COMMENTARY

Cannabis Use in Canada: The Need for a 'Public Health' Approach

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ABSTRACT

Cannabis is the most commonly used illicit drug in Canada, used by 1 in 7 adults and 1 in 4 students. Other forms of drug use (e.g., alcohol or injection drug use) are increasingly approached within a public health policy framework that focuses on reducing harms rather than use *per se*. Cannabis, by contrast, remains formally controlled by a criminal justice approach that focuses on enforcing abstinence. Its use is associated with a variety of possible acute or chronic health problems that include cognitive and respiratory impairment, psychotic episodes, dependence and injury risk. The incidence of these outcomes, however, is predicted by early onset and a high frequency and length of use that only apply to a minority of users. In a public health framework, cannabis use – especially in young populations – should be systematically monitored and high-risk patterns of use screened for in appropriate settings, e.g., schools and GP offices. Evidence-based primary and secondary prevention, treatment and enforcement need to be targeted at these high-risk patterns of use. Given the large cannabis user population, especially among young people, and the failure of the criminalization approach to discourage use, a public health framework for cannabis use is urgently needed in Canada.

Key words: Cannabis use; public health; morbidity; policy; interventions; Canada

La traduction du résumé se trouve à la fin de l'article.

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Cannabis is one of the three psychoactive substances most commonly used in Canada (the other two being alcohol and tobacco). In 2004, after substantial increases in use rates for about a decade, one in seven adults reported recreational use of cannabis in the past year.[1] Among Ontario secondary school students, one in four reported past-year cannabis use – double the proportion of tobacco users.[2] Compared to other industrialized nations, Canada features some of the highest cannabis use rates among adults and adolescents. The specific reasons for these increasing use rates are not clear but they suggest the limited effectiveness of the current deterrence-based policies.

Key areas of popular psychoactive substance use have become embraced by a public health framework in recent years. This approach is primarily concerned with reducing substance use related harms by acting on determinants and risks, rather than focusing on use *per se,* and by implementing targeted interventions to reduce the public health burden of use.[3] A leading example of such a policy framework is alcohol use, where problems like binge-drinking, alcohol dependence and drunk driving have been recognized as key harms that are targeted by prevention, treatment and enforcement.[4] Even the field of injection drug use has been influenced by public health-oriented policy with the adoption of interventions like needle exchange programs, supervised consumption sites and opioid prescription for maintenance to reduce the overall health burden of this form of drug use.[5]

Cannabis use, however, has been conspicuously exempted from a public health approach in Canada. The enforcement of abstinence is its primary policy objective.[6,7] The predominant approach of criminalization proscribes any use of the drug as illegal and subject to punishment (implying that all use is harmful). The large number of cannabis users, and especially the larger proportion of young users, in Canada indicate the need to rethink our approach to cannabis use by better aligning it with principles and objectives of public health.

A public health framework for cannabis use requires a solid footing in evidence on the health risks and harmful consequences of its use and the identification of patterns of use that predict such problems. When considering the disease burden of cannabis use, the acute toxicity of cannabis use is low with few if any deaths attributable directly to its use, most of which are related to traffic accidents and possibly cancers. Cannabis-attributable mortality is nonetheless very small compared to tobacco, alcohol and injection drug use.[8,9] So too is attributable morbidity. In Canada in 2002, acute care and psychiatric hospital days attributable to cannabis amounted to 62,575 (0.25% of total days) compared with 321,154 (1.29%) for other illegal drugs, 1,301,059 (5.21%) for alcohol, and 2,210,155 (8.85%) for tobacco.[9]

The most probable health risks and harms arising from cannabis use include the following (see refs. 10-12):

- acute or chronic impairment of attention, memory and psychomotor performance;
- cannabis use and driving (CUD), i.e., increased risk of non-fatal or fatal motor-vehicle accident (MVA) involvement due to psychomotor impairment;
- a cannabis dependence syndrome, characterized by a loss of control over cannabis use;
- respiratory problems (e.g., bronchitis) and histopathological changes that may be precursors to malignancy, e.g., cancers; and
- the triggering or amplifying of psychotic symptoms or disorders.

Essential from a public health perspective is that the risks of these problem outcomes are disproportionately elevated by specific patterns of cannabis use, namely:

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- early onset of use (e.g., <14 years);
- high frequency of use (i.e., daily or near-daily) and chronic/long-term frequent use (i.e., >10 years).

The epidemiological research on cannabis use therefore identifies subgroups of cannabis users among whom risks for acute or chronic health problem outcomes are substantially elevated, and who can be targeted by evidence-based interventions. Data on cannabis use from the CAS documented that these constitute a relatively small minority of current users. In the CAS, about 18.0% of past-year cannabis users qualify as daily or near-daily, i.e., frequent users, about half of whom (47.7%) report using for >10 years. 13.9% of users reported onset of use before 14 years of age.

From a public health perspective, once these 'high-risk' cannabis users are specified there are two ensuing challenges: 1) monitoring/surveillance, i.e., identifying individuals indicating high-risk behaviours, and 2) offering them appropriate interventions.[13] Both tasks are difficult. Because cannabis use is criminalized, there is little – if any – open monitoring of use for public health purposes. Existing population surveys provide broad information on prevalence and patterns of use, but more systematic monitoring is required to link problem users to appropriate interventions.

