PERCEIVED BARRIERS TOWARD THE PROVISION OF OPIOID REPLACEMENT THERAPY IN PRIMARY CARE: A LITERATURE REVIEW

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Abstract

Introduction: According to the Manitoba Centre for Health Policy, 5.9% of Manitobans were diagnosed with a substance use disorder (SUD) between 2010 and 2015. For patients with opioid use disorder (OUD), opioid replacement therapy (ORT) in combination with psychotherapy is the first line treatment. However, many primary care physicians choose not to provide this service and identify a variety of barriers to the provision of ORT. As a result, individuals with OUD are left without access to treatment.

Objective: The objective of this study is to identify and explore physician sentiments and perceived barriers to the provision of ORT therapy for the treatment of OUD. Ultimately, this study aims to provide rationale for primary care providers to appreciate the value in providing ORT, and to encourage them to offer ORT to their patients with OUD.

Methods: A literature search was performed using the PubMed database with search terms "opioid replacement therapy", "opioid agonist therapy", "provider barriers", "ORT", and "opioid use disorder in primary care." The search yielded a total of 1,679 articles, with 6 articles deemed appropriate for inclusion in the study.

Results: The most commonly cited barrier was the lack of access to psychosocial supports and specialty backups for physicians providing ORT. Other commonly identified barriers and perceptions included generalized mistrust of patients with OUD and their potential to divert medications, difficult patient population and potential for patients to negatively affect a physician's practice, the high degree of regulation and potential for legal consequences, lack of fair remuneration for services provided, logistic barriers such as increased administrative duties, lack of physician's confidence and formal education regarding substance use disorders, as well as the generalized stigma surrounding opioid use and ORT.

Conclusion: ORT using Methadone and Buprenorphine/Naloxone has consistently been shown to have positive results in the context of reducing substance use, mortality rates, and adverse health outcomes while improving psychosocial functioning and quality of life. A significant number of barriers to the provision of ORT may be addressed and resolved with fair remuneration, increased education, and increased access to programming and services. Effective and accessible access to the treatment of opioid use disorder continues to be an uphill battle, necessitating greater partnership between government planning and resources, along with physician willingness to adapt their practice accordingly.

Table of Contents

Abstract 2

Introduction 4

Objective 6

Methods 7

Results 7

Discussion 14

Limitations 19

Future directions 19

Conclusion 20

Acknowledgments 20

References 21

Appendix 25

Introduction

Manitoba saw a 2.9-fold increase in the number of opioids prescribed per person between the years 2001-02 to 2016-17. (1) According to the Manitoba Centre for Health Policy, 5.9% of Manitobans were diagnosed with a substance use disorder between 2010-15. (2) Given the fact that many individuals may not be forthcoming with their substance use history, attempting to estimate the prevalence of substance use disorders presents a unique challenge. (3) Therefore, it is more than likely that 5.9% is a gross underrepresentation of the number of Manitobans suffering from a substance use disorder. One of the most challenging substance use disorders that healthcare providers are faced with today is opioid use disorder (OUD).

According to the DSM-5, OUD is defined as the presence of two or more of the following over a 12-month period: tolerance (i.e. having to take more of the drug to reach the desired effect or diminished effect when using a consistent amount of the drug), withdrawal symptoms in response to abstinence, continued use despite recognizing the dangers of use, use in hazardous situations, forfeit of social and occupational activities due to use, recurrent failure to meet personal, social, and occupational obligations, continued use despite social, personal, or occupational problems which can be attributed to use, cravings, persistent and/or unsuccessful attempts to quit, increasing amount of time dedicated to obtaining the drugs, and taking the drug in larger quantities or for longer periods of time than was originally anticipated. (4) The prevalence of OUD has unfortunately increased exponentially, in part due to the over prescription of opioid analgesics. (5)

