

**A Vision of Cannabis Regulation: A Public Health Approach Based on
Lessons Learned from Regulating Alcohol and Tobacco**

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Abstract

Background:

There is growing scientific evidence and public acknowledgment of the failure and harms of cannabis prohibition, and increasing support for cannabis legalization. What is missing is a discussion about the relative merits of different regulatory frameworks, including how a public health approach could be used to minimise the harms and maximise the benefits of cannabis. The purpose of this paper is to inform the scientific and public dialogue by offering a proposal for cannabis regulation derived from evidence-based public health oriented recommendations for alcohol and tobacco.

Methods: Since there is very limited evidence base for public health oriented cannabis regulation as an alternative to cannabis global cannabis prohibition, and there is a substantial body of knowledge regarding the public health oriented regulatory evidence base for alcohol and tobacco, we examined international syntheses of evidence based recommendations for public health oriented alcohol and tobacco regulation to identify options that have been shown to have public health benefits.

Results: This paper describes a model of how cannabis could be regulated to control availability and accessibility (control structure, retail sales, price), purchase, consumption, use, supply (production, product) and demand drivers (promotion, packaging) that could be researched as part of evaluating a strategy of public health regulation of cannabis.

Interpretation: As the public opinion supporting cannabis “legalization” is growing, proactive, rigorously evaluated action based on a public health approach needs to be taken. Otherwise a commercial exploitation model may result such that similar health and social problems as those associated with alcohol and tobacco may be repeated. Alcohol and tobacco evidence based

recommendations suggest that a comprehensive public health approach to cannabis regulation could contain or reduce health and social problems that presently exist in the setting of cannabis prohibition, while allowing for benefits to accrue.

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A Modest Proposal: A Public Health Approach for Cannabis Regulation

Introduction

There is growing evidence and awareness that prohibition of cannabis is not achieving its purported objectives of reducing use and potential harms, and has considerable adverse consequences (1-4). Uruguay, Colorado, and Washington State have recently established non-criminal law based regulatory regimes for cannabis. However there is widespread uncertainty regarding potential benefits and harms of a non-prohibition based, regulated framework for cannabis. The purpose of this paper is to address this uncertainty by suggesting a public health oriented model for cannabis regulation, derived from evidence-based recommendations for public health approaches to alcohol and tobacco.

Lessons Learned from Alcohol and Tobacco – A Proposed Regulatory Model

There has been much research on alcohol and tobacco to identify regulations that protect health which is summarized in international syntheses of evidence-based recommendations i.e.

Alcohol: No Ordinary Commodity by Babor et al (5); and *The Framework Convention on Tobacco Control* (FCTC) by the World Health Organization (6).

Based on these sources we constructed comparative tables, organized according to the public health oriented regulatory framework for psychoactive substances proposed the Health Officers Council of BC (7).

Tables 1 to 4 list the evidence based regulatory recommendations for alcohol and tobacco from the Babor et al (5) and the FCTC (6), which are summarized in Table 5. Based on these recommendations following are suggestions for how these measures could be applied to cannabis. Where there existed gaps in the regulatory recommendations we used our judgment to propose measures that are consistent with the objective of protecting public health.

1. Availability and Accessibility – Table 1

Control Structure

As shown in Table 1, research has concluded that a government monopoly is effective in limiting alcohol consumption and related harms. This is achieved by reducing the profit motive which can promote consumption through sales promotion and political influence of special interests to loosen restrictions on availability; by limiting the number of sales outlets and limiting hours and days of sales; and by having more professional staff to reduce likelihood of selling to minors (8).

Following the evidence-based summarized in Table 1, we suggest that jurisdictions develop cannabis specific legislation and regulatory oversight such as establishing a governing body (e.g. a “Cannabis Control Commission”) with a clear public health mandate to manage cannabis, explicitly guided by public health oriented goals and objectives. Government revenue generation should not be a primary driver. The Commission should operate at “arms length” from government to allow for stability, clarity of focus, and to provide insulation from industry influence which will promote revenue generation imperatives to the detriment of public health.

The Commission would control cannabis production, packaging, distribution, retailing, and revenue allocation and have an important role in demand reduction. Processing and packaging would be done in Commission-licensed facilities according to set standards. Direct sales from producers to retailers or consumers would not be allowed.

While a ban on alcohol sales has been found to reduce consumption and harms (Table 1), widespread alcohol prohibition was tried and rejected in North America in the early part of the 20th century (9).

Provision to Consumers

Cannabis would only be sold through Commission operated or licensed outlets explicitly designed and required by law to support public health objectives. To minimize cannabis promotion a standardized, neutral, non-promoting appearance and environment should be required. The street presence of outlets would be minimal with no advertising outside indicating the location of a cannabis outlet. All signs would be small and designed with a consistent bland color and format (e.g. drab olive green with the logo of a mortar and pestle). Staff could be dressed in standardized bland appearing attire and trained and certified about cannabis-related benefits and risks. Locating stores above (or below) the street level would reduce the visual presence, but would need to be accessible for people with mobility difficulties. Stores should not be allowed to be clustered, and not located within 500 meters of a school, playground, or alcohol retail outlet.

Health promotion messages would be prominently displayed including information about the laws against and risks of driving or operating heavy machinery while intoxicated. Information and referral mechanisms for cannabis dependency treatment would also be standardized and prominently displayed.

As Table 1 indicates hours of sale restrictions are important in reducing availability so we recommend similar limitations on cannabis retailers to allow reasonable access while preventing illegal market activity.

Price

As shown in Table 1, there is strong evidence that taxation and price are important for reducing rates of use of alcohol and tobacco. As such pricing, taxation and other policies should be used to establish a pricing structure that competes with the illegal market while ensuring a high enough price to restrict youth access, limit overall consumption, and allow for needs of patients using cannabis for therapeutic purposes.

