Prescribing medical cannabis in Canada: Are we being too cautious?

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ABSTRACT

There has been much recent discussion and debate surrounding cannabis in Canada, including the prescribing of medical cannabis for therapeutic purposes. Certain commentators – including the Canadian Medical Association (CMA) – have denounced the prescribing of cannabis for medical purposes due to a perceived lack of evidence related to the drug's efficacy, harms, and mechanism of action. In this commentary, we present arguments in favour of prescribing medical cannabis in Canada. We believe the anti-cannabis position taken by CMA and other commentators is not entirely evidence-based. Using the example of neuropathic pain, we present and summarize the clinical evidence surrounding smoked or vapourized cannabis, including recent evidence pertaining to the effectiveness of cannabis in comparison to existing standard pharmacotherapies for neuropathy. Further, we outline how the concerns expressed regarding cannabis' mechanism of action are inconsistent with current decision-making processes related to the prescribing of many common pharmaceuticals. Finally, we discuss potential secondary public health benefits of prescribing cannabis for pain-related disorders in Canada and North America.

KEY WORDS: Cannabis; medical marijuana; pain; Canada

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Cannabis has recently become a topic of intense interest throughout Canada. This has been fuelled in part by politically charged media hype regarding legalizing cannabis and moves by Health Canada to switch the onus of prescribing medical cannabis from the federal health agency to physicians. Recently, leading members of the Canadian Medical Association (CMA) have joined others in publicly discouraging the prescribing of cannabis, attributing this decision to a lack of clinical evidence pertaining to efficacy, mechanisms of action, and potential harms.¹ CMA's position appears to be problematic in that it generates unnecessary stress and confusion among prescribers and patients, as it is in conflict with the stated position of other similarly qualified organizations. For example, the California Medical Association's "Physician Recommendations of Medical Cannabis"² specifically acknowledges a therapeutic role of cannabis in conditions such as pain, nausea and vomiting secondary to chemotherapy, spasticity, and anorexia associated with Acquired Immunodeficiency Syndrome (AIDS). On the other hand, CMA's "evidence-based" approach is a valued tradition that should be integral to the recommendations of any major medical body. However, given CMA et al.'s failure to acknowledge various peer-reviewed and high-quality clinical research studies on the therapeutic application of cannabis, we feel that this position is not entirely evidence-based. Furthermore, while knowledge gaps related to mechanisms of action and abuse liability undoubtedly exist for medical cannabis and are cited as deterrents to its use, such issues apply to a range of existing and accepted medical practices without the same ramifications. Finally, potential secondary public health benefits arising from medical cannabis use have been overlooked in these discussions, but warrant attention.

Therapeutic benefits of medical cannabis have been demonstrated across a wide spectrum of medical conditions and symptoms. Take neuropathic pain as an example: a chronic and debilitating symptom arising from diseases or lesions (damage) affecting the somatosensory system, which is present in some 3% of the population. Typically, less than half of neuropathy patients receive satisfactory pain relief with standard pharmacological treatment.³ Cannabinoids (e.g., Dronabinol) are considered as a fourth-line treatment option³ and more recently, smoked or vaporized cannabis has also been clinically investigated. A PubMed review reveals five recent randomized control trials^{4–8} (including two published in the *Canadian Medical Association Journal*), and two systematic reviews,^{9,10} that have evaluated the analgesic efficacy of smoked or vaporized cannabis on neuropathic pain compared to a placebo. While treatment regimens (e.g., potency and dosage) and patient populations (e.g., HIV patients, multiple sclerosis patients) varied across studies, each study recorded significant neuropathic pain relief associated with cannabis treatment.

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While various commentators advocate for the continued use of routine pharmacological therapy, cannabis may be at least as – if not more – effective as standard treatment for certain conditions, including neuropathy. A recent meta-analysis found that smoked cannabis was significantly more effective than placebo in providing pain relief to patients with HIV-related neuropathy, while the efficacy of more commonly prescribed drugs, such as gabapentin and pregabalin, did not differ significantly from placebo.¹¹ Concerns regarding the prescribing of medical cannabis have also been expressed on the basis of a perceived lack of information related to its mechanism of action. Applying this model more generally, it could be argued that physicians should be discouraged from prescribing a host of routine pharmacological treatments, including gabapentin and pregabalin, whose mechanisms of action are still largely unclear.

