Prepared by Kristin Atwood for the Victoria/ South Island Divisions of Family Practice Joint IT Working Group November 8, 2019

Introduction

Telemedicine (also known as telehealth, virtual care, or virtual health) has been a feature of the service delivery landscape for several years, but interest in its provision is increasing, driven by several factors. For one, more patients expect to be able to access health care remotely, especially online, similar to how they access services such as finance or education. A recent survey commissioned by the Canadian Medical Association (CMA) found that between 61% and 71% of Canadians are highly interested in consulting with their physician virtually, depending on respondent age; most (71%) expect that telemedicine will lead to improved access and more timely care (CMA and Ipsos, 2019).

Interest in telemedicine is also driven by health care organizations, which are responding to increased demand and a chronic shortage of health care workers; and by providers themselves, who want to "leverage the potential of new and emerging technology" to better serve their patients and preserve their own work-life balance (CMA, 2019a). Remote providers also identify the opportunity to receive mentoring from urban specialists as a driver of telemedicine use (Praxia Information Intelligence and Gartner, 2011).

Doctors of BC (2014) states that telemedicine has the potential to improve clinician productivity by enabling more consultations, a position supported by the evidence, at least for service delivery to rural patients. One study found that telemedicine saved 496 days of provider travel time among 25 clinicians, which increased their capacity to provide other services. Studies have shown financial savings in the form of cost-avoidance, including a reduction in government-sponsored medical travel grants and fewer emergency department visits (Praxia Information Intelligence and Gartner, 2011), although one study found that savings in the long term were only modest (McGrail, Ahuja, and Leaver, 2017).

There is also a growing body of evidence that suggests that telemedicine improves outcomes in chronic disease management; mental health and substance use; occupational and speech therapy; wound care; and home care (Doctors of BC, 2014; Canadian Medical Protective Association (CPMA); 2015a; CPMPA, 2015b; Praxia Information Intelligence and Gartner, 2011). Among patients who have received telehealth, satisfaction is high (Praxia Information Intelligence and Gartner, 2011; McGrail, Ahuja, and Leaver, 2017). It can improve the patient experience by helping reduce patients' personal costs, such as for travel (Doctors of BC 2014; Praxia Information Intelligence and Gartner, 2011) and helping with self-management. Telehealth may also have a role to play in emergency response. One study indicated that "real time connectivity utilizing telehealth networks during the SARS and H1N1 outbreaks was essential to educate clinicians about the spread of the disease and its likely cause [as well as] connecting patients with their families and their providers" (Praxia Information Intelligence and Gartner, 2011).

However, telemedicine is not yet ubiquitous in physician offices; in 2014, only 25% of physicians responding to the National Physician Survey reported using it (CPMA, 2015a). Regulatory and professional associations have identified knowledge gaps related to how telemedicine works in the Canadian health environment (Federation of Medical Regulatory Authorities of Canada (FMRAC) no date; CMA, 2019b). The policy landscape is complex, with numerous regulatory bodies issuing standard of which physicians interested in the practice will need to be aware. The purpose of this document is to provide an overview of those policies as they are relevant to British Columbia, and to document what advice on implementation and barriers could be found among the professional associations connected with physicians in Canada.

How the literature reviewed in this report was located is described in the Methodology Appendix.



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Policies Regarding Telemedicine

Most regulatory bodies and professional associations are oriented toward maintaining quality of care and ensuring privacy and security as their primary areas of focus. Regarding quality, Doctors of BC (2014) emphasizes that the use of telemedicine must be in keeping with the principles of enhanced primary care; while the College of Physicians and Surgeons of BC (COPSBC) notes that "telemedicine should be affiliated with and supported by full-service primary care clinics" because telemedicine as a stand-alone episodic service would rarely meet expected quality standards (2017). Doctors of BC (2014) echoes the conclusion that care fragmentation is a risk of telemedicine. COPSBC (2019) requires physicians to ensure the same standard of care as with an in-person visit, including maintaining records; providing patient access to records; communicating and sharing records with other caregivers; making appropriate referrals; and ensuring follow-up (see also Federation of Medical Regulatory Authorities of Canada (FMRAC), no date).

