Cannabis distribution in Canada: A literature review of policy options and potential implications for public health

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Abstract

Introduction

Canada is preparing for the legalization of cannabis, making it the second country to fully legalize the drug. The process of legalization poses challenges to government as policy debates ensue regarding the 'best' ways to regulate and retail the product. The resulting regulatory structure governing cannabis retail will impact public health given its' adverse consequences and addictive propensity. Shaping this impact will be factors such as the chosen distribution format, and related, the strength of the regulatory structure's emphasis on population health protection. Further, the policy contexts of tobacco and alcohol control provide important 'lessons learned' for this debate. This report seeks to critically assess the public health literature pertaining to cannabis distribution and commercialization in a North American context.

Method

A review of the public health literature will allow for a critical assessment of cannabis distribution systems and commercialization from a public health perspective.

Results

The public health literature highlights divergent approaches to cannabis distribution, with privatized distribution providing a 'light touch' regulatory approach and distribution within a publicly owned system providing a more restrictive policy and retail environment.

Conclusion

A privatized cannabis retail system would facilitate commercialization and would pose the greatest risk to public health.

Table of Contents

Chapter 1: Introduction

For the purpose of this report, the term 'cannabis' will be used to describe the non-medical use of the plant *cannabis sativa*.

1.1 Evolution of cannabis legalization in Canada

Announced as a fulfilled election platform in 2017, the Liberal government in Canada made public its' intent to legalize cannabis retail and use, with markets set to open on July 1, 2018 (Austin, 2017). With only a short period of time to design and implement a fully operational cannabis retail system, the Government began a fast-tracked regulatory pursuit, beginning with the development of a cannabis policy Discussion Paper (Government of Canada, 2016). Accompanying this Discussion Paper was a formal consultation process wherein stakeholders were invited to voice their preferences and concerns relative to the Discussion Paper's policy recommendations (Health Canada, 2016; p8). The result was the production of a National Cannabis Framework (named in full, the "Framework for the Legalization and Regulation of Cannabis in Canada, the Final Report of the Task Force on Cannabis Legalization and Regulation"), providing suggested policy approaches within the devolved provincial rollout of cannabis legalization (Health Canada, 2016). Several policy domains held dominant positions within these documents and consultations, including options for cannabis distribution (Health Canada, 2016). With distribution formats ranging from privatized to publicly owned system, Canadian policymakers have an important decision to make regarding which format to pursue. While other regulatory decisions will also play a primary role in policy development processes, it is arguably the distribution format that will have the largest impact on both commercial and public health outcomes. The debates and evidence pertaining to this area of focus will be explored within the literature review of this report.

While there is limited evidence to guide the development of cannabis policy and cannabis distribution systems as of yet, lessons can be learned from the approach to regulating alcohol and tobacco (Government of Canada, 2016; Kilmer, 2014). Research has demonstrated that the tobacco and alcohol industries share similar strategies and tactics, and recent evidence suggests that the burgeoning cannabis industry will likely share commonalities with these industries (Spithoff, Emerson, & Spithoff, 2015; Subritzky, Lenton, & Pettigrew, 2016a).

This likelihood is heightened when one considers that the tobacco industry has already shown interest in entering the cannabis market (Barry, Hiilamo, & Glantz, 2014). In addition to sharing similar tactics, like the alcohol and tobacco industries, the cannabis industry will also stand to profit most from the heaviest of users (Caulkins et al., 2015; Hall, 2017), thus creating an acutely at-risk group of consumers.

In a North American context, Canada can apply lessons learned from Colorado and Washington State, where cannabis use and retail has been progressed to legalization from as early as 2012 (Kilmer, 2014). Unfortunately, these states were prohibited from pursuing a distribution system in the form of a publicly owned system, as cannabis use and retail remains illegal at the federal level in the United States (Hall & Lynskey, 2017). For Canadian policy-makers, this represents a drawback, as the ability to learn from the outcomes and mechanisms of a previously established publicly owned system for cannabis distribution would have been valuable. What policy-makers can learn from however is the potential risk to public health associated with the implementation of a privatized cannabis distribution system, wherein preliminary results show that this has promoted the growth of a large, industrial entity that acts in opposition to public health goals (Room, 2013; Spithoff, Emerson, & Spithoff, 2015). Other limitations from drawing lessons learned from the United States include the lagged effect of the legalization of cannabis retail on uptake and use of cannabis (Pacula et al., 2014). Given that cannabis has until only recently been legalized in Colorado and Washington State, the effect of marketing and retail tactics to encourage uptake of cannabis use will likely not show effect for some time (Hall & Weier, 2015; Pacula et al., 2014).