Additional pharmaceutical recommendations for neuropathic pain include opioid analgesics as a second- or third-line treatment.^{3,12} Over the past two decades, prescribing levels of opioid pain relievers have increased sharply in North America, bringing a spike in prescription opioid misuse and opioid-related overdose deaths. The addition of cannabis to physicians' lists of viable pain treatment options has the potential to bring with it some major secondary public health benefits. While marijuana is not associated with an elevated risk of mortality,¹³ prescription opioids directly contribute to almost half of overdose deaths, which now exceed deaths from motor vehicle accidents.¹⁴ A recently published study by Bachhuber and colleagues in the *Journal of the American Medical Association Internal Medicine* noted a 25% reduction in opioid-related overdose fatalities in states that enacted medical cannabis laws.¹⁵ Although firm conclusions cannot be drawn from this type of ecologically-based natural experiment, these findings raise questions about potential unintended benefits of medical cannabis use, particularly as they pertain to reducing rates of opioid use and associated harms. Related to this, while various potential harms associated with cannabis have been cited as reasons for not prescribing it, there exists an established body of literature pointing to increasing rates of abuse, overdose and other complications arising from the more commonly used non-opioid drugs for neuropathic pain, such as gabapentin and pregabalin (see Hakkinen et al.,¹⁶ for example). This has occurred alongside recent studies that have raised doubts about previously expressed harms of cannabis use.^{17,18} It is worth noting that discussions regarding the potential public health applications of cannabis extend past medical use to discussions of full legalization. Such discussions are beyond the scope of the current paper, as are related issues of restricting cannabis access and costs associated with prescribing, but these discussions should continue to be undertaken elsewhere as models of cannabis regulation evolve.

Physicians have a responsibility to make clinical decisions in accordance with the best available scientific evidence, and amidst a co-occurring influx of cannabis success stories in the media, a cautious position is warranted. However, in citing a complete lack of evidence and ignoring that many drugs used in place of cannabis bring a host of potential harms tolerated by

the medical community, some commentators are failing to acknowledge the full picture while holding cannabis to a different standard than other drugs commonly used in medical practice. Sadly, this could result in missed opportunities and unfavourable outcomes for the one million Canadians suffering from neuropathic pain, and the many others with other undertreated chronic diseases for which cannabis may be a potential therapy.

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RÉSUMÉ

Il y a eu récemment de nombreux débats et discussions sur le cannabis au Canada, notamment sur la prescription du cannabis médical à des fins thérapeutiques. Certains commentateurs – dont l'Association médicale canadienne (AMC) – dénoncent la prescription du cannabis à des fins médicales en raison du manque perçu de preuves de l'efficacité potentielle, des méfaits et du mécanisme d'action de cette drogue. Nous présentons ici les arguments en faveur de la prescription du cannabis médical au Canada. Nous croyons que la position anti-cannabis adoptée par l'AMC et par d'autres commentateurs n'est pas entièrement fondée sur les données probantes. En prenant l'exemple de la douleur neuropathique, nous

présentons et nous résumons les preuves cliniques portant sur le cannabis fumé ou vaporisé, y compris les preuves récentes afférentes à l'efficacité du cannabis comparativement aux pharmacothérapies standard existantes contre les neuropathies. De plus, nous montrons que les préoccupations exprimées au sujet du mécanisme d'action du cannabis sont en contradiction avec les processus décisionnels actuels liés à la prescription de nombreux produits pharmaceutiques courants. Enfin, nous discutons des éventuels avantages secondaires pour la santé publique du fait de prescrire le cannabis pour les troubles liés à la douleur au Canada et en Amérique du Nord.

MOTS CLÉS : cannabis; marijuana médicale; douleur; Canada