Other requirements to maintain quality include determining patient suitability for a remote visit and ensuring follow up instructions are clear (e.g., see CPMA 2017; Island Health, 2018; COPSBC, 2019). Many acute care needs may require assessment that goes beyond the functionality of telemedicine (COPSBC, 2017). Prescribing via virtual care was specifically flagged, especially with reference to cannabis for medical purposes and controlled substances (CPMA, 2015a; CPMA, 2015b; COPSBC, 2019, FMRAC, no date). Physicians are also advised to assess whether patients have cognitive or mental health challenges or physical limitations that could interfere with their ability to use telemedicine (Island Health, no date).

The CMA (2019b) also reminds physicians that there are social and cultural inequalities in access to health technologies. These include differences in infrastructure in rural versus urban areas such limited bandwidth in remote communities; costs associated with accessing videoconferencing-capable technologies for patients, who may need to provide their own devices; and age differences in computer literacy and comfort (CMA, 2019b). Telemedicine is more likely to be used by both younger patients and younger physicians (McGrail, Ahuja, and Leaver, 2017). A survey of BC patients indicated that inequalities in access extend to whether or not patients are likely to receive longitudinal care. Patients who were of lower socioeconomic status were the least likely to access a known provider remotely and more likely to receive episodic care from a provider they had never seen before (McGrail, Ahuja, and Leaver, 2017).

Obtaining and documenting patient consent was a core feature of policies (e.g. see COPSBC, 2019; Island Health, 2018; Doctors of BC, 2018). So too was confirming the patient's identity through multiple identifiers and ensuring that both the provider and the patient are in a site where confidentiality can be maintained (e.g., see COPSBC, 2019; Island Health, 2018; FMRAC, no date). Another key policy consideration is that the encounter is appropriately documented in the medical record (CMPA, 2017; COPSBC, 2019; FMRAC, no date). However, few organizations provided specifics about standards for documentation, other than that it must be 'adequate'. The exception is COPSBC (2019), which specified that if others are present, the physician must ensure their identities are disclosed and approved by the patient and then document both the names of those present and the patient's consent to their presence in the record.

Doctors of BC (2018) indicates that confidentiality agreements with all staff and external contractors should be in place prior to telemedicine implementation. They note that this could include "an MOA setting up a video session, IT support, or even a cleaner who might overhear a conversation" (Doctors of BC, 2018, p. 2). They also indicate the need for Information Sharing Agreements with parties who are outside the health



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care team and may access recordings or images, including for the purposes of transmitting from provider to patient. Secure uploads and encryption are best practices for data transmission (Doctors of BC, 2018).

Licensure was another priority for many policymakers, particularly as regards virtual care that crosses provincial boundaries (CMA, 2019c; CPMA, 2015b, Oetter, 2019; FMRAC, no date). Provinces differ regarding licensing for telemedicine and physicians are cautioned that they may need separate licensing for the province in which they are located and the jurisdiction in which their patients are located, if the latter is different from the former (CPMA, 2015b). For virtual care for patients outside of Canada, the CMPA (2015b) warns that it does not aid in medico-legal difficulties that arise, unless the patient is outside of Canada temporarily and contacts the physician concerning a pre-existing condition. Similarly, COPSBC (2019) warns that using electronic communications only may affect liability insurance, and that the onus is on the physician to ensure they have appropriate protection in place.

Few organizations provided detailed technology standards. For instance, the CMPA (2017) only indicates that if videos and images are relied upon for the encounter, they must be "clear and adequate." Policies reiterated that the onus was on the physician to ensure they were "competent and comfortable providing telehealth consults" (COPSBC, 2019; Island Health, 2018). COPSBC (2019) also indicates that physicians should ensure that both their and their patient's technology complies with legal requirements.

