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Strategies to Address British Columbia's Prescription Opioid Crisis

Recommendations from the British Columbia Node of the Canadian Research Initiative on Substance Misuse

November 2015

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Executive summary

Recent events in British Columbia have highlighted the urgency with which policy makers, regulatory bodies and clinicians need to act together to address the public health harms related to pharmaceutical opioids and other addictive pharmaceutical drugs. This report briefly describes the provincial pharmaceutical opioid problem and provides several key recommendations for immediate steps to reduce fatal overdoses, misuse, addiction and other severe harms related to unsafe opioid prescribing in BC.

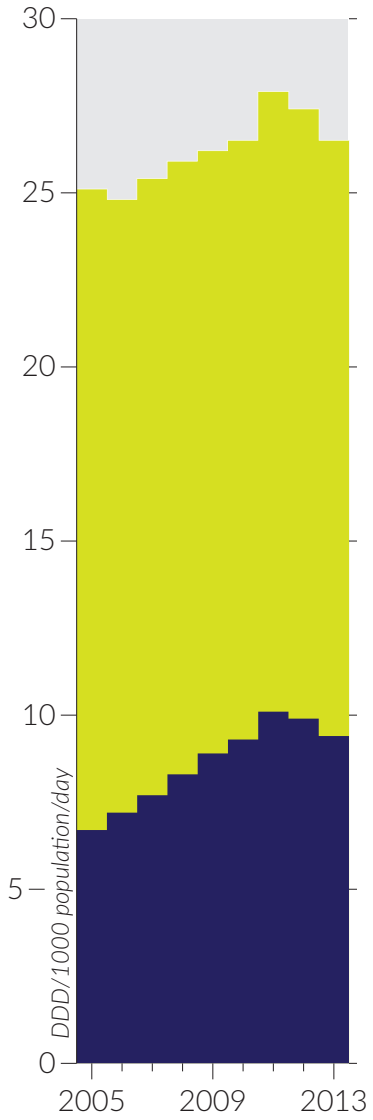


fig 1

Annual opioid dispensing (not including methadone) in BC, 2005–2013

Weak opioids

Strong opioids

Fischer et al., 2014.
** DDD = defined daily dose*

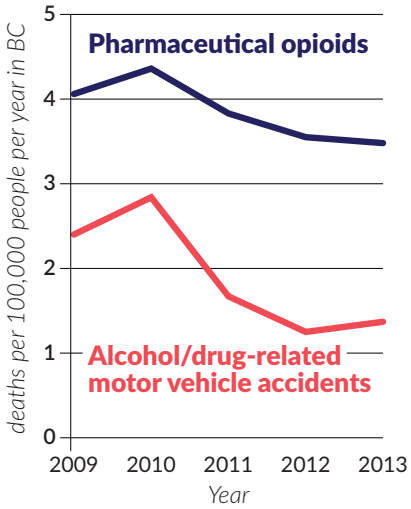
The prescription opioid epidemic

Canada has the second highest opioid consumption rate among developed countries, with the rate of pharmaceutical opioid use tripling in Canada over the past decade.[1-3] Despite similar rates of chronic pain across Canada, there is substantial variation in the rates and types of opioids prescribed across provinces.[4-8] For example, British Columbia (BC) dispenses more than double the amount of opioids compared to Quebec, the lowest opioid dispensing province.[6,8] Additionally, from 2005 to 2011, the rate of dispensing strong opioids in BC increased by almost 50% overall, including a 135% increase in oxycodone dispensation.[6] Notably, these increases in opioid prescribing conflict with the increasing body of research suggesting that opioids may have limited long-term effectiveness for treating chronic non-cancer pain, and that the risk profile of opioids may outweigh their potential short-term benefits in cases of mild to moderate acute pain.[9-11]

In addition to an increased rate of opioid prescribing, there is evidence of inappropriate and high-risk opioid prescribing practices in BC. For instance, while patients on methadone commonly have chronic pain, past research suggests that 35% of patients on methadone maintenance treatment in BC are co-prescribed opioids that are often not prescribed by the patient's primary methadone provider.[12] This is problematic since co-prescriptions with methadone have important safety considerations, as evidenced by a recent study of provincial mortality data found that methadone was involved in 25% of pharmaceutical opioid-related deaths in BC.[13] Equally concerning are the persistently high rates of benzodiazepine prescribing in BC,[14] given that co-prescription of benzodiazepines and opioids has long been known to be a major risk factor for fatal overdose.[15-18]