Slow-release formulations of Oxycodone were introduced to market across Canada in 1999. (5) These drugs were marketed as non-addictive, safe medications, and as a result, were readily prescribed to patients even with mild pain symptoms. (5) Unfortunately, this contributed to a widespread opioid dependence epidemic that persists to this day. (5) In 2009, the CDC released

a statement that heroin and opioid overdoses were killing more people in the United States than motor vehicle accidents, with 165,000 deaths secondary to opioid overdose between 1999 and 2014. (6) Worldwide, greater than 120,000 deaths occur secondary to OUD each year. (7) Opioid replacement therapy (ORT) using Methadone and Buprenorphine is now accepted as first line treatment for OUD in combination with psychotherapy. (4)

Methadone and Buprenorphine are partial mu-opioid receptor agonists used to treat OUD. (8) By occupying the mu-opioid receptor, these drugs provide agonist therapy to prevent withdrawal symptoms which effectively increases patient functioning while decreasing the reinforcing effects of opioids. (8) While OUD treatment with Methadone became accepted into practice in the 1950s, it may still be considered high-risk due to its long list of drug-drug interactions and variable bioavailability, leading to potential for opioid toxicity and overdose. (9)(10) In ORT, Buprenorphine is combined with Naloxone in a formulation called Suboxone. This formulation is unique in that it combines the mu-opioid receptor agonist effect of Buprenorphine with the mu-opioid antagonist effect of Naloxone to prevent potential misuse of the drug. (11) Though used less commonly, Naltrexone is an opioid antagonist approved in the treatment of OUD as it has been shown to prevent relapse. (12) It is important to note that maintenance therapy with Methadone or Buprenorphine/Naloxone should not be equated to weaning off opioids, as those undergoing maintenance therapy remain in treatment for extended periods of time. (13)

When employed successfully, ORT has been shown to reduce the risk of addiction-related behaviours which can lead to negative health outcomes such as blood-borne illnesses and increased mortality rates due to overdose. (14) Furthermore, American data suggests that healthcare costs associated with OUD range from $10,627 to $20,760 more per year than the average individual.

(15) Increased burden of disease secondary to OUD combined with the increased healthcare costs associated with OUD ultimately solidifies the need for increased use of ORT to combat OUD. (14)

According to the College of Physicians and Surgeons of Manitoba (CPSM), in order to prescribe Methadone or Buprenorphine/Naloxone, a physician must be registered to prescribe drugs through the Manitoba Prescribing Practices Program (M3P) and apply for approval from the CPSM after successful completion of a 2-day Methadone course. (16) Physicians with previous experience must complete one half day of supervision with an additional one year of mentorship alongside a supervising physician before being approved to prescribe. For those who have not previously prescribed, they may choose to either have their first five starts monitored by an experienced supervising physician, or to maintain partnership with a mentor to discuss each case with a supervising physician until he or she deems the new prescriber safe to continue prescribing without further supervision. (17) The question remains why primary care providers have been slow to adopt the service into their practices despite the fact that ORT has been a possibility in Canada for the past 60 years. (5)

Having discussed the issue with a primary care physician currently providing ORT in the Pine Falls area of Manitoba, a number of possible barriers to the provision of ORT were identified. Barriers identified included time commitment to ORT-related office visits for fee-for-service physicians, as well as general lack of knowledge and comfortability within the realm of substance abuse and treatment options. This conversation was the inspiration to investigate and identify common barriers to the provision of ORT, and to further understand how the issue may be combatted in order to facilitate effective treatment for OUD.

Objective

The objective of this paper is to identify and explore physician sentiments and perceived barriers to the provision of ORT. Ultimately, this study aims to provide rationale for more primary care providers to appreciate the value in providing ORT, and to encourage more primary care providers to offer ORT to their patients with OUD.

Methods

A literature search was performed using the PubMed database. Specific search terms were "opioid replacement therapy", "opioid agonist therapy", "provider barriers", "ORT", and "opioid use disorder in primary care". The search yielded a total of 1,679 articles. Criteria for study eligibility included primary research evaluating prescriber sentiments towards ORT, written in English, peer-reviewed, and published within the previous 10 years (2010-20). Titles were screened for relevance to the topic of perceptions of and barriers to the provision of ORT for OUD. Furthermore, abstracts were screened and articles focusing on provider perceptions outside of physicians, PAs, or NPs were excluded, leaving 6 articles deemed appropriate for review.

