Improving community health and safety in Canada through evidence-based policies on illegal drugs

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➢ The use of illegal drugs remains a serious threat to community health.[1] However, despite the substantial social costs attributable to illegal drugs, a well-described discordance between scientific evidence and policy exists in this area,[2] such that most resources go to drug law enforcement activities that have not been well evaluated.[3,4] When the Office of the Auditor General of Canada last reviewed the country's drug strategy, in 2001, it estimated that of the $454 million spent annually on efforts to control illicit drugs, $426 million (93.8%) was devoted to law enforcement.[5] The report further concluded, "Of particular concern is the almost complete absence of basic management information on spending of resources, on expectations, and on results of an activity that accounts for almost $500 million each year."[5]

Despite the long-standing emphasis on drug law enforcement, the federal government has recently further prioritized this approach by developing legislation requiring mandatory minimum prison sentences for minor drug law offences.[6] This article reviews the impact of conventional drug policies employed internationally and describes evidence-based steps to reduce the health and social costs attributable to drug policies in Canada.

Impact of drug law enforcement

Law enforcement has a critical role to play in community safety. However, as was observed with the emergence of a violent illegal market under alcohol prohibition in the United States in the 1920s, the vast illegal market that has emerged under drug prohibition has proven remarkably resistant to law enforcement efforts, while unintended consequences have similarly emerged.[4,7]

Given its well-funded drug surveillance systems, the United States has generated excellent data for assessing the impact of drug law enforcement. Remarkably, despite an estimated US$1 trillion spent since former US president Richard Nixon first declared his country's "war on drugs," the effort to reduce drug supply and drive up drug prices through aggressive drug law enforcement appears to have been ineffective.[8–10] Instead, in recent decades, the prices of the more commonly used illegal drugs (e.g., cannabis and cocaine) have actually gone down, while potency has risen dramatically.[11,12] To highlight the limited ability of drug law enforcement to constrain cannabis supply, Figure 1 shows that the estimated potency of US cannabis (in terms of its active ingredient, tetrahydrocannabinol) has increased by more than 170%, from approximately 2.3% in 1981 to 6.3% in 2002, despite an increase in US federal anti-drug expenditures from US$1.5 billion in 1981 to more than US$18 billion in 2002.[8,13]

Opponents of drug policy reform commonly argue that drug use would increase if health-based models were emphasized over drug law enforcement,[14] but we are unaware of any research to support this position. In fact, a recent World Health Organization study demonstrated that international rates of drug use were unrelated to how vigorously drug laws were enforced, concluding that "countries with stringent user-level illegal drug policies did not have lower levels of use than countries with liberal ones."[15] In addition, although reducing the availability of cannabis has been a central focus of drug law enforcement efforts, over the past 30 years of cannabis prohibition the drug has remained "almost universally available to American 12th graders," according to US drug use surveillance systems funded by the US National Institutes of Health, with 80%–90% of survey respondents saying that the drug is "very easy" or "fairly easy" to obtain.[16]

Besides the fact that drug law enforcement is costly and ineffective, over-reliance on this approach has also resulted in a range of unintended consequences, which were recently summarized in the official conference declaration of the XVIII International AIDS Conference in Vienna, Austria (Box 1).[17] The International AIDS conference has become the largest biennial public health conference in the world. The so-called Vienna Declaration has now been endorsed by thousands of individuals, including leaders in science and medicine, Nobel laureates and former heads of state. In Canada, the declaration has already been endorsed by the Canadian Public Health Association, and by the Urban Public Health Network, which represents the medical officers of health of Canada's 18 largest cities.

