

**PERSPECTIVE**

Stigma-related barriers to medical cannabis as harm reduction for substance use disorder: Obstacles and opportunities for improvement

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Abstract

Emerging evidence on substituting cannabis for more harmful drugs has led to cannabis becoming a novel harm-reduction strategy for combating the current drug poisoning crisis. However, the authorization of medical cannabis as part of a harm-reduction approach and recovery strategy has significant implementation barriers rooted in longstanding stigma towards cannabis. Through a multi-discipline collaboration of Canadian clinicians and academic researchers, we highlighted stigma barriers and opportunities to address these barriers to elicit improved delivery of medical cannabis as a harm-reduction therapy within existing therapeutic frameworks. Evidence from existing literature and real-world experiences converged on three key themes related to stigma barriers: (1) Lack of medical cannabis education within the healthcare community, (2) lack of consensus and coordination among harm-reduction services and (3) access to medical cannabis. We highlight potential solutions to these issues, including improved healthcare education, better coordination between care teams and suggestions for improving access. Through this discussion, we hope to contribute to reducing the stigma around using medical cannabis as a harm-reduction strategy for individuals with a substance use disorder and consider new perspectives in policy development surrounding recovery services.

KEYWORDS

harm-reduction, medical cannabis, policy solutions, stigma, substance use disorder

INTRODUCTION

Cannabis is a green leafy plant that humans have used for millennia due to its psychoactive and medicinal properties. A growing body of literature has identified a potential role for cannabis in reducing the harms associated with using other substances, including alcohol, opioids and stimulants (Lucas et al., 2020; Mok et al., 2021; Scavone et al., 2013; Socías et al., 2017). Indeed, recent research indicates that cannabis use can potentially play a therapeutic role for many people who use drugs (PWUD), including those at high risk of drug-related harms such as overdose. Medical cannabis has possible

benefits through supporting intentional reductions in drug use, addressing long-term pain, or supporting engagement in medication-based treatments for opioid use disorder. The need for novel harm-reduction approaches coupled with the increasing access to cannabis has increased interest in cannabis as a potential drug substitution and harm-reduction tool for PSU.

Support for using cannabinoid medicines as a harm-reduction strategy within the context of problematic substance use has a promising empirical basis. Although cannabis has been described as a putative 'gateway' drug that increases the risk for the use of other substance use, a parallel area of study has identified a substitution

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effect by which cannabis use replaces or reduces the use of other more harmful substances. Specifically, studies of addiction treatment-seeking populations report that cannabis can serve as a substitute for opiates (Scavone et al., 2013) and for cocaine (Aharonovich et al., 2006), and survey data suggest that up to 75% of medical cannabis patients substitute cannabis for alcohol, illicit drugs or prescription drugs (Lucas et al., 2016; Lucas & Walsh, 2017). Data from individuals at high risk of overdose also show beneficial associations between cannabis use and injection drug use initiation (Socias et al., 2017) levels of opioid use, a lower likelihood of daily injection drug use and more rapid cessation of injection drug use (Reddon et al., 2020, 2021). Cannabis use has also been associated with greater engagement in therapy for opioid use disorders, such that periods of daily cannabis were associated with greater retention in opioid agonist treatment among a large sample of individuals with opioid use disorder (Socias et al., 2018) and a lower likelihood of unregulated opioid use among people who use drugs who also report long-term pain (Lake et al., 2019). Moreover, one of the primary components in cannabis, cannabidiol (CBD), has been shown to reduce drug cravings in human and animal models of addiction (Hindocha et al., 2018; Ren et al., 2009). Several small trials in individuals with opioid use disorder showed reduced opioid craving for up to a week following a three-day treatment regimen with CBD (Hurd et al., 2015, 2019; Suzuki et al., 2022). However, despite the devastating toll of overdose and other consequences of the ongoing drug poisoning epidemic, the application of medical cannabis therapies as part of a harm-reduction approach and recovery strategy has encountered significant barriers (Belle-Isle et al., 2014; Lo et al., 2023; Lucas, 2017; Mok et al., 2021, 2022). The present perspective piece examines obstacles that have impeded the implementation of cannabinoid therapies in the context of problematic substance use and addiction services.