Results

Livingston et al. (2017) interviewed 20 primary care physicians working in Nova Scotia, Canada in 2015. They used a series of open-ended questions related to physician experiences, perceptions, and prescribing practices, and how these perceptions and experiences may affect their decisions and practices surrounding the use of Methadone maintenance therapy (MMT) to treat

OUD. They further subdivided this qualitative data of common perceptions into physician-related factors, patient-related factors, practice-related factors, and contextual factors. (14)

Physician-related factors identified by those participants in the Livingston et al. (2017) study included the following: access to Methadone expertise, help from allied professionals, appropriate knowledge and skills, and personal experiences and values. Participants identified the importance of being connected to expert prescribers of Methadone and specialty clinics in order to feel supported in their decision to prescribe Methadone and their ability to stabilize complicated patients. Additionally, participants identified the need for a multidisciplinary approach to MMT, including increased administrative duties and the utilization of social workers and counsellors. While the physicians who were currently providing MMT identified that they felt as though they had received the appropriate knowledge, training, and skills to provide MMT, they also acknowledged the need for more education regarding what local services and supports are available for patients undergoing MMT. Physicians who were not currently providing MMT identified the need for more education surrounding the risks and benefits of MMT, as well as the need for specific guidelines surrounding urine drug screening and tapering processes. (14)

Livingston et al. (2017) classified personal experiences, interest, and values as a category playing a large role in the decision making of physicians in Nova Scotia, as those physicians who had exposure to MMT during training expressed more benefit and professional satisfaction with the idea of providing MMT. However, non-prescribers identified their dissatisfaction with the long-term risks of providing MMT and the idea that MMT is simply the substitution of one drug for another. MMT patients were identified as being a difficult patient group due to being unreliable, manipulative, and deceptive, as well as having complex needs in regard to their chaotic lifestyles

and comorbidities. However, MMT prescribers identified the opportunity to implement more preventative medicine due to the frequent visits necessitated by receiving MMT. (14)

In relation to practice-related factors, Livingston et al. (2017) were able to reveal the fear that these physicians had in regard to medical license compromise and increased scrutiny from governing bodies, which played a factor in their decision not to prescribe MMT. Others identified discomfort with policing their patient's in regard to urine drug screens and stressed the strain that this practice puts on their therapeutic alliance. For fee-for-service physicians who were not currently providing MMT, fair renumeration played a major role in their decision not to provide MMT, as these appointments typically take longer periods of time and this patient group is more likely to miss appointments. Safety concerns also played a role, as MMT patients were identified as being at increased risk of violence. Furthermore, physicians raised concerns of how these "volatile patients" may disrupt their family practice as other patients may choose to find a new physician to avoid this group of individuals. Contextual factors affecting their decision included the fact that there is little formal education about substance use disorders and their treatment during medical training, that substance use disorder is considered outside the scope of a generalist primary care physician, and the negative media coverage surrounding OUD. (14)

Schulte et al. (2013) extended a questionnaire concerning structural barriers to the provision of ORT to 2,332 physicians currently providing the service in Germany. The questionnaire consisted of closed-ended statements regarding previously identified barriers to treatment with ORT, and participants were asked to rate these statements on a five-point Likert scale from "strongly disagree" to "strongly agree." Open-ended questions were also provided in the questionnaire in an attempt to identify other structural barriers that were not included in the

closed-ended statements. Furthermore, physicians were asked to rate the current state of ORT from "very good" to "totally deficient" on a scale of 1-6. (18)

Of those invited, Schulte et al. (2013) had 596 respondents. The study showed a greater number of physicians in urban centres rated the state of ORT as being "very good" (33.7% vs. 18.0%). Overall, ratings of the quality of the state of ORT were 3.5 (±1.45). The most commonly identified barrier for ORT was the strong degree of regulation, with 84.8% of respondents agreeing. Furthermore, 79.1% of respondents identified the possibility of legal consequences for regulation violation to be a barrier. 75% of respondents felt that there was a discrepancy between the amount of effort undertaken to provide ORT and the renumeration received. Other identified barriers included increased interdisciplinary requirements (29.7%) and inadequate social support (37.9%). 372 respondents also provided suggestions to help improve the current state of ORT. Suggestions included reducing administrative duties for physicians (25%) and legal barriers (20.2%), increasing remuneration and number of ORT providers (19.9% and 18.8% respectively), more opportunities for collaboration and networking between providers (13.4%), as well as efforts to improve access to psychosocial supports (9.9%). Importantly, 7.0% of respondents identified the need to destigmatize opioid addiction and ORT. (18)