Models to reduce harm: those that do not work and those that do

Of critical importance to any discussion of efforts to reduce harm is the fact that some commonly employed school-based drug prevention programs have repeatedly been proven ineffective in randomized trials,[18] yet they continue to receive substantial federal funding in both the United States and Canada. Other programs, including the Canadian federal government's antidrug media campaign, are often implemented without evidence to support their efficacy and despite evidence that they may be harmful.[19] For instance, controlled trials of antidrug media messages have suggested that they may result in harmful assumptions among youth about drug use.[20] Moreover, a US$42.7 million federal government–funded evaluation of the ongoing National Youth Anti-Drug Media Campaign in the United States recently concluded that its US$1.4 billion advertising campaign had been ineffective at curtailing rates of drug use by youth and may actually have had the negative effect of inflating youths' perceptions regarding rates of drug use among their peers.[21]

Conversely, a substantial research base points toward more effective models that have been proven to reduce health-related and community concerns attributable to drug use, as well as reducing the unintended effects of drug policies.[7,17,22–24] This substantial body of evidence leads to several observations, as outlined below.

Evidence-based drug treatment programs are cost effective, and significant benefits should be derived, at both individual and societal levels, through an increase in scale.[25] Consistent with the recent recommendations of the House of Commons Standing Committee on Public Safety and National Security,[26] this would include expanding access to existing evidence-based models of care such as medical and non-medical withdrawal programs, programs to manage concurrent mental health problems and addictions, ambulatory and residential treatment programs, and opioid substitution therapies.[17] Similarly, given the substantial health (e.g., infectious disease, overdose death) and social (e.g., crime) concerns caused by heroin addiction in urban areas[27] and the potential for heroin by prescription to reduce these harms among those in whom conventional treatments fail, the prescription of heroin could be considered for selected patients with opioid addiction that is refractory to all other treatment modalities.[23,28,29]

Various harm reduction strategies, such as needle exchange programs and methadone maintenance therapy,

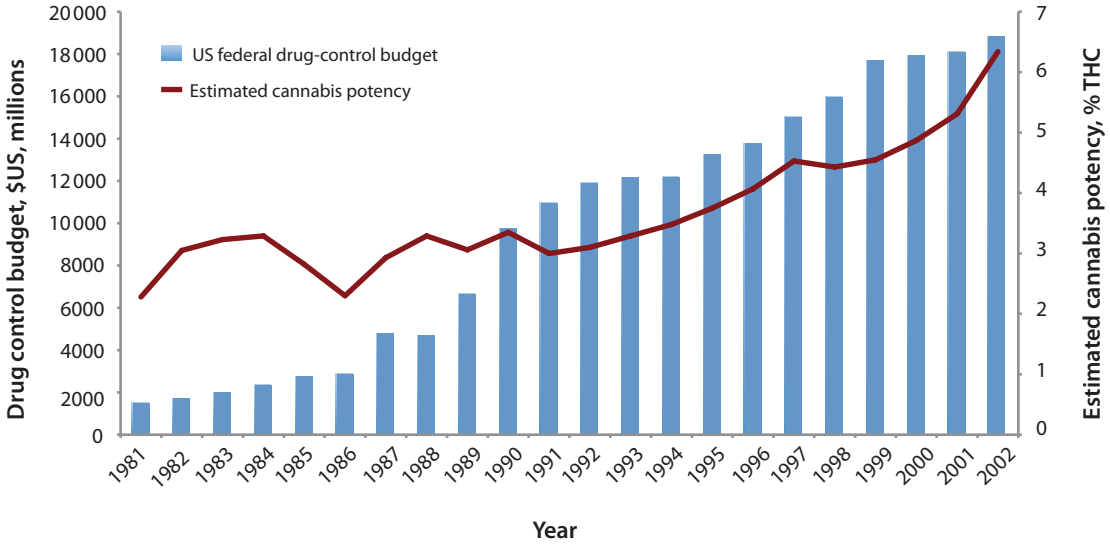

Figure 1
US funding for drug control and estimated potency of cannabis, 1981–2002. Data from the University of Mississippi Cannabis Potency Monitoring Project[13] and the US Office of National Drug Control Policy.[8]
THC = tetrahydrocannabinol