Doctors of BC (2018) provides more specific recommendations for technology safeguards, including keeping security patches current; using the most up-to-date version of malware protection; password-protecting videoconferencing devices; disabling camera and microphones when not in use; choosing software that uses servers in Canada and ensuring that service contracts cover reasonable security precautions; and ensuring that software uses industry-standard encryptions. They note that readily available commercial alternatives such as Skype or Facetime do not meet these standards (Doctors of BC, 2018). Doctors of BC (2018) discourages capturing video data during the session. The CMPA (2015a) does not provide technology standards per se, but does note that low bandwidth, poor screen resolution, and unsecure networks or portals can affect quality of care and compromise privacy.

Physicians should be aware that different standards may apply depending on where the session takes place (e.g. in a private clinic versus a health authority setting) and whether it occurs over a VPN or public network (Doctors of BC, 2018). Their Policy Statement on Telemedicine in Primary Care (2014) indicates that the physician is "personally responsible for the confidentiality and security of all records and transmission if they choose to practice telemedicine outside an approved health authority site" (p. 1).

Guidance for Implementation

While most of the regulatory and professional association documents reviewed were aimed at informing policy, there was some procedural information that can direct implementation decisions. Much of this was focused on the activity of planning, undertaking, and following up a visit; no information was found to guide physicians in setting up workflows for telemedicine or in choosing a vendor.

Before initiating telemedicine, there needs to be a shared understanding between patients and physicians regarding the "rules of engagement' for virtual care" (CMA, 2019c). Physicians should be clear about what virtual care can be used for and set expectations about their availability (CMA, 2019b). The appropriateness, limitations, risks, and privacy issues need to be articulated to the patient prior to the scheduling of a remote appointment (COPSBC, 2019; CMPA, 2015a; CMPA, 2015b). CMPA (2015a) suggests



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physicians have patient sign a consent form prior to initiating telemedicine care. Physicians are advised to assure patients that participation is voluntary and that they can request an in-person appointment instead (Island Health, 2018).FMRAC (no date) notes that materials directed to patients should be in plain language and provide information on factors to consider when accessing telemedicine; how to verify that physicians meet licensure requirements; and complaints procedures. Doctors of BC (2018) cautions members not to include confidential information in a session invitation sent to patients.

Ensuring that the patient is ready to receive services remotely includes confirming the identities of the patient and anyone else joining the appointment (e.g. family member or support provider); being familiar with the patient's location and ensuring they are comfortable; and confirming that technology is working prior to commencing (COPSBC, 2019; Island Health, 2018; Doctors of BC, 2018). FMRAC (no date) cautions physicians not to proceed unless available resources are safe, secure, and can be used effectively in a private manner. Physicians are responsible to ensure this is the case both for themselves and for their patient (CMPA, 2015b). Verifying that the patient has an immediate alternative to telemedicine if their condition turns out to be more serious was a recommended best practice (COPSBC, 2017; Island Health 2018, COPSBC, 2019; FMRAC, no date). This includes having consistent staff for longitudinal care and having short-notice in-person services available in the patient's location (COPSBC, 2017).

Logistic advice included ensuring there was no background noise; sitting far enough from the camera so that the patient has a clear view of the provider; using diffused light to eliminate shadows on the video image; and keeping the microphone in front of the provider to ensure the best sound quality (Island Health, 2015). Physicians were advised to use signage so that they were not disturbed during the session; to keep confidential information out of the sight of the camera; and to improve confidentiality by using white noise machines, sound panels, or insulation so that the conversation could not be overheard (Island Health, 2015; see also Doctors of BC, 2018). Appointments may need to be longer than in-person appointments to accommodate time to set up and confirm that equipment is working; ensure that privacy is protected on the patient side; and confirm the identities of the patient and provider (Island Health, no date). Doctors of BC (2018) advises that physicians should not leave a connection unattended or set on automatic call answering, and that once the visit is over, they should disconnect the call immediately.

