

# The potential use of telemedicine to increase access to opioid agonist therapy in rural and remote communities

A province-wide, centralized virtual care program for patients in rural and remote areas to access buprenorphine/naloxone and methadone may be a reasonable interim strategy to combat the opioid overdose crisis.

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The opioid overdose crisis continues to affect people in all parts of Canada. Between January 2016 and September 2019, Canada reported more than 14 700 deaths due to opioid-related overdose.<sup>1</sup> In British Columbia, fentanyl or its analogues are detected in about 80% to 85% of illegal drug overdose deaths, and about a third of overdose deaths occur in small- to mid-sized communities.<sup>2,3</sup> The BC Coroners Service reports that the illegal drug overdose death rate (per 100 000 person-years) between 2018 to 2020 is highest in Hope.<sup>4</sup> The top five communities on the list include two other small communities (Lillooet and Terrace) along with Prince George and Vancouver.<sup>4</sup>

Federal and provincial governments have implemented numerous strategies to target overdose prevention and harm, including easier access to naloxone and increased availability of supervised consumption facilities,<sup>5-7</sup> but rural and remote communities do not have access to many of these services. Furthermore, accessibility of opioid agonist therapy (OAT)

remains limited in these communities.<sup>8</sup> Buprenorphine/naloxone and methadone are the two most commonly prescribed evidence-based OAT treatments that greatly reduce illicit drug use.<sup>9</sup> The use of buprenorphine/naloxone or methadone is also associated with a reduction in mortality and harms related to illicit drug use.<sup>10,11</sup> Additionally, slow-release oral morphine is available as the third-line OAT option for patients who were not successful with or could not tolerate buprenorphine/naloxone and methadone.<sup>9</sup>

Obtaining these evidence-based medications for opioid use disorder is particularly challenging for patients in rural and remote communities. Despite availability of addiction medicine specialists via Rapid Access to Consultative Expertise (RACE), scarcity of local OAT prescribers continues to be one of the most significant barriers to access. As a result, to improve access to effective treatments, telemedicine has been proposed as a means to provide OAT to the medically underserved communities.<sup>12-15</sup>

## Evidence for delivering OAT care through telemedicine

Telemedicine may greatly reduce the physical barriers to accessing OAT for patients in rural and remote communities; however, the effectiveness of OAT care delivered using telemedicine must also be considered. There is limited

research in this area; however, the available evidence suggests that it has similar retention rates and treatment effectiveness compared to traditional, in-person appointments. A retrospective cohort comparison study in Canada with over 3500 patients on either methadone or buprenorphine found that those who primarily used telemedicine to connect with their OAT physicians had a higher retention rate than the group of patients who primarily attended in-person appointments at 1 year of the study (50% versus 39%).<sup>16</sup> The authors hypothesized that ease of access and flexibility were the reasons for the superior retention rate.<sup>16</sup> The efficacy of OAT treatment (determined by urine drug screen in the last 30 days of the study) was also comparable between the telemedicine and in-person groups.<sup>16</sup> Similarly, a prospective study published this year involving pregnant patients on buprenorphine/naloxone found no statistically significant differences between retention rates of the in-person and telemedicine groups.<sup>17</sup> There was also no difference between the rates of neonatal abstinence syndrome or positive urine drug screen at 6-weeks postpartum between the two groups.<sup>17</sup> Lastly, a retrospective study on patients in rural communities receiving buprenorphine care solely via telemedicine had a nearly 60% retention rate at 3 months, and 86% of the remaining participants had negative urine screens.<sup>18</sup> Although this study did not have a comparison

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*This article has been peer reviewed.*

group, the authors reported similar retention rates with published results of office-based OAT.<sup>18,19</sup>

None of these studies reported adverse patient outcomes due to OAT care being delivered via telemedicine. The studies did have limitations: they were nonrandomized, and many of them had small sample sizes and shorter follow-up periods. Future studies should focus on rural areas, where telemedicine-delivered OAT would have the most impact.