have also proven effective in reducing drug-related harm and have not been associated with unintended consequences.[22] The joint recommendations recently released by several United Nations agencies, including the World Health Organization, provide a strong scientific basis for expanding harm reduction efforts.[22] Beyond these recommendations, the recent consensus statement from Canada's National Specialty Society for Community Medicine,[30] which endorses the scale-up of supervised consumption facilities, reflects the compelling national and international evidence to support the controlled expansion of these programs in urban areas with high concentrations of public drug use and related harms. Since 1986, more than 90 supervised drug consumption facilities have been set up in Switzerland, the Netherlands, Germany, Spain, Luxembourg, Norway, Canada and Australia, mainly in cities with large populations of street injection drug users.[29,31,32]

The criminalization of people who use drugs continues to prove ineffective in reducing rates of drug use and has instead contributed to substantial health-related harms (Box 1).[7] Portugal, which decriminalized all drug use in 2001, has seen no increases in drug-related harms. Instead, a published review of the effects of decriminalization noted that this change was followed by "reductions in problematic use, drug-related harms and criminal justice overcrowding," with rates of drug use remaining among the lowest in the European Union.[24]

Accordingly, Canadian society would greatly benefit from a reorienting of its drug policies on addiction—that is, with consideration of addiction as a health issue, rather than primarily a criminal justice issue. In this context, evidence-based community diversion programs for non-violent drug offenders could be expanded and evaluated to replace more costly and less effective incarceration efforts.[33,34] In the states of New York, Michigan, Massachusetts and Connecticut, for instance, mandatory minimum legislation for non-violent drug offences is being repealed, with several other US jurisdictions set to follow suit.

Finally, in light of the simple reality that drug prohibition has not effectively reduced the availability of most illegal drugs and has instead contributed to a vast criminal enterprise and related violence,[4] among other harms, alternatives should be prioritized for urgent evaluation.[12] In addition, controlled regulation of illegal drugs may offer several advantages over the unregulated market currently controlled by organized crime groups, and there is substantial evidence from research on illicit drugs, tobacco and alcohol regarding how regulatory tools can more safely control drug availability while having the potential to positively influence cultural norms related to drug use (Table 1).[35–37] For instance, comparisons of cannabis use between the United States and Holland, where cannabis is sold to adults for recreational use through government-sanctioned "coffee shops," have revealed that rates of use are higher in the United States, and researchers have concluded that "Drug policies may have less impact on cannabis use than is currently thought."[38] Similarly, evaluations of cannabis use by US youth have demonstrated that rates of use have not increased in states where medical marijuana has been legalized.[39]

In this context, several Canadian bodies, including the Canadian Public Health Association[40] and the Health Officers Council of British Columbia,[41] have recently endorsed the evaluation of a regulated market for all currently illegal drugs. Although a full description of

Box 1

Harms of traditional drug policies, as listed in the Vienna Declaration

- HIV epidemics fuelled by criminalisation of people who use illicit drugs and by prohibitions on the provision of sterile needles and opioid substitution treatment.
- HIV outbreaks among incarcerated and institutionalised drug users as a result of punitive laws and policies and lack of HIV prevention services in these settings.
- The undermining of public health systems when law enforcement drives drug users away from prevention and care services and into environments where the risk of infectious disease transmission (e.g., HIV, hepatitis C & B, and tuberculosis) and other harms is increased.
- A crisis in criminal justice systems as a result of record incarceration rates in a number of nations. This has negatively affected the social functioning of entire communities. While racial disparities in incarceration rates for drug offences are evident in countries all over the world, the impact has been particularly severe in the US, where approximately one in nine African–American males in the age group 20 to 34 is incarcerated on any given day, primarily as a result of drug law enforcement.
- Stigma towards people who use illicit drugs, which reinforces the political popularity of criminalising drug users and undermines HIV prevention and other health promotion efforts.
- Severe human rights violations, including torture, forced labour, inhuman and degrading treatment, and execution of drug offenders in a number of countries.
- A massive illicit market worth an estimated annual value of US$320 billion. These profits remain entirely outside the control of government. They fuel crime, violence and corruption in countless urban communities and have destabilized entire countries, such as Colombia, Mexico and Afghanistan.
- Billions of tax dollars wasted on a "War on Drugs" approach to drug control that does not achieve its stated objectives and, instead, directly or indirectly contributes to the above harms.