One document from Doctors of BC (2019) provided billing information, including identifying that only one telehealth service per patient per day could be claimed; that sessions that are interrupted due to technical failure can be claimed under a miscellaneous code; and that a limited consultation can be billed for if an inperson examination is required after a remote appointment. There are separate fee codes for in-office videoconferencing and out-of-office telemedicine in a health-authority approved facility, and telephone, email, or text-messaging communications to patients is billed separately from a telemedicine visit. Finally, the document notes that there is fee-code coverage for physicians who assist with in-person physical assessment of a patient receiving telehealth from a remote specialist (Doctors of BC, 2019).

Barriers to Telemedicine Implementation

A small number of organizations have examined barriers to implementing telemedicine in individual practices. These include a lack of fulsome compensation models (and inconsistency of remuneration across jurisdictions); burdensome administrative requirements to bill for telemedicine; a lack of coverage for costs associated with acquiring and maintaining technology; a lack of interoperability between telemedicine technology and other information systems (e.g. EMRs); and a lack of training and support for physicians



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(CMA, 2019a; Praxia Information Intelligence and Garner, 2011). As well, physicians consulted through regional meetings with the CMA (2019c) felt that privacy and access concerns are "generally overstated and often act as barriers to the adoption of technology" (p. 18).

Praxia Information Intelligence and Gartner (2011) recommend that funding to incentivize increased utilization is needed and that outcomes should be monitored in order to create a body of knowledge about the benefits of telemedicine in order to encourage uptake. Doctors of BC (2014) notes that primary care physicians should be supported to pursue education on best practices for telemedicine and that ongoing monitoring for quality improvement should be incorporated into physicians' telemedicine practice.

Conclusion

Although telemedicine technologies have existed for some time, their use is not ubiquitous in Canada. Policy makers view telemedicine as potentially improving access to care, but there are many technical, privacy, legal, and logistic issues to consider. Canadian studies of these issues, particularly as relates to assisting physicians with the practicalities of implementation, are difficult to find. As digital health solutions become more available, there will be an increased need for knowledge about implementing telemedicine.

Regulatory bodies and professional associations are only just beginning to respond to this need; for instance, FMRAC is in the early stages of exploring the creation of a single license to support telemedicine across the country, which will enable greater mobility among telemedicine providers (Oetter, 2019). The Canadian Medical Association, College of Family Physicians of Canada, and Royal College of Physicians and Surgeons of Canada (2019) have only recently announced the launch of a task force to examine virtual care technologies and identify what regulatory changes are required to enable physicians to deliver virtual care. Recommendations from this task force are expected in 2020; in the meantime, the guidance provided to physicians, as described in this document, is generally high-level, with a primary focus on privacy protection and quality of care and little information on steps to implementation.

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Methodology Appendix

This review employed a systematic search of online documents using four search terms:

- Telemedicine
- Telehealth

- Virtual Care
- Virtual Health

The searches were of the public-facing websites of seven organizations associated with physician clinical practice. In the case of member association sites, members only areas could not be accessed by the researcher. A small number of documents from an eighth organization were provided via personal communication with a physician leading a telemedicine project in that organization, and a final (ninth) website was the subject of a more targeted search in order to locate specific documents referenced elsewhere. The organizations were:

- Doctors of BC
- College of Physicians and Surgeons of British Columbia
- Canadian Medical Association
- College of Family Physicians of Canada
- Royal College of Physicians and Surgeons
 of Canada
- Canadian Medical Protective Association

- Federation of Medical Regulatory Authorities of Canada
- Island Health (documents provided by physician lead)
- Canada Health Infoway (targeted search for documents referenced by other sources)

The search returned 61 unique documents that appeared relevant to the research. However, of these, 34 were either not relevant (e.g. documents that mentioned telemedicine in a list of other considerations without any further text), repeated content (e.g. re-using information for multiple news or blog posts from a larger report that was also included in the search), or could not be accessed. Thus, the information in this document was drawn from a total of 27 documents. Not every source was ultimately cited.





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