### Legality and practicality of OAT care via telemedicine: Before and during COVID-19

One of the biggest concerns with this modality is the safety of patients, and physicians are legally bound to the OAT standards of practice as outlined by provincial regulatory bodies. For example, the College of Physicians and Surgeons of BC states that comprehensive evaluation of the patient, including history, physical, and relevant investigations, must be completed before methadone OAT initiation.<sup>20</sup> On the other hand, while the standards of practice from the College of Physicians and Surgeons of Alberta do not explicitly outline the necessary evaluations, physicians are instructed to follow evidence-based guidelines.<sup>21</sup> And both the widely recognized BC Guideline for the Clinical Management of Opioid Use Disorder and the Centre for Addiction and Mental Health's Buprenorphine/Naloxone for Opioid Dependence Clinical Practice Guideline recommend that comprehensive assessments, including focused physical exams, be conducted before initiating patients on either methadone or buprenorphine/naloxone.<sup>9,22</sup> Physical assessments are crucial to identify signs of drug use, intoxication, or withdrawal symptoms, and medical conditions that would preclude the use of OAT. Similar recommendations exist for initiating a patient on slow-release oral morphine, a medication with higher overdose and diversion risks.<sup>9</sup>

As a result, use of telemedicine for OAT providers in BC was mainly limited to stable patients already maintained on OAT, but who could not attend a follow-up appointment in person. In Ontario, most OAT is delivered in person, with a number of physicians in urban

areas providing OAT via the Ontario Telemedicine Network.<sup>23</sup>

The COVID-19 pandemic ushered in many changes to how OAT is prescribed and delivered. The pandemic introduced new layers of complexity to the opioid overdose crisis in the forms of limited and toxic drug supply, isolation, difficulty with daily witnessed dosing and accessing injection sites, etc. As a result, the

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BC College of Physicians updated the practice standard on telemedicine in March 2020 so physicians may continue to provide care using telemedicine for the appropriate clinical contexts.<sup>24</sup> The British Columbia Centre on Substance Use also recommends that OAT providers continue to support patients on OAT with telemedicine.<sup>25</sup> Moreover, the centre published interim clinical guidance on how to protect people who use drugs from COVID-19 by offering OAT initiation or providing pharmaceutical alternatives to illicit drugs (i.e., oral hydromorphone and/or sustained-release oral morphine).<sup>12</sup> Because of restrictions imposed by the pandemic, OAT prescribers have also started to initiate buprenorphine/naloxone or methadone over telemedicine for appropriate patients.

### The virtual opioid dependency program in Alberta

Prior to COVID-19, it was not a common practice for physicians to initiate OAT via telemedicine, especially methadone, but Alberta's Virtual Opioid Dependency Program (VODP) has been prescribing OAT via telemedicine for

the past 3 years.<sup>26</sup> The program, established by Alberta Health Services, is currently serving clients in over 100 communities, and patients may either self-refer by calling the helpline or be referred by their physicians or allied health care providers.<sup>26</sup> According to the program manager, Mr Kelly Smith, physicians in the program are permitted by the college to prescribe same-day buprenorphine/naloxone starts for patients using illegal opioids (written communication from K. Smith, manager, VODP, 8 May 2020). Methadone can also be offered through VODP after the patient completes an initial assessment by a physician via virtual care. One of the most significant challenges to accessing OAT in rural communities is the lack of local prescribers, and the VODP program overcomes this by providing treatment initiation and maintenance of buprenorphine/naloxone and methadone through virtual care. Patients are also able to access addiction counseling through VODP. The program expanded substantially in 2019, and it had approximately 1200 new admissions in the last fiscal year.

### Conclusion

People in rural and remote communities continue to experience great difficulty accessing the care needed to treat opioid use disorder, and telemedicine has garnered much attention as a potential tool to increase access. Even with readily available OAT virtual prescribers, patients in rural and remote areas must still overcome other barriers such as access to a pharmacy for daily witnessed dosing, laboratory for urine drug tests, and counseling and other mental health or social support services. However, as is evident from Alberta's VODP program and the existing literature, providing buprenorphine/naloxone and methadone care via telemedicine is feasible and may have retention rates and effectiveness comparable with traditional in-person visits. Changes to OAT prescribing practices due to COVID-19 will also lead to more data on the safety, feasibility, effectiveness, and physician experience of OAT initiated over telemedicine. While more and more rural physicians are obtaining training on initiating and maintaining patients on OAT, establishing a province-wide, centralized virtual care program for patients in rural and remote

areas to access buprenorphine/naloxone and methadone may be a reasonable interim strategy to combat the opioid overdose crisis. ■

### Competing interests

None declared.

### Acknowledgments

The author would like to thank addiction medicine physicians Dr Jeff Pocock and Dr Kelsey Roden for providing insights into current practices and reviewing this article prior to submission.

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