For additional information, see the Vienna Declaration.[17]

regulatory models is outside the scope of this paper, it is important to stress that regulatory tools would need to be closely evaluated and should be tailored to each specific substance. Examples of regulatory tools that have been described for cannabis are presented in Table 1.[36]

Advocating for drug policy reform has traditionally been politically unpopular, but a recent Angus Reid poll estimated that 50% of Canadians already support legalization of cannabis.[42] In this context, it is noteworthy that, although cannabis is not free from harms, recent reviews have suggested that it is less harmful than many currently legal drugs, including alcohol and tobacco, as well as several commonly used pharmaceutical drugs.[43] A recent study based on a 16-level matrix of harm, spanning individual physical and social harms, demonstrated the relative safety of cannabis over alcohol (Figure 2).[44] In light of the persistently widespread availability and relative safety of cannabis in comparison to existing legal drugs, as well as the crime and violence that exist secondary to prohibition of this drug,[4] there is a need for discussion about the optimal regulatory strategy to reduce the harms of cannabis use while also reducing unintended policy-attributable consequences (e.g., the organized crime that has emerged under prohibition).[8,38]

A call for action

In 2005, as part of the renewal of Canada's National Drug Strategy, an exhaustive national consultative process led by Health Canada and the Canadian Centre on Substance Abuse culminated in a "national framework for action" to reduce the harms associated with drugs in Canada.[45] This inclusive process, which involved all stakeholder groups, aimed to remove the rhetoric and emotion that have traditionally guided Canada's response to illicit drugs and instead sought to incorporate the best available scientific evidence into the country's drug policy. The central aim of the strategy was "to ensure that Canadians can live in a society increasingly free of the harms associated with problematic substance use," and it differed from the US approach in emphasizing harm reduction.[45]

In 2007, however, the federal government abandoned this framework in favour of a new anti-drug strategy, which removed support for the evidence-based harm reduction programs recommended by the World Health Organization. The new strategy has also supported various drug-use prevention measures that have proven ineffective and potentially harmful elsewhere.[18,20,21] Lastly, as described above, more recent plans to enact costly mandatory minimum sentences for drug law violations highlight a complete departure from evidence-based policy-making.[33]

Table 1
Models and mechanisms for reducing cannabis-related harms in a regulated market*

Model or mechanism	Description
Prescription or permit system	Prescriptions or permits could be issued to individual purchasers, in a manner similar to the systems in place at some medical cannabis dispensaries.
Licensing system	Cannabis dispensaries could be issued conditional licences requiring compliance with regulatory guidelines.
Purchasing controls	Taxation (i.e., increasing consumer price barriers) has been shown to affect levels of alcohol and tobacco use and could be applicable to cannabis.
Sales restrictions	Implementing age restrictions similar to those in tobacco and alcohol regulations could limit access to cannabis among youth. Limiting days and hours of sale of alcohol has been shown to affect levels of alcohol use and could affect rates of cannabis use. The density of alcohol outlets has been associated with rates of alcohol use; limiting the density of cannabis outlets could similarly limit rates of use. Restrictions on bulk sales, as employed in the Netherlands (where purchases are restricted to 5 grams), could help to restrict the diversion of cannabis to minors.
Restrictions on use	Regulatory policies that affect the location or circumstances of use and allow for limited use in designated places, as with the Dutch coffee shop model for cannabis, could limit uncontrolled and "public nuisance" use. Strict regulations could prohibit driving or operating machinery while impaired.
Marketing	Strict regulations on marketing and product branding would reduce exposure to advertising, which is known to affect rates of alcohol and tobacco use.
Packaging	Tamper-proof packaging, standard labelling on content, factual health warnings, and no on-pack branding or marketing would help to regulate cannabis use.
Reducing harm	Regulated and controlled availability of lesser-strength substances would reduce the illegal market for and use of higher-potency substances, as has occurred with the regulation of alcohol. Opportunities should be explored to change patterns of use toward non-smoked cannabis.