2. Purchase, Consumption, Use

Purchase

As shown in Table 2 a minimum purchase age is important so regulations would require sales be limited to individuals over a specified age e.g. age 19. Purchase could be by filling out a form to access behind the counter cannabis and could include a declaration that the cannabis is only for the purchaser or other legal age adults. Also as Table 2 shows rationing has moderate effectiveness, with effects greater on heavy drinkers so we propose that customers would only be

allowed to purchase a maximum amount e.g. 10 grams a day. This small volume would also prevent diversion to youth or trading within an unregulated market.

Cannabis Use Locations

Public use of alcohol and tobacco is a contentious issue, and there will likely be similar challenges in arriving at a cannabis public use policy. Although public drinking is widely restricted in Canada, as shown in Table 2 there is insufficient evidence of the public health effectiveness of bans on public use of alcohol. With respect to tobacco, restrictions on location of use are driven by the health hazards of environmental tobacco smoke. These recommendations, as well as the lack of research on effects of environmental cannabis smoke and the public health concern about exposure to any type of smoke suggest that cannabis smoking be restricted to licensed cannabis consumption locations or home use. Worker's health could be protected by providing separately vented space for customers and not allowing tobacco smoking.

For consistency with the policy of non-promotion (see below) cannabis lounges should have standardized neutral external and internal appearances, limited snack options and prominent health promotion information and referral information displayed, and no promotional materials or activities. Use locations also offer the opportunity for public health promotion as they provide a central, accessible and social venue through which information dissemination and demonstration of potential harm reduction and health promotion approaches can occur, such as encouraging use of smokeless modes of cannabis consumption that may reduce particulate exposure (10).

No alcohol or tobacco use should be permitted in cannabis use locations to support the public health objective of separating cannabis, alcohol and tobacco consumption.

Consumption locations would obtain their supply from the Commission and could sell to customers, would have restrictions on the days/ hours of operation and size, and be required to establish “good neighbour” agreements. Training would be required in recognizing and intervening with people experiencing problems related to their consumption patterns. No “special price reductions” or “happy hour discounts” would be permitted.

3. Supply

Babor et al (5); and the FCTC (6) provide no guidance with regards to public health oriented regulatory recommendations for the supply of alcohol and tobacco, yet supply management is a critical control measure and is closely related to some of the measures described in the governance section.

Production

To control supply, the Commission would be the only organization authorized to purchase cannabis from licensed growers, import to the province, and supply retailers. Supply management systems similar to other agriculture marketing boards could be established to manage the supply and protect small producers. People should be allowed to grow for their own personal consumption and would not be allowed to sell, which would be similar to home brewing of beer and wine which do not require a specific license. To legally grow cannabis for the purpose of selling would require a license and adherence to processes to ensure quality and safety. This model of for-profit private growers with controlled distribution and retailing is

similar to provincial (11) or state alcohol monopolies and models that have been proposed for tobacco (12, 13).

Many public health problems are determined by social and economic factors (14) of which a significant determinant of health is unequal wealth distribution (15). An egalitarian approach to equitably distribute cannabis related wealth by supporting many small scale growers and producers and preventing large concentrations of wealth by multinational corporations should be adopted.

Product

Table 3 shows that there are no recommendations about regulation of alcohol product constituents, while the FCTC recommends that constituents and emissions of tobacco products be regulated. Similar requirements as those recommended for tobacco should be applied to cannabis.

The concentration of the psychoactive ingredient delta-9-tetrahydrocannabinol (THC) has been noted to have increased over the years (16). Increased use of concentrated alcohol products emerged during alcohol prohibition where mostly spirits were available as illegal dealers preferred smaller packages when importing and transporting illegal alcohol (9). Concentrated products increases risk of harm and are often not preferred by users. It has been observed in the Netherlands, where cannabis is de facto legal, that users prefer relatively lower THC concentrations (17). In this model, retailers could sell a variety of strains with different concentrations of THC.

Only bulk products should be available to allow individuals to determine their dose, rather than pre-determining the dose as is a feature of pre-made cigarettes. Processed products (e.g. tinctures, cookies) prepared according to specific regulatory requirements should be available to avoid harms of smoke inhalation.

4. Demand Drivers

Promotion and Packaging

As shown in Table 4, there are well supported recommendations that limiting advertising, promotion, and sponsorship is effective at reducing psychoactive substance use and harms. This reflects that one of the most important lessons of the commercialization of tobacco and alcohol is that product promotion is a significant driver of consumption and related harms. Branding of products is critical to promotion, and once branding is allowed promotion is very difficult to prevent, therefore all branding and promotion of cannabis products should be prohibited including plain package requirements (i.e. no logos, brand names, or colourful packaging).

Table 4 also indicates that product constituents and warnings labelling are considered important to prevent the harms of tobacco. For cannabis the packaging should describe the concentration of important constituents, the strain, and have dominant, standardized warning labels.

Dedicated revenue

The revenue raised from cannabis regulation initiatives should be use for health and social initiatives. For example, as the education level of a population is an important determinant of health, 50% of all revenue should be allocated to ensure that children and youth receive

exceptional early child development programs and high quality publicly funded education. Other public health enhancing initiatives could also be supported such as housing for marginalized people and improving mental health and addictions prevention and treatment services.

Conclusion

The public opinion supporting cannabis “legalization” is growing in part due to increasing recognition of the lack of effectiveness and harms of cannabis prohibition, and it is imperative that proactive action based on a public health approach be taken. Otherwise a commercial exploitation model may result such that similar public health and social problems as are associated with alcohol and tobacco will be repeated. Changes to cannabis regulation should include rigorous evaluation to monitor for unintended consequences, potential harms and anticipated benefits of a new regime.

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