

Disrupting the paradigm of oncology care in Canada: the triumphs, challenges and future implications of telemedicine



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Medicine has long been one of the lingering aspects of society yet to be fully disrupted by technological advances. Unlike media, banking and commerce which have adapted to the growing demand for convenience and accessibility from the public, the practice of medicine in many ways remains much unchanged from decades prior. The 2019 novel coronavirus (COVID-19) demanded an immediate shift in the way Canadian healthcare was delivered to reduce the risk of viral transmission from in person patient encounters. Cancer poses a large and ever-increasing impact on the Canadian population and healthcare resources. Brenner et al. (2020) estimated nearly half of the Canadian population will develop cancer in their lifetime in addition to the recent increasing yearly number of new diagnoses and deaths as the population grows and ages.¹ Cancer patients were initially an ideal population for telemedicine

encounters during the pandemic. These patients often have additional comorbidities association with COVID-19 mortality and a diagnosis of cancer may further increase this risk.² As healthcare enters a second year within the new paradigm of virtual medicine, it is important to consider the impact and future of telemedicine on Canada's ever-growing oncology patients.

Telemedicine is not a novel concept and has been in use for many years. Telemedicine may take many forms and could include voice consultation, video consultation or tele-synergy/multimedia conferencing.³ Its role has been well established for communication with rural, under served or remote areas where travel to specialized centers would be prohibitive. Telemedicine in US oncology patients has been shown to improve diagnostic accuracy with easy access to multiple opinions, a reduction in costs and enhanced

care management.⁴ Little is known about widespread telemedicine or virtual care programs and practices in Canadian oncology populations. A recent systematic review suggested telemedicine is comparable to in person encounters with respect to quality of life but there is a lack of literature on oncologic outcomes.³ Telemedicine may have additional benefits including remote chemotherapy supervision and delivery, symptom management and palliative care access.⁴ While the successes and benefits of telemedicine in oncology may be readily apparent, there may be unique aspects of oncologic care that warrant special consideration.

There is limited data and experience with remote assessments for oncologic surveillance. Many guidelines require physical exam surveillance and oncologists using telemedicine have voiced concerns in this domain.⁵ Recommendations or changes in therapy may result solely from verbalized subjective symptoms. There may be much information lost by the ability to observe non-verbal behaviour or the 'end of the bed' test. Surveys of patients during the pandemic suggest that while there is enthusiasm for telemedicine options, a little over 50% of eligible patients would accept a virtual option.⁶ In addition, only 46% of oncologists have been shown to prefer managing cases virtually.⁶ Many oncology patients are elderly and familiarity with technology may be an obstacle. Patients may also feel reluctant to discuss certain aspects of their care over video conference or have nervousness using new technologies. Research has shown oncology patients and providers may demonstrate trepidation surrounding the rapid uptake of telemedicine and this may be due to a lack of education for both parties on how best to utilize these services effectively.⁴ Furthermore, up to 20% of encounters may be less than ideal due to technical considerations which may be preventable with improved education.⁷ This has resulted in many organizations creating practice guidelines surrounding oncology care during the COVID-19 pandemic.⁸

The wide-spread use of telemedicine in Canada is still in its infancy but has been provided a proverbial 'sink or swim' opportunity. The future of oncologic care in Canada is ripe for an effective uptake of virtual care to enrich the current standard. With increasing systemic treatment options, movements towards multidisciplinary care and limited

oncologic centers of excellence across a vast geography, the practice of oncology in Canada has the potential to be positively impacted. Patients may have improved access to second opinions, supportive allied healthcare and clinical trial exposure. The National Comprehensive Cancer Network strongly recommends clinical trial involvement where possible for all cancer patients and telemedicine offers the opportunity for improved patient access and multicenter collaboration. Furthermore, a robust telemedicine system may reduce overhead costs in a universal healthcare system.

It is unknown if this forced experience with virtual care will result in a positive change for Canadian oncologic healthcare delivery or simply a quick regression back to old, familiar ways. In the end, the barriers will not be healthcare consumers – patients – as they will likely adapt and embrace the benefits, improved access and convenience of virtual care. It will be up to practitioners and policy makers to take advantage of this opportunity, embrace the disruption with initial growing pains and move forward into a new era of oncologic healthcare delivery.

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