Coinciding with the dramatic increases in opioid prescribing in BC, there are high rates of opioid dependence, addiction and misuse that have contributed to significant health and social harms. In 2013, there were more than 330 deaths in BC related to illegal drug overdose including opioids. Of these deaths, 87% were accidental.[19] Pharmaceutical opioids account for a large proportion of these deaths, to the extent that the number of pharmaceutical opioid-related deaths exceeds the number of deaths from motor vehicle accidents involving alcohol in BC (Figure 2).[13,19–21] Furthermore, among the pharmaceutical opioid-related deaths in BC, 93% involved at least one other high-risk medication (e.g., benzodiazepines).[21] Although rates of prescription opioid-related death in BC have plateaued in recent years, the province is still experiencing annual mortality rates of close to 4 deaths per 100,000 people.[13]

fig 2



More people die in BC each year from pharmaceutical opioids (including methadone) than from alcohol/drug-related motor vehicle accidents.[13,19–21]

Studies have suggested that approximately 40% of prescribed pharmaceutical opioid-related deaths occur among people who are prescribed opioids above recommended safe-dosing guidelines.[22] Furthermore, deaths related to prescribed pharmaceutical opioids correlate strongly with rates of opioid dispensation in BC.[23] In addition to opioid overdose and mortality,[24] there are extensive health and social harms associated with pharmaceutical opioids, including injuries and trauma;[25] increased risk of costly emergency department visits;[26,27] diversion to street-based markets, drug dealing and other

addiction-associated petty crime.[3,28] Additionally concerning is evidence highlighting the growing number of infants being born with opioid addiction in Canada.[29] Finally, recent evidence has demonstrated that many individuals who initially used pharmaceutical opioids or benzodiazepines illicitly may eventually transition to heroin or intravenous drug use thus substantially increasing the risk for blood-borne infections and overdose.[30-36]

In the face of this evidence, change has been slow to come. This brief paper was prepared through the secretariat of the British Columbia node of the CIHR Canadian Research Initiative on Substance Misuse (CRISM). The development of this document included a range of expert stakeholders through the network's membership and other experts (Appendix A). This urgent call to action outlines changes that can be immediately implemented in BC to substantially reduce the rates of overdose death, addiction and related harms that stem directly from the current system.

Urgent need for action in British Columbia

While the pharmaceutical opioid epidemic has emerged throughout North America, recent events in BC have highlighted the urgency with which BC policy makers must act to address the public health harms related to pharmaceutical opioids and other addictive pharmaceutical drugs. Despite the scale of the present public health problem, strategies to meaningfully address unsafe prescribing have not been implemented. This is despite the fact that, ultimately, prescribers are largely responsible for the burgeoning illicit market in pharmaceutical opioids that has developed on the streets of BC.[37-40] In fact, the entry of organized crime groups into the manufacturing of counterfeit pharmaceutical opioids (which often contain fentanyl) to fuel the street market for illicit or diverted opioids is arguably a direct result of longstanding unsafe physician prescribing practices.[41-43]

Specifically, BC has witnessed a spike in fentanyl related overdoses and deaths. Within only two years, there has been a seven-fold increase in fentanyl detected deaths in BC (from 13 deaths in 2012 to 90 deaths in 2014), representing 25% of all illicit drug related deaths in the province in 2014.[44,45] In 2015, there have been several high profile deaths from fentanyl in BC,[46-48] as well as 16 cases of suspected fentanyl overdoses in a single day in Vancouver.[49-51] This worsening of the situation has occurred despite focused drug-law enforcement on the illicit fentanyl trade that has included at least 11 search warrants, 8 charges and 500,000 pills seized in Metro Vancouver alone.[41,52,53] Based on past evidence regarding the limited effectiveness of police seizures on controlling the availability of illicit drugs, it is unlikely that law enforcement efforts are a promising solution to this problem.[54,55]

In 2015, sixteen cases of suspected fentanyl overdoses were once reported in a single day in Vancouver.