* For further information, see the report of the Health Officers Council of British Columbia.[42]

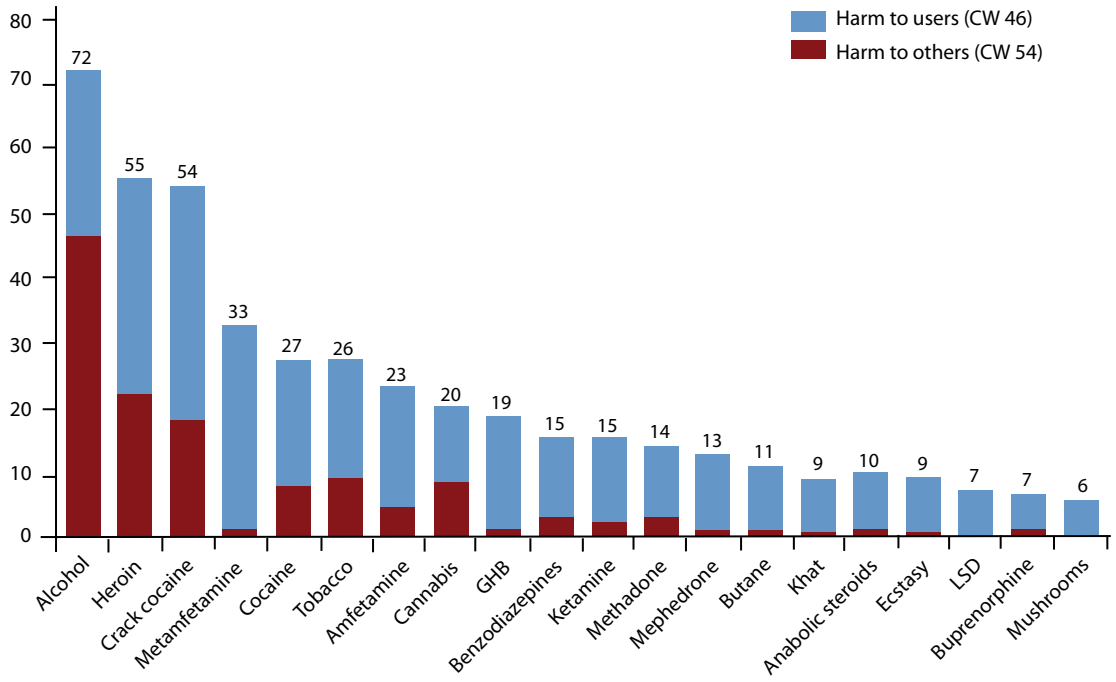

Figure 2

Drugs ordered by their overall harm scores, showing the separate contributions to each overall score of harm to users and harm to others. The cumulative weights (CWs) after normalization (potentially ranging from 0 to 100), as shown in the key, are 46 for sum of all normalized weights for all criteria related to harm to users and 54 for sum of all normalized weights for all criteria related to harm to others. GHB = γ-hydroxybutyric acid, LSD = lysergic acid diethylamide. Reprinted with kind permission of *The Lancet* from Nutt et al. (2010).[44]

Publications in medical journals often attract transient media attention, but their impact can be short-lived without meaningful debate on the part of policy-makers. We urge that such an informed debate take place without delay to increase the relevance of scientific evidence in drug policy decision-making.

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