Although cannabis-based medicines are among humanity's most ancient therapeutic agents (Russo, 2007), the past century has witnessed substantial stigmatization and prohibition. The origins of stigma with cannabis date back to the 1930s and were amplified by the US-led 'war on drugs' (Khenti, 2014; Rodrigues & Labate, 2016), which has been ineffective at protecting health while disproportionately impacting racialized populations, including Black, Hispanic and Latinx communities (Hewitt, 2020). Indeed, the colloquial term 'marijuana' originated from a campaign to alienate cannabis from its longstanding status as a therapeutic agent (Halperin, 2018; Hewitt, 2020). The residual effects of this ideologically driven campaign continue to add to the stigma surrounding the therapeutic applications of cannabis medicines (Geller & Fagan, 2010; Vitiello, 2019). Notably, there remain disproportionate impacts for vulnerable groups looking to apply medical cannabis as an alternative treatment and harm-reduction intervention,

and systematic inquiry into the medical benefits of cannabis has been impeded for decades (Ng et al., 2022), hindering healthcare curriculums and creating lasting knowledge gaps for healthcare professionals, healthcare academics and policymakers (Leos-Toro et al., 2018; Melnikov et al., 2021; St. Pierre et al., 2020). Indeed, the criminalization of people who use cannabis and the characterization of all cannabis use as inherently problematic may be particularly pronounced in the context of treatment for problematic substance use, where cannabis use is generally classified as a problem rather than a potential solution (Hasin & Walsh, 2021; Williams, 2020).

Aims

This perspective highlights critical barriers to using medical cannabis as a harm-reduction strategy for substance use disorders. As a multi-disciplinary team of clinicians, academic researchers and community harm-reduction counsellors with experience in cannabinoid medicine, we aim to highlight barriers to the implementation of cannabis-based interventions and to consider opportunities to address these barriers to elicit improved delivery of medical cannabis as a harm-reduction tool within existing frameworks.

STIGMA, BARRIERS AND OPPORTUNITIES

Based on our review of the published literature and our observations as clinicians and researchers who work with medical cannabis patients and care providers, we have identified three key themes relating to barriers to medical cannabis as a harm-reduction modality.

1. Lack of medical cannabis education within the healthcare community
2. Lack of consensus and coordination among harm-reduction services
3. Access to medical cannabis

Lack of medical cannabis education within the healthcare community

Stigma towards cannabis has contributed to substantial knowledge gaps in Canadian healthcare education (Ko et al., 2016; Ng et al., 2022). Currently, there are inadequate cannabis-related education and training opportunities throughout healthcare, leading to misconceptions and misunderstandings that perpetuate stigma towards medical cannabis (Ko et al., 2016; St. Pierre et al., 2020; Zolotov et al., 2018). Studies throughout Canada and the United States show that healthcare trainees lack sufficient knowledge of medical cannabis



and do not feel prepared to counsel on the subject (Fitzcharles et al., 2014; Zolotov et al., 2018). Under Canadian cannabis regulations, only nurse practitioners and physicians can authorize cannabis. For both, education on using cannabis for therapeutic purposes is poor. For example, a Canadian sample of physicians-in-training reported that 96% felt they had insufficient knowledge to make recommendations regarding medical cannabis (St. Pierre et al., 2020), and some medical students go as far as to declare the opinion that physicians should be penalized for recommending cannabis (Chan et al., 2017). In addition, although Nurse Practitioners have the power to authorize medical cannabis, a quantitative study regarding medical cannabis education cited a low rate of knowledge regarding cannabis for therapeutic purposes (Balneaves et al., 2018). These limitations are echoed in other allied healthcare fields, such as nursing and pharmacy (Szaflarski et al., 2020). They extend to the professional level, in which healthcare providers (HCPs) report being reluctant to discuss or authorize medical cannabis due to a perceived lack of evidence, minimal knowledge of therapeutic use and administration, and concerns over adverse events, addiction and abuse (Balneaves et al., 2018; Chan et al., 2017; Ng et al., 2021).

Importantly, these knowledge gaps result in HCPs lacking familiarity with details surrounding how to correctly dose and monitor those using medical cannabis to maximize therapeutic benefit and mitigate risk (Ko et al., 2016; Ng et al., 2021; St. Pierre et al., 2020). Moreover, HCPs may not understand how medical cannabis use differs from recreational use (Zolotov et al., 2018). This lack of education and understanding results in not just a lack of confidence and comfort among HCPs but also could result in misconceptions and stigma towards medical cannabis (Clobes et al., 2022; Melnikov et al., 2021). As a result, HCPs may not support those who use cannabinoid medicines, and patients may experience negative judgement or barriers to accessing medical cannabis (Bottorff et al., 2013; Clobes et al., 2022; Melnikov et al., 2021). These knowledge gaps may be amplified in the context of treatment for problematic substance use, where cannabis medicines remain embedded in pervasive stigma.

More significant investment in developing and delivering medical cannabis education to trainees and healthcare professionals is critical to reducing stigma towards medical cannabis (Clobes et al., 2022). Patients have reported that they have experienced obstacles to physicians authorizing medical cannabis due to 'the stigma associated with cannabis use and the belief by clinicians that it is only a recreational substance with a high potential for abuse' (Balneaves et al., 2018). This belief could be challenged with education. Physicians-in-training state that their comfort level with authorizing medical cannabis could increase with professional education, as this education is currently minimal (St. Pierre et al., 2020).