Cannabis use is highly prevalent among youth and adolescents, and patterns of use established during this development stage may be critical for adverse long-term outcomes that impose a substantial burden on young adults, and hence these groups are accordingly a primary target population for monitoring.[14,15] The secondary school environment – a setting that has played an important role for other preventive public health interventions, including dental care, sexual health or vaccinations – offers itself as a potential key site for systematic monitoring.[16] If implemented by 'neutral' agents (e.g., public health staff), screening and referral for interventions could be direct, swift and confidential. Cannabis-specific brief screening tools could also be included in General Practitioner (GP) settings, akin to the Screening, Brief Intervention and Referral to Treatment (SBIRT) tools used in the US or those available for alcohol or tobacco use. The combination of targeted youth media campaigns and modern communications technology (e.g., Internet- based self-assessments) could also help to identify and intervene with young or indeed older problem cannabis users.[17,18]

In addition to more reactive interventions, systematic and effective prevention constitutes a critical element. Current cannabis prevention for young people is limited in effectiveness, and additionally often suffers from unrealistic, judgemental or weakly delivered content.[15,19] A prime example is the US-based Drug Abuse Resistance Education (DARE) program, most widely used in schools across Canada, which despite millions of dollars invested has not achieved its stated objectives in available evaluations.[20] Current research recognizes peer influence as one of the primary predictors of cannabis or other illicit drug use among young people but we do not have reliable knowledge about how to positively steer or use such influence.[14] Canada requires a broad-based and public health oriented cannabis prevention strategy for young people. Its main message should clearly state that the most reliable way to avoid cannabis-related harms is to abstain from use. Those who are already using cannabis need to be advised about patterns of use to avoid problems in the short and long run, e.g., not to drive while intoxicated.[21] For adult users, 'safer cannabis use guidelines' – akin to those for alcohol[22] – could be developed and disseminated by public health authorities.

We also need to improve responses to problem cannabis users. Data from several countries suggest that up to 10% of lifetime cannabis users will develop dependence and may need help to stop using. This proportion rises to about 75% in long-term daily/near-daily users.[23] At present, most people who develop cannabis dependence or problems do not access treatment.[23] Nevertheless, treatment admissions for cannabis have risen considerably in the past couple of decades, facilitated in part by increased rates of cannabis use and hence a greater user base. In Ontario, one in three addiction treatment admissions in 2000/01 included cannabis as a main problem substance. Most of these reported entering treatment because of pressure from family, work or the legal system and so may actually not see themselves as in need of treatment.[24] Available modes of treatment (e.g., cognitive behavioural) can reduce cannabis use and problems but are at best only modestly effective in producing lasting abstinence.[25] The main challenge in Canada is to effectively make available and deliver treatment to those who would benefit from it, i.e., as identified by clinical need, rather than by their being caught in the law enforcement net.

The law certainly has a role to play in public health focused cannabis control, but the blanket criminalization of cannabis use may be counterproductive. Cannabis possession arrests have sharply increased in Canada in recent years; some 500,000 Canadians have been arrested for this offense in the past decade.[26] The long-term stigmatization of users resulting from a criminal conviction, the selective focus of law enforcement on marginalized users and the pressuring of users into illicit drug markets offering other illicit high-risk substances are major costs of current policy.[10,27,28] These problems have been well documented for several decades. We leave the 'cannabis legalization' debate to others but observe that a public health approach to cannabis should more selectively use law enforcement to achieve public health objectives in specific areas of particular concern, such as deterring driving while affected by cannabis, and minors' opportunities to use cannabis.[29]

Cannabis is widely used by Canadians and its use is likely here to stay for some time, yet current policies emphasize principles of criminalization over public health. Canada is overdue to follow the lead and lessons from other areas of substance use by adopting a public health approach to cannabis use.

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RÉSUMÉ

Le cannabis est la drogue illicite la plus consommée au Canada; il est utilisé par 1 adulte sur 7, et par 1 étudiant sur 4. Les autres formes de consommation de drogues (p. ex. l'alcool ou l'usage de drogues injectables) ont été examinées dans un cadre stratégique sur la santé publique qui vise à réduire les préjudices plutôt que l'utilisation en soi. Le cannabis, au contraire, demeure officiellement contrôlé par une approche de la justice pénale qui vise à contraindre l'abstinence. Son utilisation est associée à une variété de problèmes de santé graves et chroniques, notamment une insuffisance respiratoire et cognitive, des épisodes psychotiques, la dépendance et les risques de blessures. Toutefois, l'incidence de ces résultats est prédit par une consommation précoce et une fréquence et une longueur d'utilisation qui ne s'appliquent qu'à une minorité d'utilisateurs. Dans un cadre de santé publique, l'utilisation du cannabis, en particulier chez les populations de jeunes, devrait systématiquement être surveillée, et les modèles d'utilisation à haut risque devraient être examinés dans les milieux appropriés, p. ex. les écoles et les bureaux GP. La prévention primaire et secondaire fondée sur les preuves, le traitement et l'exécution de la loi doivent cibler ces modèles à haut risque d'utilisation. Étant donné la grande population de consommateurs de cannabis, en particulier chez les jeunes, et la défaillance de l'approche de criminalisation visant à décourager l'utilisation, la nécessité d'un cadre de santé publique pour la consommation de cannabis est urgente au Canada.

Mots clés : consommation de cannabis; santé publique; morbidité; politique; interventions; Canada