaluations with providers to support change management initiatives and to improve tool design to meet patient and provider needs.

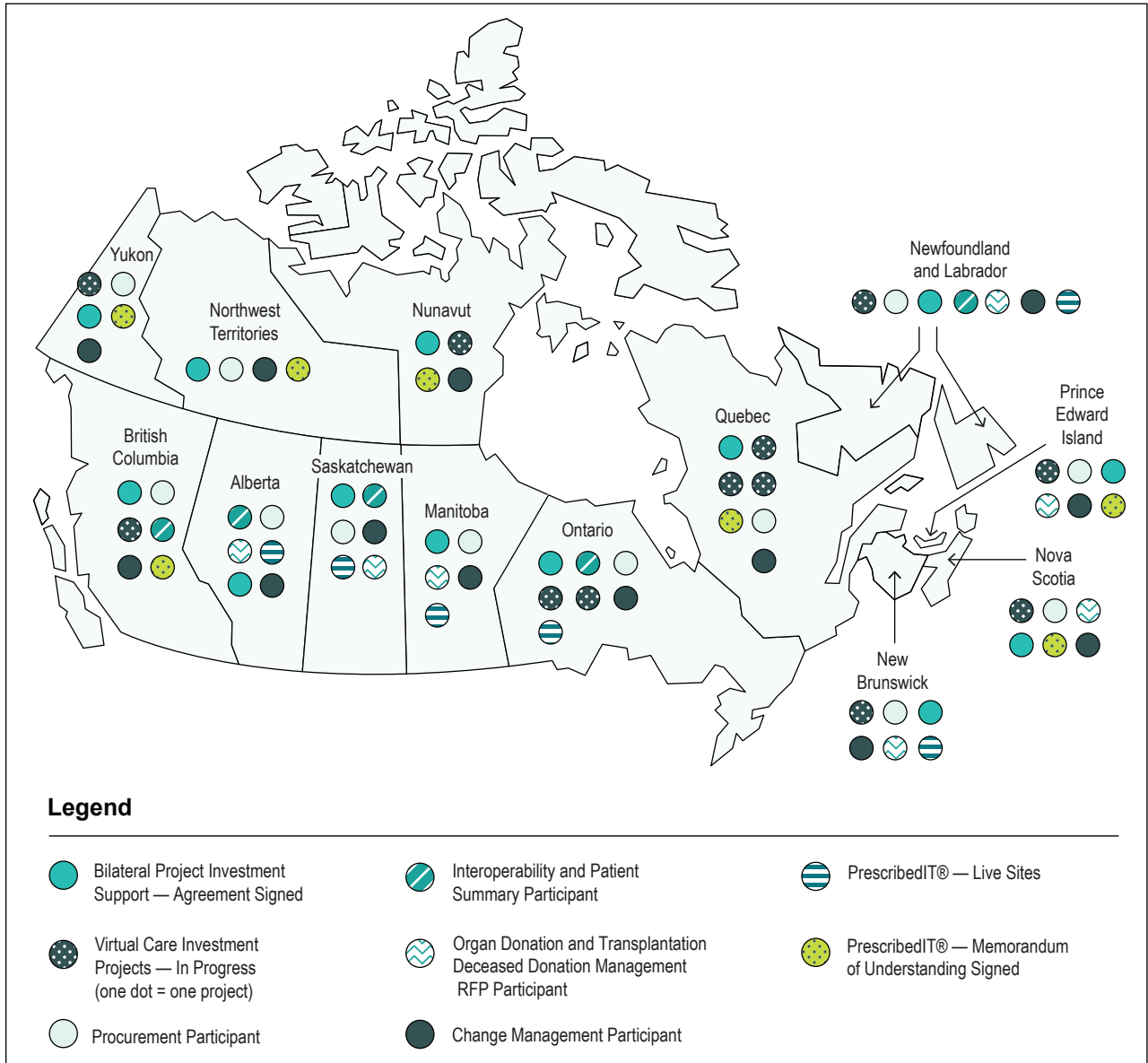
Conclusion

Since the arrival of the pandemic, health systems have worked quickly to deliver virtual care services in an equitable way, using appropriate modalities for patients and providers. In doing so, they faced common challenges related to standardized data collection and resource constraints, and benefited from patient and provider engagement throughout the process of planning and implementing their work. Provinces and territories are now focused on how to build sustainable, integrated virtual care options, and on maximizing available resources to deliver more seamless patient-centred care.

Building a foundation of data standards is crucial to support health system performance measurement and to achieve interoperability between and within health systems. As provinces and territories consider how virtual care can become an integrated part of their health services beyond the pandemic, there is a role for CIHI to support them in standardizing virtual care data, measuring the delivery and impact of virtual care services, and continuing to learn from each other.

Appendices

Appendix A: Overview of provincial/territorial project activities supported by Canada Health Infoway



Source

Adapted with permission. Canada Health Infoway, [Annual Report 2021–2022](#). 2022.

Appendix B: Acknowledgements, and interview participants and data providers

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Please note that the analyses and conclusions in the present document do not necessarily reflect those of the individuals or organizations mentioned above.