Incorporating medical cannabis education into the medical school curriculum and providing evidence-based guidelines and training for HCPs can increase physician confidence and comfort in authorizing medical cannabis (Ko et al., 2016; St. Pierre et al., 2020). These same principles could be extended to allied healthcare professionals. This educational gap indicates a need for standardized medical cannabis curricula and could be aided by querying cannabis knowledge in licencing examinations, among other solutions (Hachem et al., 2022). Medical cannabis education should be interdisciplinary, particularly in the context of substance use, where diverse teams are often engaged in treatment. Cannabis education may also benefit from public education and destigmatizing strategies such as those used previously for fields such as HIV/AIDS (Melnikov et al., 2021). For example, (Balneaves et al., 2018) discuss nurses providing harm reduction, safe route administration, self-titration, minimizing side effects, avoiding causing second-hand smoke exposure and appropriate disposal of used material. Improving cannabis education for clinicians in the field of problematic substance use can reduce stigma and enhance openness for HCPs to discuss medical cannabis with their patients, leading to improved patient care (Clobes et al., 2022).

Lack of consensus regarding harm reduction with medical cannabis

Poor communication and coordination between care staff and the healthcare system can lead to administrative challenges within a substance recovery programme utilizing medical cannabis (Balneaves et al., 2018; Zolotov et al., 2018). These barriers can range from a lack of support for the effective use of cannabinoid therapies to the outright prohibition of any cannabis use as a requirement for obtaining substance use services (Grinspoon, 2023). The diverse narratives of cannabis can be a significant barrier to implementing medical cannabis policies (Zolotov et al., 2018). Issues stem from a lack of available clinical protocol standards for integrating medical cannabis into treatment programmes, particularly surrounding the access and use of cannabis (Zolotov et al., 2018). This can lead to conflicting information from physicians, programme staff and other allied healthcare professionals. Problems may also arise from a lack of support from care staff due to attitudes and stigma towards cannabis (Balneaves et al., 2018; Chan et al., 2017; Ng et al., 2021). The disconnect between the lived experiences of cannabis-using patients and the training of health care providers may lead to patients concealing their self-treatment with cannabis and to feelings of stigmatization among clients that can rupture therapeutic alliance. Other impacts include decreased participation and disruption of programme services. Furthermore, there is no path for continued care



when transitioning from a programme to independent living.

An essential approach to addressing these dilemmas is to develop guidelines for medical cannabis use within a substance use treatment framework. Education surrounding medical cannabis and improved professional communication with a clear delineation of roles may also mitigate issues (Clobes et al., 2022; Ng et al., 2021; St. Pierre et al., 2020). Evidence-based education has been identified to facilitate destigmatization in healthcare professionals and patients (Clobes et al., 2022; Ng et al., 2021) and could be provided within the context of substance use treatment. Issues that might be addressed could include optimal dosing, product selection and delivery mode (e.g. vaping or edible versus smoking). As evidence continues to develop, treatment frameworks and education specific to using medical cannabis for substance use disorders should be developed. Additionally, the enhancement of resources, including websites, workshops and transitional support, will assist in more effective integration of medical cannabis treatment within a treatment programme to reduce problematic use of alcohol, opioids and stimulants.

Access to medical cannabis

The effective implementation of cannabis therapies for addictions is also impeded by the inability of individuals to access medical cannabis. In Canada, physicians and nurse practitioners are the only entities able to authorize medical cannabis, essentially acting as gatekeepers (Government of Canada, 2022a; Ng et al., 2021). However, stigma at a personal level and within a more significant institutional level (e.g. lack of training or healthcare education opportunities) has led to reduced healthcare providers willing or able to authorize medical cannabis (Balneaves et al., 2018; Holman et al., 2022; Melnikov et al., 2021; Ziemianski et al., 2015). As such, receiving authorization to take medical cannabis can be a challenge. Furthermore, patients cite other structural barriers to obtaining medical cannabis once authorized (Ng et al., 2021; Valleriani, 2022). For example, medical cannabis from Health Canada licenced producers can only be obtained through the mail. This requires a stable home address, which many individuals struggling with substance use do not have. The other options are to self-produce or have a designated grower. However, both also require a stable geographical location. Furthermore, many rental properties or subsidized properties do not allow cannabis grow operations on the premises.