Equally concerning are the persistently high prescribing rates of benzodiazepines in BC. Benzodiazepines are sedating hypnotic medications that, despite limited evidence of effectiveness and clear evidence of harms (e.g., addiction, fatal overdose, etc.), continue to be regularly used to treat sleep disorders and other minor health conditions for which there are much safer alternatives. In fact, benzodiazepines remain among the most commonly prescribed and misused types of psychoactive drug in the world, despite their link to serious harms, including cognitive impairment and decline (i.e., dementia), accidents and injuries, dependence and addiction, and fatal overdose—especially when used in combination with opioids or alcohol.[56-58] Locally, recent research has found that benzodiazepine use

was associated with elevated rates of HIV infection among a cohort of people who inject drugs, and addiction to benzodiazepines is known to be extremely difficult to treat.[59] In light of these risks, many clinical guidelines now recommend against prescribing benzodiazepines, yet inappropriate prescribing has continued to persist in BC.[14] As a result, the percentage of pharmaceutical opioid related overdose deaths involving benzodiazepines in BC increased 600% between 2004 and 2013.[13]

Areas for intervention

In the wake of the crisis that exists in BC, there has yet to be sufficient action from various colleges (i.e., College of Physicians and Surgeons of BC, College of Pharmacists of BC, College of Registered Nurses of BC, College of Dental Surgeons of BC, College of Veterinarians of BC) or other regulatory bodies across the province. This situation is likely a result of these groups waiting on Health Canada for action, coupled with the fact that no single group (e.g., regulatory bodies, police, etc.) has a clear mandate to address the current epidemic.

Fortunately, BC is uniquely positioned to rapidly implement several safeguards to reduce unsafe prescribing practices through the province's PharmaNet system and other interventions. PharmaNet is an electronic information system that records data (e.g., drug name, dose, quantity, duration, prescribing practitioner, dispensing pharmacy) on all prescriptions dispensed at community pharmacies in BC.[60] Previous research has suggested that the real-time, centralized nature of PharmaNet, which allows prescribers and pharmacists to access patients' current prescription information, can be effective in reducing inappropriate prescriptions of opioids and benzodiazepines by approximately 30-50%.[61] Notably, this study was performed at a time when only pharmacies had access to PharmaNet, suggesting that there is room for even greater reduction of inappropriate prescribing if PharmaNet is more widely utilized by prescribers and pharmacies. To this end, enabling physicians and nurse practitioners to access patients' opioid prescription history promotes optimal opioid prescribing practices.[62]

However, presently, physicians and nurse practitioners in BC are able—but not required—to use PharmaNet when prescribing medications. Here, it is estimated that less than 30% of physicians in BC have enrolled for PharmaNet,[62] which means that over 70% of BC physicians may be writing opioid prescriptions without knowing if the patient in front of them is already prescribed opioids from multiple other practitioners. This is a very real concern, as evidenced by the case of one BC resident who received more than 23,000 pills of oxycodone from more than 50 physicians and 100 pharmacies over five years.[64]

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Additionally, practitioners who do not use PharmaNet may be unaware if a patient is receiving medications that pose high risk for overdose if co-prescribed with opioids, such as benzodiazepines or methadone. Furthermore, it is not currently required that benzodiazepines are prescribed on a duplicate prescription pad, which is an additional safeguard that is in place for opioids and other medications that pose high risk for misuse, diversion or overdose.[65] Prescription monitoring for benzodiazepines has already been enacted in other settings including Alberta and New York.[66,67] A study of the New York triplicate prescription program found that benzodiazepine prescribing was reduced by nearly 50% after the program's implementation. These reductions were sustained for at least seven years after the program's implementation, and most

patients did not require supplemental medication once their benzodiazepine prescriptions were discontinued.[67]

In addition to clinic-level prescribing practices, due to common pain and injury presentations, emergency departments can be another source of opioids. One study conducted at Vancouver General Hospital found that patients who were prescribed opioids upon discharge from the emergency department had triple the odds of experiencing an adverse event within two weeks.[68] Given the demands placed on emergency department staff for providing pain relief among injured and other patients who present to emergency rooms, research and educational interventions tailored to emergency department settings—such as clinical guidelines, electronic decision support tools, and clinician education—require resources to support opportunities for safer opioid prescribing in this environment.