Appendix C: Text alternative for figures

Text alternative for Figure 1: Proportion of primary care physicians whose practice offers patients options to communicate with their practice electronically

The proportion of primary care physicians whose practice offers patients the option to. . .	Canada, 2019	Canada, 2022	Commonwealth Fund average, 2019	Commonwealth Fund average, 2022
Schedule appointments online*	22%	38%†	56%	57%
Communicate with your practice via email or a secure website about a medical question or concern	23%	50%†	65%	75%
View patient visit summaries online	5%	12%†	26%	42%

Notes

* The wording of the question in the 2022 survey was modified slightly from “Request appointments online” in the 2019 survey.

† The 2022 results were found to be significantly different from the 2019 result.

Source

The Commonwealth Fund, 2022 International Health Policy Survey of Primary Care Physicians in 10 Countries. 2022.

Text alternative for Figure 2: Aligning clinical appropriateness of virtual care with patient preference

GPs provided 47% of encounters by phone, 1% by video and 3% via text. GPs said that 61% of all visits would have been clinically appropriate by phone, 52% would have been clinically appropriate by video, and 15% would have been clinically appropriate by text. The proportion of virtual services delivered by mature-use GPs was below the thresholds they deemed to be clinically appropriate. Even so, the phone was used more (and video and text were used less) than patients would like.

Patients said they'd like 41% of their care in person and 40% of their GP care virtually by phone, 9% by video, and 10% by text. All proportions are below GP-described clinically appropriate thresholds.

Note

"Mature use" means that the physician had demonstrated use of virtual care in their practice prior to the pandemic. This cohort is largely represented in previous virtual care demonstration/pilot projects across Nova Scotia.

Source

Adapted with permission. Nova Scotia Department of Health and Wellness, *Understanding the Quality Impacts of Funding Family Physicians to Provide Virtual Care in Nova Scotia — Final Report*. September 2022.

Text alternative for Figure 3: Volumes of rural physicians and patients accessing the Real-Time Virtual Support pathways, May 2020 to July 2022

Month and year	Volume of physicians	Volume of patients
May 2020	57	490
June 2020	65	3,127
July 2020	63	5,105
August 2020	69	7,237
September 2020	107	8,910
October 2020	106	10,898
November 2020	107	13,760
December 2020	109	16,512
January 2021	108	19,515
February 2021	126	22,877
March 2021	126	27,010
April 2021	129	31,047
May 2021	134	35,843
June 2021	147	39,268
July 2021	157	42,713
August 2021	152	47,172
September 2021	154	50,597
October 2021	160	53,815
November 2021	159	57,820

Month and year	Volume of physicians	Volume of patients
December 2021	154	60,689
January 2022	151	64,383
February 2022	153	67,689
March 2022	152	71,219
April 2022	166	75,596
May 2022	181	80,697
June 2022	173	84,189
July 2022	177	88,097

Source

Data submitted to CIHI from British Columbia's Real-Time Virtual Support (RTVS). 2022.

Text alternative for Appendix A: Overview of provincial/territorial project activities supported by Canada Health Infoway

Province/ territory	Bilateral Project Investment Support — Agreement Signed	Virtual Care Investment Projects — In Progress	Procurement Participant	Interoperability and Patient Summary Participant	Organ Donation and Transplantation Deceased Donation Management RFP Participant	Change Management Participant	PrescribeIT® — Live Sites	PrescribeIT® — Memorandum of Understanding Signed
N.L.	Yes	1 project	Yes	Yes	Yes	Yes	Yes	No
P.E.I.	Yes	1 project	Yes	No	Yes	Yes	No	Yes
N.S.	Yes	1 project	Yes	No	Yes	Yes	No	Yes
N.B.	Yes	1 project	Yes	No	Yes	Yes	Yes	No
Que.	Yes	3 projects	Yes	No	No	Yes	No	Yes
Ont.	Yes	2 projects	Yes	Yes	No	Yes	Yes	No
Man.	Yes	None	Yes	No	Yes	Yes	Yes	No
Sask.	Yes	None	Yes	Yes	Yes	Yes	Yes	No
Alta.	Yes	None	Yes	Yes	Yes	Yes	Yes	No
B.C.	Yes	1 project	Yes	Yes	No	Yes	No	Yes
Y.T.	Yes	1 project	Yes	No	No	Yes	No	Yes
N.W.T.	Yes	None	Yes	No	No	Yes	No	Yes
Nun.	Yes	1 project	No	No	No	Yes	No	Yes

Source

Adapted with permission. Canada Health Infoway, [Annual Report 2021–2022](#). 2022.

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**CIHI Ottawa**

495 Richmond Road
Suite 600
Ottawa, Ont.
K2A 4H6
613-241-7860

CIHI Toronto

4110 Yonge Street
Suite 300
Toronto, Ont.
M2P 2B7
416-481-2002

CIHI Victoria

880 Douglas Street
Suite 600
Victoria, B.C.
V8W 2B7
250-220-4100

CIHI Montréal

1010 Sherbrooke Street West
Suite 602
Montréal, Que.
H3A 2R7
514-842-2226

cihi.ca

28011-0123

