Will COVID-precipitated advances in the use of digital health in Canada persist or backslide in the "next normal"?

While the COVID-19 pandemic brought chaos in healthcare, education, and world economies during the first half of 2020, it also accelerated the adoption of a new "virtual first" model in the Canadian healthcare system.

Advancing beyond simply delivering primary care, digital health platforms now connect intensive care specialists in large centres to smaller hospitals lacking their expertise, provide primary and specialty care to rural and remote communities, correctional facilities, and long-term care homes, and play large roles in mental health assessment, treatment and supports[1].

Digital health and data platforms are no longer ways to simply connect patients to doctors remotely. Canada Health Infoway notes that 93 per cent of physicians who use Electronic Medical Records (EMRs) have touted the ability to provide better patient care, reduce duplicate tests and minimize adverse drug events. Rapid growth in the volume, speed of transmission, and variety of data, otherwise known as 'big

[1] New Normal: Are virtual doctor's appointments here to stay? https://www.ctvnews.ca/health/coronavirus/new-normal-are-virtual-doctor-s-appointments-here-to-stay-1.4939255

data', can revolutionize traditional approaches to data storage, management, and analysis. Big data has the potential to transform the health sector with rich opportunities for improving population health, predictive analysis, personalized healthcare, research, and education.

Yet even though Canada was a forerunner in telehealth over 30 years ago, providing services to remote populations in Newfoundland through the telephone, we have sadly fallen far behind other countries in the uptake of digital health.

A 2016 Commonwealth Fund study found Canada not only lagged behind its peers in the adoption of digital tools, there is also considerable variation across the provinces and territories[2]. Canada's provincial and territorial-led healthcare systems result in varying standards, inconsistent interpretation and application of privacy frameworks and legislation, and lack of unified data governance frameworks. Unsurprisingly, these siloed health systems present significant barriers to unlocking and leveraging data.

The course of COVID-19 shows us the incredible potential of properly harnessing the power of data, particularly in the area of predictive modeling. After the first confirmed case was reported in Wuhan, China at the end of 2019, mathematical and computational models[3] provided the basis for the World Health Organization to declare the potential for a global pandemic less than a month and half later. Similarly, modeling was used to predict infection and mortality rates and spur countries to take decisive actions in the interest of public health and safety.

Experts believe that the evolution of long-established health care delivery models is imminent. The Canadian Medical Association has identified that more than two-thirds of medical follow ups can be conducted virtually and their recent polling of 1,800 Canadians interviewed, showed that 91% were very satisfied with virtual care services and 42% would prefer to continue using them[4]. HealthCare*CAN* continues to engage with our members and the federal government to support the acceleration of digital health solutions in Canada.

WHAT IS HOLDING BACK WIDER APPLICATION OF VIRTUAL CARE?

The major advantage of more widely used digital health services will undoubtedly be convenience, saving time and money for both patients and health professionals. However, experts fear that the wide-spread use of virtual care may further marginalize disadvantaged groups and lead to poorer health outcomes for populations living in rural and underserviced areas, lower socio-economic status or homeless, having lower digital health literacy, and suffering from mental illnesses[5].

Current regulations and policies are insufficient to support expanded virtual care. Billing regulations favour in-person consultations while virtual visits are compensated at lower rates, disincentivizing doctors. Although this issue was addressed in most provinces and territories temporarily due to the pandemic, it remains to be seen if the changes will be permanent.

Policies and licensing practices do not support cross-provincial and territorial medicine, hindering the ability to realize the true potential of virtual care. In remote northern communities, patients often seek specialist care from other jurisdictions, yet in many cases information sharing across boundaries is not

[2] Innovation, Science and Economic Development Canada, "Report from Canada's Economic Strategy Tables: Health and Biosciences". https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISEDC_HealthBioscience.pdf/$file/ISEDC_HealthBioscience.pdf

[3] https://www.thelancet.com/journals/landig/article/PIIS2589-7500(20)30196-5/fulltext

[4] Virtual care is real care: National poll shows Canadians are overwhelmingly satisfied with virtual health care. Retrieved from: https://www.cma.ca/news/virtual-care-real-care-national-poll-shows-canadians-are-overwhelmingly-satisfied-virtual

[5] Crawford A, Serhal E Digital Health Equity and COVID-19: The Innovation Curve Cannot Reinforce the Social Gradient of Health. J Med Internet Res 2020;22(6):e19361, URL: https://www.jmir.org/2020/6/e19361

possible. To further complicate the problem, patients often are not allowed access to their entire health records, leading to severe compromises in patient care and safety.

Digital data presents challenges on ensuring patient safety and confidentiality, consent, and trust, while sharing vital information. Many studies and experts advocate for patients to be able to access and control their own data and a few healthcare organizations have started to do so but it is still uncommon. The healthcare sector is also consistently targeted by cyber criminals due to the wealth of data and the propensity of organizations to pay ransoms to avoid disruptions[6]. More information on cybersecurity challenges in the healthcare space can be found in HealthCare*CAN*'s recently released brief titled *COVID-19 and cybersecurity: Cyber criminals not deterred by lockdowns*.

HealthCare*CAN* members echo many of these concerns.

In a poll conducted in April 2020, members shared that to successfully scale up virtual care, the healthcare sector requires:

National digital health platforms that enable data sharing between institutions across Canada and a centralized primary care information system that would unify the health records of patients who are accessing primary care services

Funding for remote health monitoring technologies and virtual care support structures (software licenses and subscription fees, extended health insurance plans, integration with EMRs, cloud platform hosting fees, connectivity for remote and rural communities, upgrading hardware, software, and connectivity services for health professionals, etc.)

Support structures like call centres, virtual triage, registration and waiting rooms, "digital navigators" who can provide additional support to patients to orient them to their technology, and mobile virtual care patient rooms (rooms with monitors, cameras and microphones, integrated heart rate, temperature and blood pressure monitors, etc.)

Integration of Artificial Intelligence tools into patient care to enable remote diagnoses

Funding for improvements to critical infrastructure and cyber security ensuring members and health systems are accurately informed and protected from emerging threats

Mental health registries that would hold the data on patients who need inpatient and follow-up outpatient mental health services, and, which would, also, ensure the interconnection with community care programs, self-management and coaching programs, Rapid Access to Addictions Medicine Centres, as well as virtual families support groups

Increasing education around virtual care to ensure students have the right tools and knowledge before entering the medical field

[6] https://www.thestar.com/business/2019/12/18/security-experts-say-health-care-industry-is-prized-target-for-cyber-criminals.html

OUR GOALS

HealthCare*CAN* strongly advocates for growing digital health solutions to improve patient care, find cures and treatments for diseases, and increase the efficiency of the health care system. We have encouraged the government to:

1. Substantially invest over five years through Canada's research hospitals and academic health sciences centres in order to develop meaningful digital health data platforms and applications;
2. Work with industry, legislators, privacy commissioners, clinicians and patients as well as Canada Health Infoway;
3. Undertake evaluation of clinical benefits and promote use throughout the health system.

FOR YOUR INPUT

As virtual care is set to expand in Canada, HealthCare*CAN* welcomes perspectives from our members and would like to know:

1. Does your organization have any specific suggestions or concerns about scaling up digital health services to better serve your patient populations?
2. How can HealthCare*CAN* support your organization from a policy and/or advocacy perspective?

HealthCare*CAN* will keep members apprised of developments as they occur. If you have questions, feedback or wish to discuss further, please contact us.

Siri Chunduri
Policy and Research Analyst
schunduri@healthcarecan.ca

Jonathan Mitchell
Vice President – Research and Policy
jmitchell@healthcarecan.ca