Hutchinson et al. (2014) conducted a study to examine barriers that newly trained physicians providing Buprenorphine maintenance therapy (BMT) in Washington State identified in their experience with outpatient treatment of OUD. Physicians were instructed to answer yes or no as to whether or not the statement was considered a barrier to their practice of BMT. They were later invited to share any barriers that were not identified in the questionnaire. 92 of 120 physicians who were invited to participate responded. However, 7 of the physicians were residents and another 7 had previously prescribed Buprenorphine prior to the study initiative and were thus

excluded. Of the 78 remaining physicians, only 50 of them had received a DEA waiver to prescribe Buprenorphine, 22 of the physicians had prescribed Buprenorphine to at least one patient following the course, while 56 of them had not. Identified barriers included a lack of psychosocial support (64%), time constraints (54%), lack of access specialty backup (45%), lack of confidence (41%), resistance from practice partners (42%), lack of institutional support (36%), reimbursement concerns (28%), and lack of patient need. The most frequently cited barrier (64%) identified by both prescribers and non-prescribers was a lack of psychosocial support, while the least cited barrier overall was reimbursement concerns. Significantly more non-prescribers were concerned with the lack of institutional support preventing the adoption of BMT into their practice. (19)

DeFlavio et al. (2015) surveyed family physicians located in Vermont and New Hampshire with a quantitative study evaluating factors influencing the adoption of BMT. They were asked to rate their opinion on a list of 20 statements using a five-point Likert scale. Statements were based on a literature review of already-identified barriers to the adoption of ORT. Physicians were also provided with open-ended questions they could choose to respond to. An estimated total of 714 physicians were invited to participate, and 108 surveys were completed and returned. 11 of the respondents were Buprenorphine prescribers while the remaining 97 were non-prescribers. A total of 10% of non-prescribers indicated interest in using BMT to treat OUD, while roughly one-third of them indicated that access to addiction experts via telephone would increase their interest in prescribing Buprenorphine. Of those physicians surveyed, 90% of prescribers and 53% of non-prescribers agreed that buprenorphine is an effective treatment for OUD. (20)

As previously identified as a barrier, DeFlavio et al. (2015) also inquired about physician's self-confidence towards treating OUD and prescribing ORT. Of currently prescribing physicians, 100% agreed with feeling confident in their abilities to prescribe Buprenorphine in accordance

with accepted standards, while only 16% of non-prescribers agreed. In total, 94% of physicians agreed with the statement that patients with OUD are a difficult population, and only 41% thought that their patients with OUD were actually motivated to discontinue opioid use. Interestingly, while 91% of prescribers agreed that their patients would be satisfied with BMT, only 35% of non-prescribers agreed with the same sentiment. Furthermore, non-prescribers were more likely than prescribers (92% vs 64%) to attribute cost as a barrier to BMT for their patients. Non-prescribers specifically identified more logistic barriers to the provision of BMT. Most commonly, 88% of them identified administrative duties and need for specialized training as a significant barrier, lack of time/space necessary to dedicate to BMT practice, and heavy regulations were also cited as significant barriers to this population. 52% of total respondents felt there should be increased pay for BMT services. Qualitative issues identified in the open-ended portion of the survey included physicians feeling that their patient lists and waitlists were already overwhelmed, lacking the interest or time to dedicate to BMT, mistrusting patients with OUD and perceiving them to be a difficult patient population — further confounded by lack of access to psychiatric care, and finally multiple physicians endorsed the idea that BMT is simply a practice of substituting one addiction for another. (20)

