



Heroin Compassion

Clubs

A cooperative model to reduce opioid overdose deaths & disrupt organized crime's role in fentanyl, money laundering & housing unaffordability

About the British Columbia Centre on Substance Use

The BC Centre on Substance Use (BCCSU) is a provincially networked organization with a mandate to develop, help implement, and evaluate evidence-based approaches to substance use and addiction.

The BCCSU collaborates with partner groups and stakeholders to better prevent and address harms from substance use and substance use policies. The BCCSU's multi-pronged approach is based on research to generate knowledge to drive the development and implementation of clinical care guidelines, policy supports, and education to ensure a systematic and evidence-based approach to substance use in the province. More at www.bccsu.ca.

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Illustration of the poppy plant by Hawkfeather Peterson.

In British Columbia, the fabric of society is fraying. The morgues are full of community members who have died of opioid overdoses as a result of fentanyl poisoning of the illicit drug supply. For the first time in recent history, the life expectancy in British Columbia is decreasing due to extreme rates of overdose deaths. Behind this public health crisis are powerful organized crime groups reaping billions from the illegal fentanyl trade and targeting the local real estate market to launder drug profits, contributing to the housing affordability crisis. The causal relationship between drug prohibition and transnational organized crime's growth is well known and has been clearly articulated, while all available evidence indicates that efforts to curtail the fentanyl supply through drug law enforcement have failed. Instead, prohibition has enriched organized crime groups to the point where recent reports suggest as much as \$5 billion annually in drug and organized crime profits is laundered through Vancouver-area real estate in recent years.

cannabis and connect with a range of health services, while buyers clubs procured life-saving treatment for patients living with HIV and AIDS when government inaction limited access to these medicines. Similar small user-driven underground initiatives to ensure access to heroin exist today, but they are risky, illegal and without a secure supply of fentanyl-unadulterated heroin. This severely limits access and sustainability.

This report proposes evaluating an updated model to these patient-led responses: a cooperative approach through which heroin could be restricted to members and legally obtained from a pharmaceutical manufacturer and securely stored in much the same way as it is already obtained and stored for heroin prescription programs, while also undertaking scientific evaluation to assess impacts. A cooperative could undermine the illegal market wherever it is set up. It could be initiated at little to no operating cost to the public, with the potential to reduce fentanyl-related opioid

A heroin compassion club could have the immediate potential to reduce the number of fentanyl-related deaths and impacts of organized crime

In the face of this reality, this report describes a model that has the immediate potential to address the underlying structural basis that has led to unprecedented levels of organized crime profits, unaffordable housing and opioid poisonings. This model is inspired by cannabis compassion clubs and buyers clubs, both of which emerged in the 1980s and 1990s in response to the AIDS epidemic—the last public health emergency our province faced. Then as now, compassion clubs functioned to provide a safe place for people to access medical

poisonings and decrease the spread of opioid addiction in the province.

In a public health emergency, urgency is required. It is proposed that this model be rapidly implemented and rigorously evaluated to understand how this model for regulation and control of the heroin market might reduce fentanyl overdose deaths while undermining organized crime profits and improving public health and safety in British Columbia.

Why Compassion Clubs?

British Columbia is in the midst of a drug-related public health crisis. In recent years, thousands of British Columbians have lost their lives to overdose and other drug-related harms.¹ While the recent spike in overdose deaths has been primarily driven by organized crime through the introduction of illicitly manufactured fentanyl analogues in street opioids (e.g., “heroin”), other harms stem from the contaminated illicit drug supply, including brain injuries from non-fatal overdoses, also contribute to major morbidity, mortality and health care cost.²⁻⁸

From an evidence-based public policy perspective, fentanyl adulteration in the illicit drug supply is a predictable unintended consequence of drug prohibition. Specifically, the same forces that pushed the market away from relatively bulky opium towards heroin, a more concentrated opioid that was easier to transport clandestinely, have continued to push the opioid market to increasingly potent synthetic opioids, including a range of fentanyl analogues.^{4,6} At the same time, the prohibition of drugs continues to contribute to a range of health and social consequences and, via the criminalization of people struggling with illicit drug addiction, perpetuates stigma towards people who use drugs (see page 8).²⁻⁸

British Columbia’s longstanding drug-related organized crime concerns have also recently reached a crisis level stemming from the province’s growing unregulated illegal drug market.¹ The profits enriching organized crime groups have recently generated increasing public interest, given high profile investigations of how the province’s casinos have been used to launder the proceeds of organized crime. However, less attention among the public has been paid

to acknowledging the links between money laundering schemes and the source of organized crime profits: the illegal drug trade. Similarly, while many in the public view drug market violence as resulting from the effects of drugs (e.g., drug-induced psychosis), and high-level violence in drug markets has been used to stigmatize people who use drugs, criminology and law enforcement research demonstrates the clear links between the profits afforded to organized crime groups as a result of prohibition and drug market violence.^{9,10} Drug prohibition and the criminalization of people who use drugs contributes to a host of other harms to drug users and society at large (see page 8).²⁻¹⁰