The cost of obtaining medical cannabis is another significant barrier to access cited by medical cannabis patients (Capler et al., 2017; Gates, 2020). Many products typically recommended for medical use are costly, and medical cannabis is subject to additional taxes, unlike

other pharmacotherapies. Another affordability aspect is the absence of a Health Canada-appointed Drug Identification Number, which often precludes insurance coverage (Valleriani, 2022). Furthermore, while some insurance companies are beginning to provide medical cannabis coverage as an add-on option, this comes at an increased cost to payers and may be at the discretion of an employer or deciding entity of group benefit plans. As such, individuals may not have access to such add-on insurance. To the extent that individuals seeking treatment for problematic substance use are more likely to experience financial distress (Baptiste-Roberts & Hossain, 2018; Government of Canada, 2022b; Pear et al., 2019), additional costs associated with access and supplementary insurance may be prohibitive. In sum, the cost of cannabis via the recreational market is prohibitive (Capler et al., 2017; Gates, 2020; Valleriani, 2022), access to the medical stream is inhibited by limited access to health care, and self-production is often impossible due to limitations related to residential factors. However, those who might benefit most from access to cannabis for medical purposes are also those who are least able to access it; they cannot afford to buy it and have no way to grow it.

The impact of these barriers to access results in individuals being unable to try utilizing medical cannabis as a harm-reduction tool or requiring people to stop using medical cannabis, even if it is effective. Indeed, many addiction treatment providers require cannabis abstinence in order to access services. Alternatively, some individuals may turn to obtain products at reduced prices through non-medical outlets such as legal storefronts (often colloquially referred to as dispensaries), illegal dispensaries or other illegal sources such as family/friends and dealers, which may limit access to reliable guidance regarding best practices for therapeutic use (Health Canada, 2022).

To address the problems in access for individuals with a substance use disorder, we propose a subsidized path for medical cannabis for those individuals with medical needs who cannot self-produce due to residential factors such as limited space or shared dwellings. Potential solutions to this include the development of community cannabis gardens or not-for-profit growers' clubs that would provide low-cost access to self-production akin to regulatory experiments in Europe and elsewhere (Pardal et al., 2022). However, while such innovative approaches to access and self-production are promising in the longer term, given the obstacles to a substantial revision of federal regulations, this evolution is unlikely to be realized in a timely enough manner to address the urgent needs of people who use cannabinoid medicines to reduce the harms associated with other drug use. As such, regulators should consider more immediate approaches such as reducing costs through modification of taxation schemes, incentivizing insurance coverage and reimbursement for cannabinoid medicines, and increasing



access to medical cannabis through pharmacies and other specialized in-person vendors. Moving forward, regulatory regimes for the self-production of medical cannabis should be designed to reduce financial and residential barriers, as present systems that require private residences to grow cannabis may impede access for those patients who benefit the most from access to low-cost self-produced cannabis.

RELEVANCE FOR CLINICAL PRACTICE

By examining barriers to implementing cannabis-based interventions, this work highlights opportunities to improve the delivery of medical cannabis as a harm-reduction tool within existing clinical frameworks. Programmatic education initiatives to enhance training in cannabinoid therapies should be regularly included in the training of HCPs who will work with PWUD, and outreach efforts to combat stigma and facilitate best practices should be provided to HCP currently engaged in treating addictions. Importantly, these educational initiatives should be tailored to meet the needs of a diverse range of HCP, including physicians, nurses, social workers and psychologists, as well as the many paraprofessionals who play an essential role in substance use treatment. The limitations in access for a population at the highest risk also include costs and residential factors. Alternate pathways for access to cannabis are needed to address these barriers. Open dialogue between government-level decision makers and professionals needs to improve to increase the acceptability of cannabis as a safer use over other substances with much more substantial problems.

CONCLUSION

This paper introduced the topic of using medical cannabis as an adjunctive harm-reduction tool for people who use drugs. Evidence suggests that cannabis may be beneficial for many people who use drugs with the highest risk of drug-related harm, including overdose. However, the application of cannabinoid medicine to treat substance use disorders is impeded by stigma and barriers to accessing cannabis for therapeutic purposes. By merging our experiences with existing literature, we highlight three key themes related to stigma: (1) Lack of medical cannabis education within the healthcare community, (2) lack of consensus and coordination among harm-reduction services and (3) access to medical cannabis.

AUTHOR CONTRIBUTIONS

All authors, Florriann Fehr, Lindsay A. Lo, Chris Nelson, Kate Nanson, Lauren Diehl, Karl Nielson, Hudson Reddon and Zach Walsh, discussed and contributed to the ideas and narrative presented in the manuscript.

Florriann Fehr conceptualized the initial design and intent of the manuscript. FF and LL drafted the initial version of the manuscript. Chris Nelson and Lindsay A. Lo designed the abstract portion. All authors provided comments, edits and contributions to the sections, which Lindsay A. Lo, Florriann Fehr and Zach Walsh incorporated for the final draft. All authors read, reviewed and approved the final draft of the manuscript for submission.

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CONFLICT OF INTEREST STATEMENT

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DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

ETHICS STATEMENT

Ethics approval and consent to participate are not applicable.

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