Andrilla et al. (2017) sampled a population of physicians working in rural America who were included in the DEA's list of providers with waivers to prescribe Buprenorphine. Of the 2,577 physicians invited, 1,124 responded and met inclusion criteria. These physicians were then grouped into never prescribers, former prescribers, current prescribers not accepting new patients, and current prescribers accepting new patients. The authors used a list of already identified barriers to the provision of Buprenorphine prescription and asked providers to identify whether or not they believed this barrier was of relevance to the incorporation of Buprenorphine treatment into their

practice. Identified barriers included: time constraints, lack of patient need, financial/reimbursement concerns, resistance from practice partner, lack of specialty backup for complex problems, lack of confidence in ability to manage OUD, lack of available mental health or psychosocial support services, attraction of drug users to your practice, DEA intrusion, and diversion or misuse of medication concerns. The most common barrier cited overall was diversion or misuse of medication, accounting for 48.4% of participants. 44.4% of participants identified lack of available mental health or psychosocial support services as being a barrier, and 40.2% identified time constrains as a barrier. Never and former prescribers were statistically significantly more likely to report the other barriers listed in comparison to the current prescribers. Furthermore, 205 physicians provided write-in responses supplementary to the questionnaire. 17.6% of these physicians identified administrative or infrastructure issues, 16.6% cited difficulties with prior authorization and paperwork, 11.7% responded with difficult patients, and 9.3% identified stigma as a barrier. (21)

Andrilla et al. (2020) surveyed a group of physician assistants (PAs) and nurse practitioners (NPs) who had received waivers to prescribe Buprenorphine, in order to understand the unique barriers that may be faced by ORT providers who require supervision. 614 (498 NPs and 116 PAs) out of a total of 1,572 individuals surveyed responded and met inclusion criteria. Surveyed NPs and PAs were working in a variety of specialties, however, 54% of respondents were practicing in family medicine, 23.9% were practicing in psychiatry, and 9.9% were practicing in addictions. Interestingly, one-third of respondents were not currently prescribing BMT even though they had received the waiver. Medication diversion or misuse was identified as the most common barrier to the provision of BMT with 50.9% of PAs and NPs reporting. Other barriers identified included lack of support services (44.1%), insurance issues (41.8%), lack of specialty services to help

manage complex patients (37.3%), time constraints (33.9%), remuneration concerns (30.5%), potential to attract drug users to the practice (26.9%), DEA waiver patient-limits impacting potential benefit of BMT (22.1%), resistance from practice partners (21.7%), clinic policies (20.9%), lack of physician backing (18.7%), and lack of confidence (17.3%). The least common barrier was identified as fear of DEA invasion on practice (8.1%). (22)

Discussion

The most frequently identified barrier cited by each of the 6 studies reviewed was the lack of interdisciplinary and psychosocial supports available to prescribers and patients undergoing ORT. In combination with lack of specialty backup for complex cases, physicians feel unsupported in their decision to provide ORT. (18)(19)(20)(14)(21)(22) This concern is of great relevance and importance to rural physicians providing ORT, as specialty clinics and services are mostly localized to larger urban centres, and transportation poses a significant barrier to successful follow through with medical appointments. Interestingly, a 2011 Cochrane Review actually demonstrated that psychosocial intervention does not provide any benefit to ORT in terms of treatment retention and opioid abstinence. (23) However, psychosocial interventions are still recommended as adjunctive to pharmacotherapy for the treatment of OUD. Thus, one solution to this concern is the use of telemedicine services to bridge the gap between patients, primary care providers, and specialists. A 2018 study by Weintraub et al. connected patients undergoing ORT for OUD with ORT providers via telemedicine. The study had favourable results, with 86.1% of patients enrolled continuing to engage with the service and remaining opioid negative via urine drug screen at three months following initiation. (24) The hub-and-spoke treatment model may also provide

reassurance to physicians undertaking ORT, as it uses a model in which complex patients may be initiated and stabilized in a central treatment hub before being transferred to the care of a primary care physician providing ORT. (22) Delivering education to primary care providers in the form of accessible program databases and referral forms may be of importance in order to increase access to psychosocial supports, such as psychotherapy for contingency management and cognitive behavioural therapy, as well as social work to aid with finances, employment, and housing. (25)