1.2 Cannabis and public health

While the health effects of cannabis use are often contested (Caulkins & Kilmer, 2016), there is consensus that cannabis use poses risk to public health (Rehm, Crepault, & Fischer, 2017). Use of the drug is associated with mental health issues including psychosis (Fergusson, Poulton, Smith, & Boden, 2006) and has been found to hinder professional, educational and social achievement (Valkow, Baler, Compton, & Weiss, 2014). Additionally, cannabis use poses heightened risk to the developing brains of children and young adults (Van Ours &

Williams, 2011). With over 20% of youth aged 15-17, 33% of Canadians aged 18-24, 16% aged 25-44, and 7% aged 45-64 having reported past year cannabis use (Statistics Canada, 2015), it will be important that the resulting cannabis distribution and regulatory system facilitates a reduction in use, as opposed to encouraging use. These dichotomous outcomes of encouraging use versus reducing use are marked in the regulatory intent governing alcohol and tobacco control in Canada. With the intent of alcohol policy being to limit a subjective quantity of 'harmful use' and the intent of tobacco policy being to reduce overall use (Carnevale, Kaga, Murphy, & Esrick, 2017; Government of Canada, 2016), it will be interesting to see where the cannabis regulatory system falls along this continuum of intent. One of the key markers for this will be whether or not the cannabis distribution system is privatized, or monopolized and publicly owned as is recommended by the Centre for Addiction and Mental Health's 'Cannabis Policy Framework' report (Crepault, Rehm, & Fischer, 2016).

Given that cannabis is harmful to public health, many stakeholders and government officials have voiced preferences for a 'public health approach' to cannabis regulation and retail (Health Canada, 2016; Government of Canada, 2016; Room, 2013; Subritzky, Pettigrew, & Lenton, 2016b), and as follows, a publicly-owned, monopolized distribution format (Haden & Emerson, 2014). With the governing documents pertaining to cannabis legalization in Canada (i.e., Discussion Paper, National Cannabis Framework) both prefacing their intent to pursue legalization through a 'public health approach', it is hopeful that the resulting cannabis distribution systems in Canada will remain out of private hands.

Chapter 2: Methods

2.1 Literature review

The literature review will assess current debates and evidence pertaining to non-medical cannabis distribution systems (focused on publicly owned monopolies and privatized systems), as well as the broader topic of privatization of licit, non-medical drug retail (i.e., cannabis, alcohol) and the implications for public health.

Search strategy and inclusionary criteria

A non-systematic narrative literature review was selected as the optimal theoretical framework for this report. This approach lends well to an exploratory literature review, providing preliminary evidence. As Ferrari (2015) describes, a narrative literature review seeks to synthesize and describe relevant, selected research studies.

The following databases were searched for relevant publications in peer-reviewed journals: PubMed, Google Scholar, and DiscoverED, using the following search terms (including synonyms and pertaining to both Canada and the United States):

- (Cannabis distribution systems) AND (Public health)
- (Cannabis retail) AND (Public health)
- (Cannabis policy) AND (Public health)
- (Cannabis legalization) AND (Public health)
- (Privatized cannabis retail) AND (Public health)
- (Monopolized cannabis retail) AND (Public health)
- (Privatization) AND (Alcohol OR Cannabis) AND (Public health)

Results were restricted to findings relevant to a North American context. After 64 abstracts were reviewed to eliminate duplicate or irrelevant results, a total of 30 articles remained. Results were restricted to publication post-2009 in order to utilize recent research results pertaining to present day cannabis legalization in Canada and post 2012 legalization in the United States (Washington and Colorado; Kilmer, 2014). Limited literature from an international context included when the report's results were applicable globally.