In the absence of the above safeguards, some limitations of Canadian prescribers should be noted. For instance, physicians in BC have traditionally received little training on how to safely prescribe opioids or how to identify and treat opioid addiction. In fact, only one third of Canadian universities provide mandatory instruction in pain management as part of undergraduate medical training. Not surprisingly, it has been estimated that only approximately 30% of Canadian family physicians feel strongly confident in their opioid prescribing skills.[69,70] Furthermore, primary care physicians have demonstrated high rates of continuing ineffective opioid prescriptions, being unaware of opioid monitoring guidelines and demonstrating low levels of knowledge regarding safe opioid prescribing in the context of chronic pain treatment.[62] Similarly, previous studies have found that up to 94% of primary care physicians may be unable to identify symptoms or methods of problematic substance use.[71-73] Recommendations regarding the need for greater investment in prescriber education (including nurse practitioners and other prescribers) in addiction and pain management, including the role of non-opioid analgesics for pain management, are described on the next page.

Recommendations

In light of the evidence and the unique characteristics of the system of care in BC, a number of steps should immediately be taken to reduce the harms of the pharmaceutical opioid epidemic in British Columbia. These steps include:

STRATEGIES FOR IMPROVED PRESCRIBING PRACTICES

1. Make registration for PharmaNet free, and legally require all clinicians with prescribing authority to be registered for PharmaNet and routinely check patients' PharmaNet profiles when writing prescriptions. Exemptions to this requirement could be provided for individuals who practice in areas without Internet access or with other barriers.
2. Revise duplicate prescription pads to include a checkbox indicating that the prescribing practitioner has fulfilled his or her legal responsibility to review a patient's PharmaNet record, thereby ruling out duplicate or high-risk co-prescriptions.

3. Put in place enforcement measures to ensure that pharmacies are checking PharmaNet to confirm that duplicate prescriptions or other evidence of inappropriate medical care is further brought to the attention of prescribing practitioners and regulatory authorities.
4. Change requirements for benzodiazepine prescribing such that benzodiazepines require a prescription on a duplicate prescription pad, in the same way that opioid prescriptions must be written in BC.[65,67]
5. Implement a maximum upper dispense limit for the amount of opioids that a patient may be dispensed at any one time.

STRATEGIES TO IMPROVE OPIOID ADDICTION CARE

6. Dedicate investments into addiction treatment. For instance, buprenorphine/naloxone—a proven treatment for opioid addiction—should be the first line pharmacotherapy option (along with methadone) for opioid addiction, given its superior safety profile with respect to overdose risk compared to methadone.[74-77]
7. Improve access to buprenorphine/naloxone by eliminating the requirement that prescribers must have methadone exemptions in order to prescribe buprenorphine/naloxone. This requirement is unnecessary given the low misuse potential of buprenorphine/naloxone and the low number of buprenorphine/naloxone prescribers the exemption requirement creates.[78] In lieu of the methadone exemption, prescribers would be required to complete an online training module on buprenorphine/naloxone prescribing.

8. Invest in recovery-oriented care for individuals with opioid addiction.
9. Consider comprehensive patient education with regards to risks of poly-substance use and overdose prevention, recognition and response including take home naloxone prescription.[79,80]
10. Increase prescribers' capacity for opioid agonist treatments (e.g., methadone and buprenorphine/naloxone) via novel collaborative strategies.

LONG-TERM STRATEGIES TO IMPROVE PRESCRIBER KNOWLEDGE

11. Invest in BC's medical curricula and continuing medical education for physicians, nurses and other clinicians in addiction diagnosis, treatment and recovery; pain management including the use of non-opioid analgesics; and safe opioid prescribing, including the potential for serious adverse effects when opioids are co-prescribed with benzodiazepines and other psychotropic medications.[38,81]

12. Coinciding with benzodiazepines transitioning to a duplicate prescription requirement, investment should be made in education for BC prescribers on the known serious harms and clinical limitations of benzodiazepines, as well as the availability of safer alternatives.[82]
13. Support research and educational interventions in emergency departments to enhance safer opioid prescribing practices in this setting.[83-86]

If these evidence-based recommendations are enacted quickly, BC has the potential to dramatically reduce fatal overdoses, abuse, addiction and other severe harms related to unsafe opioid prescribing.

Together, we can do this. The time for action is now.

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Acknowledgments

We wish to acknowledge Pauline Voon (PhD candidate) for research and writing assistance in preparing this document. We also wish to thank James Nakagawa, Cheyenne Johnson, Carmen Rock, Lianlian Ti, Elaine Fernandes, Diane Pépin, Jehnifer Benoit, and Deborah Graham for their editorial and administrative assistance.

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