The medical providers sampled in both the Andrilla et al. 2017 and Andrilla et al. 2020 studies cited the diversion of medications and general mistrust of OUD patients as the number one barrier to the provision of ORT. This barrier proves to be one of the most difficult to navigate, as the potential for abuse of ORT cannot be abated. However, it may be possible for this barrier to become more manageable if other identified barriers can be overcome. For example, medical providers may feel more trusting of their patients if they were provided with fair renumeration for their time, ultimately leading to the ability to allocate longer and more frequent engagements with patients. Providers may feel more comfortable specifically by speaking to patients multiple times throughout the week via telephone call, which may be considered administrative with ability to bill accordingly for their time. Furthermore, ORT using Buprenorphine/Naloxone rather than Methadone may be an effective strategy for mitigating the mistrust, as Naloxone eliminates the beneficial effects of Buprenorphine when abused. (26)

Additionally, an unfortunate barrier identified was the idea that OUD patients are a difficult patient population, not only from a treatment stance, but also in the idea that these patients may negatively affect one's practice. For example, Livingston et al., 2017, as well as Andrilla et al. 2017 and 2020 cited physician perceptions and worries that treating OUD patients with ORT would attract more drug users to their practice. Physicians may have concerns that treating this

patient population may potentially affect their practice in a negative way, as others may choose to find another practice where they will not be exposed to these individuals. The difficulty in approaching this barrier lies specifically in whether physicians have the ethical right to refuse patients based on their personal attributes, which is an issue that should be explored further in the future.

Another commonly cited barrier was the degree of regulation and potential for legal consequences if strict regulations were not followed. In Canada, prescribing and dispensing of controlled substances are monitored on a provincial level, specifically via the M3P program in Manitoba. (27) The College of Physicians and Surgeons of Manitoba have introduced a pilot program where funding will be utilized to provide 8 ORT training sessions per fiscal year, to conduct audits for new prescribers, to create and update recommended practices for Buprenorphine/Naloxone and Methadone, and finally to provide more mentorship for both new and existing providers of ORT. (17) While there is no solution to circumvent the potential for legal consequences for ORT prescribers, this pilot program may provide more reassurance in prescriber's abilities to follow a more detailed practice guideline and be more connected to mentorship for complex management and questions.

Given the fact that appointments with patients undergoing ORT often take significantly more time than the average visit, lack of fair remuneration is a significant barrier to the provision of ORT. Furthermore, the time constraints that are associated with a busy clinical practice does not lend itself easily to the adoption of ORT. Childerhose et al. 2019 found that many physicians providing ORT were having difficulties in billing appropriately for their OUD patients and found billing practices pertaining to counseling and psychotherapy were unclear. Fee for service physicians polled in this study suggested a number of solutions to the problem of remuneration,

including changing the classification of SUD treatment to chronic disease management in order to access incentive schemes and supplemental billing codes, as well as providing incentive billing codes for initial consult, treatment initiation, and ongoing management. (28) Others identified a blended model where physicians offering ORT would receive base pay plus top-up codes to cover no shows and administrative time, or increasing formal education surrounding billing practices and having access to readily and easily accessible billing support. (28) It remains unsurprising that fair remuneration is considered a main barrier to the provision of ORT, and although this issue is not easily solvable, there have been proposed mechanisms to help navigate this issue for the future. Additionally, increasing interest and advocation for ORT by primary care physicians may be what is required to see a turning point in policy making for fair remuneration for ORT providers. Importantly, since logistic barriers such as increased administrative duties were also identified as posing a significant barrier to the adoption of ORT into clinical practice, fair remuneration may aid in the solvency of this barrier. Increasing base pay rates may allow physicians to hire more administrative help to manage their OUD patients so that physicians can focus more on the medicine and less on the administration.

While the majority of physicians citing confidence as a main barrier to the provision of ORT were those who were not currently providing the service themselves, it still poses a main concern. Additionally, physicians interviewed by Livingston et al. (2017) articulated the fact that there is little formal medical training surrounding OUD and ORT specifically. While implementing increased education standards surrounding OUD and ORT would be a simple solution, it is unlikely that medical schools would readily afford the topic a large amount of dedicated time. However, another solution to aid with confidence would be to consider providing new ORT prescribers with a practice mentor. While Manitoba requires only a short period of supervision

from an experienced prescribed to meet standards to prescribe ORT, perhaps extending this period of supervision into a longer mentorship program would increase confidence in new prescribers.