Limitations

The literature review presented within this report is subject to numerous limitations including researcher bias, potential misinterpretation of research findings, and potential gaps in evidence utilized in the report. While care was taken to address these concerns, some limitations may persist. Furthermore, due to the fact that cannabis legalization is only a

recent development in North America, cannabis-specific literature is significantly limited at this point in time.

Chapter 3: Literature Review

The following section will explore the debates and evidence from public health literature pertaining to cannabis distribution systems, exploring divergent regulatory frameworks including publicly owned monopolies and privatized distribution systems.

3.1 Evidence and debates pertaining to cannabis distribution and public health

Similar to the key policy domains governing a public health approach to alcohol and tobacco control, cannabis policy will include domains including access, availability, and marketing (Crepault, Rehm, & Fischer, 2016; Kilmer, 2014). Each of these policy domains constitutes individual regulatory mechanisms (see Table 1 for a brief overview), however, the elected distribution system provides overarching influence (Babor, 2010; Caulkins et al., 2015; Haden & Emerson, 2014; Rehm & Fischer, 2015). With distribution systems operating along a continuum of free-market to tight regulatory control (i.e., Calman's Ladder of regulatory approaches; Calman, 2009), the resulting retail and policy environment is arguably more contingent upon the elected distribution format, than any other policy mechanism. On a theoretical basis, this may be true insofar as the type of distribution system connotes a values-based policy environment wherein the extremes of commercial values or public health protection are either validated or restricted by the format of distribution. These dichotomous values may influence policy decisions as policy development is informed not only by scientific evidence, but also by value judgments (Kalant, 2016b).

Table 1. Policy domains associated with public health protection, adapted from Babor (2010)

Policy domain	Specific policy approach
Access	Minimum age restrictions
	Taxation
	Minimum unit pricing
Availability	Retail outlet density
	Retail outlet design (i.e., standalone, single commodity stores)
	Retail location restrictions (i.e., proximity to schools, playgrounds)
Marketing	Restricted advertising (i.e., print, TV, online, radio, film, signage)
	Labeling restrictions (i.e., plain packaging, warning labels)
	Product placement
	Sponsorship

From a policy perspective, a publicly owned system governing cannabis distribution would best facilitate the implementation of a range of health-protecting policies (Babor, 2010; Caulkins et al., 2015; Haden & Emerson, 2014; Rehm & Fischer, 2015), whereas a privatized approach would best support commercial interests (i.e. liberalized, or 'light-touch' restrictions). This finding has been supported by evidence from alcohol privatization in Canada wherein the resulting alcohol distribution system maximized commercial benefit and harmed public health (Stockwell et al., 2009; Zhao et al., 2013). In order to best protect public health, researchers recommend implementing a publicly owned system for cannabis distribution that operates as a not-for-profit operation (Caulkins et al., 2015).

From a design perspective, a publicly owned system could provide access to cannabis from standalone, single commodity stores, thus mitigating the potential negative impact associated with exposure to marketing strategies that may be employed within retail environments (Haden & Emerson, 2014). Many public health researchers have recommended approaches to reducing cannabis marketization and exposure to marketing (Haden & Emerson, 2014; Kilmer, 2014; Rehm, Crepault, & Fischer, 2017; Room, 2013; Spithoff, Emerson, & Spithoff, 2015). Supporting calls to reduce exposure to cannabis marketing, researchers have recommended that monopolized retail outlets operate as standalone, single commodity stores that retail cannabis within "standardized, neutral, bland" environments (Haden & Emerson, 2014). Regulations targeting retail store design are

critical for public health as researchers studying alcohol retail have determined that marketing tactics including product placement, labeling, displays, and co-branding are risky, particularly for youth (Grier & Kumanyika, 2010; Mosher, 2012). This type of retail design may provide the following public health benefits:

- Decrease youth exposure to in-store cannabis marketing;
- Decrease opportunities for impulse purchases of cannabis;
- Eliminate opportunities for co-branding of cannabis and non-cannabis products;
- Decrease, or slow, the normalization of cannabis as an ordinary commodity as would otherwise occur within retail settings that sold cannabis alongside 'ordinary commodities' such as grocery or household products;
- Protect against the risks inherent within retail outlets that would sell both cannabis and alcohol, as the concurrent use of these two drugs compounds and creates additional risk to public health (Pacula et al., 2014).

Inconsistent with a for-profit retail model, a publicly owned system would be well positioned to facilitate the implementation of health protective policies, such as a marketing ban and neutral store design, and of import, would mitigate the formation of a strong commercial cannabis industry (Subritzky, Pettigrew, & Lenton, 2016b). From a public health perspective, this is crucial for both short and long-term population health outcomes. Furthermore, researchers have posited that a monopolized cannabis distribution system would decrease youth access to cannabis and would decrease population-level use of the drug (Rehm & Fischer, 2015). Importantly, by removing the profit, or economic motive from cannabis retail, cannabis sales may occur in a way that provides safe access, without retailer incentive to increase use and uptake of the drug. A publicly owned system would also mitigate several public health risk factors that occur through a privatized distribution system such as increased product innovation, decreased pricing, and increased access and promotion (Caulkins et al., 2015). Additionally, a privatized distribution system would have a greater incentive to promote use that would harm public health, would have significantly less capacity to control suppliers, would be significantly more likely to promote hazardous cannabis use, and would provide lesser quality insurance for cannabis products, in comparison with a governmental monopoly (Caulkins et al., 2015).

While a publicly owned system would provide an effective means to protect public health (Haden & Emerson, 2014), some of the regulatory benefits associated with this distribution design may be applied within other formats as well. For example, while neither Colorado nor Washington State have established publicly owned monopolies for cannabis distribution, Washington State has allowed provisions for regions to cap and regulate cannabis retail outlet density, if they choose to do so (Room, 2013). However, the effect of this optional approach has been questioned given that researchers posit that the cannabis legalization context in the United States appears to have facilitated the growth of a powerful industry with significant marketization potential (Subritzky, Pettigrew, & Lenton, 2016a). This development will likely undermine efforts to protect public health through optional density restrictions. While neither Colorado nor Washington State has implemented strong regulatory approaches from a public health perspective, they have chosen to restrict cannabis retail to separate, standalone stores (Carnevale et al., 2017; Room, 2013). This may be beneficial for public health in the early stages of legalization, but caution is warranted as policy longevity and enforcement may be disadvantaged within privatized distribution systems, as the profit and growth-motive of corporations would likely seek to advance marketization and deregulation (Moodie et al., 2013). A publicly owned system would avoid this risk, as this distribution format would better facilitate policy enforcement and longevity (Rehm, Crepault, & Fischer, 2017).

It is important to note that publicly owned monopolies have the benefit of being able to choose between protecting public health and pursuing profit-maximizing practices (Room, 1994). Alternatively, private corporations are bound to fiduciary responsibilities of protecting and promoting shareholder profit and are therefore unable to promote the regulatory approaches required to protect public health as this would undermine the success of a commercial model (Subritzky, Pettigrew, & Lenton, 2016b). In order to ensure the success of a publicly owned governmental system for cannabis distribution, researchers have suggested that the distribution format should operate as a commission that is legally bound to enforce public health objectives (Haden & Emerson, 2014). This would avoid the risk of having a system that operates under a profit-generating paradigm and would provide

'insulation' from the influence of industry and commercialization pressures (Haden & Emerson, 2014).