Another barrier identified by Hutchinson et al. (2014), Andrilla et al. (2017), Andrilla et al. (2020), as well as Livingston et al. (2017) was the generalized stigma surrounding OUD not only from the general population, but also from other physicians, including practice partners. This barrier ties in with the idea and concern that the utilization of ORT is simply the substitution of one drug for another in addiction. This barrier may be addressed by increasing education of both physicians and the general population about the benefits of ORT. In general, positive outcomes for ORT are often measured in retention rates and abstinence from opioid or other substance use. A 2016 Cochrane Review found that individuals undergoing ORT, in comparison to detox alone, reported less opioid use and had fewer positive urine drug screens for opioids. (29) Furthermore, sustained ORT has been shown to reduce mortality, reduce the rate of HIV infections, reduce negative legal involvement, and increase overall quality of life. (30) When considering the idea that ORT is simply the replacement of one drug addiction for another, an interesting avenue to consider is what primary outcomes are most important to both provider and patient. Complete abstinence from all substances may be the most important factor for some, however, in speaking directly with patients undergoing ORT in the Pine Falls area of Manitoba, many patients identified their newfound ability to maintain employment and relationships since being on ORT as highly beneficial.

Limitations

This review was set forth mainly to identify common barriers to the provision of ORT to individuals with OUD. Qualitative studies surrounding physician opinions and perceptions naturally lend themselves to difficulties in the generalization of data, as personal values and morals, as well as specific community and practice-specific differences play a role in these perceptions. Furthermore, experience plays a large role in perceptions. While these opinions cannot be considered generalizable to all physicians, this study undertook an important step in attempting to identify perceived barriers across a diverse sample of individuals from Canada, The United States, and Germany.

Future Directions

There is currently a pilot program underway in the Pine Falls area of Manitoba which combines the use of ORT with traditional Indigenous teachings and medicine while connecting participants with social supports. Due to time-constraints and ethics approval barriers, a project investigating outcomes from this treatment program was unable to be undertaken. Exploring patient outcomes from this program, specifically in relation to re-integration into society in the context of employment, financial, and social stability would be interesting to undertake for the province of Manitoba specifically.

Conclusion

The opioid epidemic and OUD continue to pose significant difficulties for physicians in the context of treatment, management, and financial strain on the healthcare system. ORT using Methadone and Buprenorphine/Naloxone has been shown to reduce substance use, mortality, and adverse health outcomes in terms or morbidity and mortality rates. ORT has had a positive role in increasing psychosocial functioning and quality of life for patients suffering from OUD. (30) Physicians identify a significant number of barriers to the provision of ORT, including lack of interdisciplinary and psychosocial supports, difficult patient population and general mistrust of patients with OUD, degree of regulation and potential for legal consequences, fair remuneration, confidence in managing OUD, and general stigma surrounding OUD. While not every barrier to the provision of ORT can be addressed and resolved with fair remuneration, education, and increased access to programming and services, a fair number of them can. Healthcare systems worldwide continue to face an uphill battle in the management and treatment of OUD, one that requires partnership between government planning and resources with physician willingness to adapt their practice accordingly.

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Appendix

Table 1. Overview of Studies included for Review

Study	**Population**	**Number of Respondents**	**Most commonly cited barrier**
Schute et al. 2013	Physicians in Germany	n = 596	Degree of regulation
Hutchinson et al., 2014	Physicians in Washington State	n = 78	Lack of psychosocial support
DeFlavio et al., 2015	Physicians in Vermont and New Hampshire	n = 108	Difficult patient population
Livingston et al., 2017	Physicians in Nova Scotia	n = 20	n/a
Andrilla et al., 2017	Physicians in rural America	n = 1,124	Diversion/misuse of medications
Andrilla et al., 2020	Physician Assistants and Nurse Practitioners	n = 614	Diversion/misuse of medications