Lessons learned from the Canadian context of alcohol monopolies demonstrate that governmental monopolies are not without fault. Some researchers caution that as many government monopolies operate within revenue generating formats, the difference between the monopolized and privatized systems may not be so significant (Kalant, 2016a). However, despite this risk of a system seeking profit-maximization, the risk is still significantly lesser than would be experienced within a privatized system, as is evidenced within research reports analyzing the public health impact associated with alcohol privatization in Canada
(Stockwell et al., 2009; Zhao et al., 2013). While some Canadian provinces have maintained semblances of alcohol monopolies, many have transitioned in part or in full to privatized distribution formats (Giesbrecht et al., 2016). Research analyzing the impact associated with alcohol privatization in Canada demonstrates that privatization increases access to alcohol, alcohol-related risks (Stockwell et al., 2009), and alcohol-attributable mortality (Stockwell et al., 2011). These findings are congruent with international research studying alcohol privatization, where the evidence suggests that privatized alcohol retail systems are harmful to public health, while government monopolies offer invaluable health protection (Babor, 2010; Campbell et al., 2009; Popova, Giesbrecht, Bekmuradov, & Patra, 2009; Popova et al., 2012; Grubesic et al., 2012; Hahn et al., 2012; Norstrom et al., 2010). Given the strength of this evidence from the alcohol field, public health professionals caution that the same risks associated with privatization would also apply to cannabis distribution (Centre for Addiction and Mental Health, 2016; Rehm & Fischer, 2015). Researchers Rehm, Crepault, and Fisher (2017) concur, stating that if cannabis were to be distributed within a privatized format, risk to public health would be significant given that commercialization and harm to public health would likely be positively correlated (Rehm, Crepault, & Fischer, 2017).

Chapter 4: Discussion

4.1 How might the cannabis distribution system impact public health in Canada?

With health-focused publicly owned monopolies on one end of the spectrum and commercially-focused privatized systems on the other, the debate regarding cannabis distribution has presented as complex and at times, polarizing (McColl, 2015). The public

health literature highlighted within this report provides a case for implementing a publicly owned system as the ideal distribution format for cannabis. This distribution format would best protect public health when implemented alongside other key regulatory restrictions such as (Government of Canada, 2016):

- High minimum age restrictions (i.e., above 21);
- Comprehensive marketing restrictions similar to tobacco control mechanisms;
- Health-focused taxation and pricing;
- Product restrictions (i.e., prohibiting products with a high concentration of tetrahydrocannabinol; THC)
- Restrictions on retail outlet location, design, and density.

Further to the findings highlighted within this report's literature review, many leading public health agencies and organizations in Canada support the implementation of a publicly owned governmental system for cannabis distribution (Ontario Public Health Association, 2016; Ontario Public Health Unit Collaboration on Cannabis, 2016; Canadian Public Health Association; 2016; Chief Medical Officers of Health of Canada & Urban Public Health Network, 2016; Centre for Addiction and Mental Health, 2014; Centre on Addiction Research British Columbia, 2016). Extending beyond the recommendations to distribute cannabis within publicly owned governmental monopolies, other prominent dialogues include discussions regarding whether or not to retail cannabis within pre-existing alcohol outlets (where a system exists), or within pharmacies that already distribute medical cannabis products. However, the cannabis legalization position paper from the Canadian Pharmacist Association (2017) makes clear that retailing non-medical cannabis within pharmacies may not be ideal as it may infer and exaggerate a medicinal benefit to non-medical cannabis products. However, it is possible that the Canadian Pharmacist Association has a financial incentive to protect regarding the maintenance of a distinct market for medical cannabis products. Despite this, it may be risky for public health if the perception of cannabis is further medicalized, as it is possible that this may encourage uptake and use. Regarding the retail of cannabis within monopolized alcohol outlets, while this would not be ideal given the risk associated with co-marketing and concurrent use of cannabis and alcohol, if it were the selected distribution format, regulations should ensure an

entirely separate retail space for cannabis including a separate checkout, and prohibition on cross-promotion (Centre for Addiction and Mental Health, 2017).

From a theoretical perspective, the design of a cannabis distribution system will act as the foundation upon which the regulatory framework is built. Herein, a privatized distribution system would facilitate a framework that favours commercial outcomes, whereas a publicly owned system would favour public health. As such, the latter would best serve the collective of Canadian communities in a way that respects the structural dimensions of the social determinants of health through creating a cannabis retail environment that prioritizes public health over commercial interests. In essence, the chosen distribution format for cannabis, or other licit non-medical drugs, is perhaps more indicative of political and social values and ideology than it is of science, evidence, or to a lesser extent, power. This notion has been explored by Room (1993), where the researcher elucidates how socialist or capitalistic values may influence privatization and monopolization outcomes. In this sense, the distribution format divides societal values of collectivity and social justice, with individualism and economic justice; similarly as commercial actors may seek to advance individualistic values in order to evade effective regulation (Beauchamp, 1976; Harvey, 2005). While analysis of this is beyond the scope of this report, it warrants mention as examination of the ideology underlying a governmental decision regarding how to distribute cannabis may elucidate a deeper understanding of our sociopolitical system. Will Canadian provinces choose the approach that will best protect public health, or will commercial interests be prioritized?

If Canadian provinces choose to implement privatized cannabis distribution systems, the resulting cannabis industry would likely be capable of utilizing hard and soft power tactics to shape pro-industry outcomes in the future, similar to the approaches employed by the tobacco and alcohol industries (Moodie et al., 2013). Recent evidence demonstrates that the cannabis industry in Canada already engages in lobbying efforts (deVillaer, 2017) and that the industry positions itself as a 'helpful actor', seeking to be included within policy discussions and processes (see Cannabis Trade Alliance Canada discussion paper; 2016; p2, p). These factors may aid in the creation of a positive public perception of the industry as a benevolent group, as opposed to a corporate actor progressing self-interests. By creating the perception

that the industry is a 'helpful actor', the industry may be attempting to effectively create a space for themselves within health policy processes (Dorfman et al., 2012). This may be congruent with the industry's goal of attempting to differentiate itself from the less positively regarded tobacco industry (as the tobacco industry has been largely excluded from all policy dialogues; Hall, 2017). This is despite researcher observations that the cannabis industry may have "learned well from the tobacco industry", a risky prospect for public health (Subrtizky, Lenton, & Pettigrew, 2016a).

Lastly, even if Canada were to choose to implement a privatized cannabis distribution system with retail store location and design controls similar to (the optional) approach in Washington State, deregulation may be a likely distal outcome as the cannabis industry's power grows in strength. This is relevant as researchers caution that the cannabis industry may strategize to exploit weaker regulations and loopholes (Subritzky, Lenton, & Pettigrew, 2016b) and may attempt to progress liberalized, commercial goals through the application of a "powerful lobby" (Caulkins et al., 2015). Furthermore, researchers caution that as the cannabis industry develops, so too will its' capability of exerting political influence targeted at shaping public policy processes (Barry & Glantz, 2016).

Even barring this evidence and debate, Canada would still be wise to pursue a more heavily restricted publicly owned, government system for cannabis retail as researchers and public health professionals have illuminated how it would be difficult for a privatized cannabis distribution system (or otherwise 'light touch' regulatory approach) to transition towards heavier regulation once the system is in operation (Caulkins et al., 2015). In this sense, privatization offers close to a 'no going back' regulatory position. Given that Canada is an innovator in cannabis legalization, a more cautious, amendable approach would be wise and justifiable (Pacula et al., 2014).

Chapter 5: Conclusion

In conclusion, while prohibition resulted in a system that led to social disadvantage and high governmental costs (Government of Canada, 2016), so too would a privatized cannabis distribution system. As we have learned from the Canadian experience with alcohol retail,

wherein privatized alcohol retail systems have incurred excess societal and governmental cost (Rehm et al., 2006), privatization is not a way to ameliorate the problem of prohibition. With prohibition's failure (Government of Canada, 2016) and negative impact on social well-being (Spithoff, Emerson, & Spithoff, 2015), a publicly owned monopolized cannabis distribution system would provide a community-centric, socially-progressive way forward.

Canada has the opportunity to progress with an innovative, health protective cannabis distribution and retail system that prioritizes the public's well-being. As described within the literature review, governmental decisions regarding cannabis distribution formats are of significant import as this decision creates a trickle-down impact, influencing the trajectory of other key policy domains. Privatized distribution systems and publicly owned monopolized distribution systems – divergent formats with conflicting goals. To maximize monetary gain for the cannabis industry, a privatized system would be ideal. To protect and promote the health and well-being of Canadian communities, a publicly owned system is the optimal solution according to public health literature. Regardless of the discrepant policy approaches related to each distribution format, it is perhaps the overarching goal of each that warrants attention moving forward. As a cannabis legalization innovator, Canada has the invaluable opportunity to not only implement a cannabis distribution system that best protects public health and well-being, but also to set a socially-progressive example for other countries considering a similar transition away from prohibition.

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