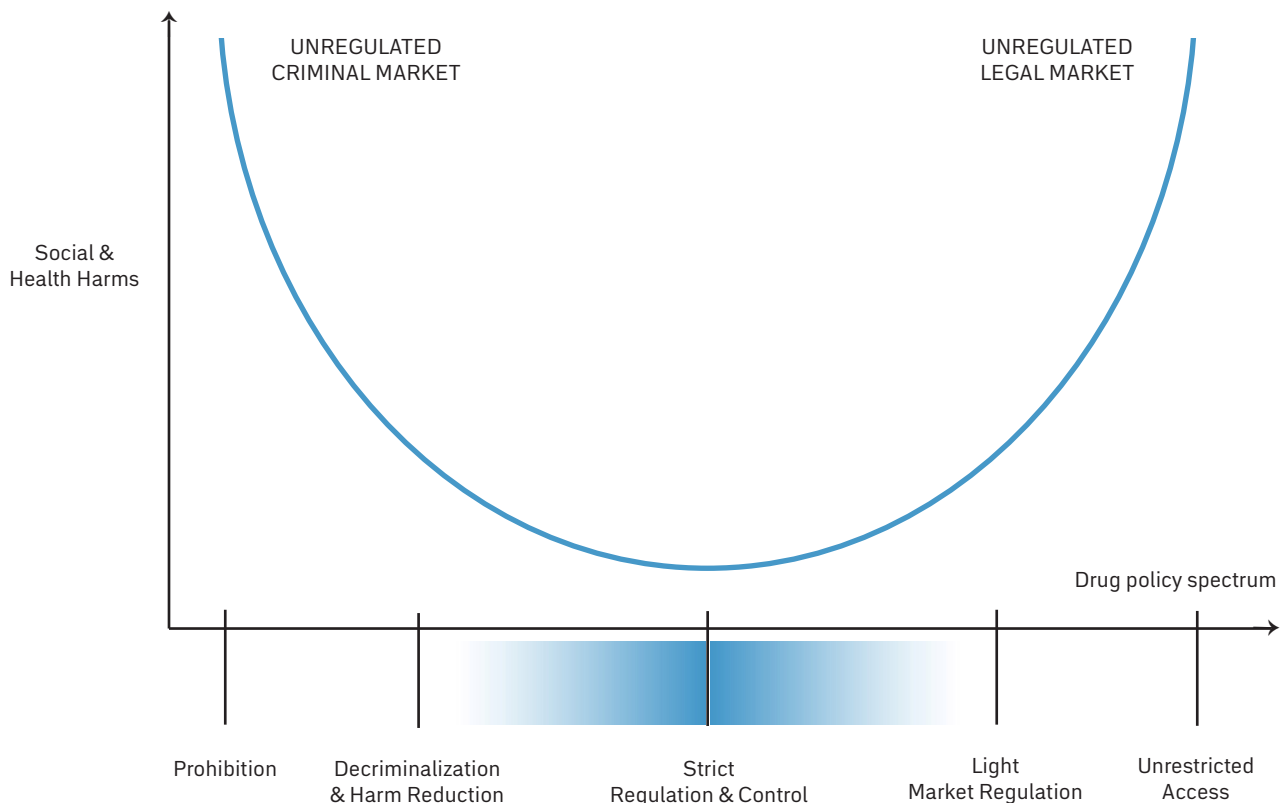
While addiction treatment and harm reduction interventions are a critical component of the public health response to substance use, addiction and related harms, these interventions do not address the structural factors that have given rise to the poisoning of the drug supply (e.g., organized crime profit motives) and related public health and safety concerns.⁴⁻⁸ Similarly, harm reduction, addiction treatment and recovery services, even when sufficiently brought to scale, will have a limited impact in addressing direct unintended effects of drug prohibition that are driven by organized crime profits in the illegal market.⁵

In this context, this report describes a membership-based cooperative model that has the immediate potential to reduce the public health consequences stemming from the poisoning of the illicit drug supply while also disrupting organized crime concerns, including the financial driver of the fentanyl-money laundering-real estate cycle. This model is inspired by cannabis compassion clubs and buyers clubs, both of which emerged

in the 1980s and 1990s in response to the AIDS epidemic, providing safe access to medicines. Given that the number of British Columbians with opioid addiction is currently estimated to exceed 120,000¹¹ in part as a result of unsafe physician prescribing¹²⁻¹⁴ and the proliferation of the fentanyl market under heroin prohibition,¹⁵ this model does not undermine efforts to promote cultural changes in the demand for drugs and, in fact, may actually reduce interest in opioids among high-risk populations.^{16,17}

It is proposed that an evaluation of this model be urgently undertaken with an initial trial site or sites to be established in neighbourhoods with high overdose morbidity and mortality, such as Vancouver's Downtown Eastside.

A REGULATED MARKET TO CONTROL HEROIN



Above: Adapted from an original concept by Dr John Marks

HARMS OF HEROIN PROHIBITION

- More violence, crime, disease, corruption and death than would occur with a public health oriented regulated system
- Institutionalized and endemic organized crime, illegal markets, corruption and criminal organizations that produce crime, violent injuries and deaths
- Undermining of public health systems when criminalization and enforcement activities drive people who use drugs away from prevention and care services and into environments where the risk of harms (e.g., overdose) is increased
- Substance displacement where illicit drug markets move to more hazardous and concentrated products (e.g., fentanyl) when profit motive drives the illegal market
- Increasing contamination of less harmful drugs (e.g., powder cocaine) with extremely dangerous and toxic adulterants (e.g. fentanyl)
- Creation and aggravation of stigma, discrimination, health and social inequities due to criminalization based on, for example, gender and ethnicity
- Crowding and slowing of criminal justice systems as a result of unsustainably high drug-market associated arrest, prosecution, and incarceration rates
- Opportunity costs of allocating resources into law enforcement, judicial and correctional/penal approaches, with consequent scarcity of resources for public health and social development approaches
- Illicit drug market profits entirely outside the control of government, fuelling crime, violence and corruption in countless urban communities and destabilizing entire countries such as Colombia, Mexico and Afghanistan
- Millions 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

Modified from the Vienna Declaration - Wood et al. Lancet 2010 Jul 31;376(9738):310-2

In 2017, at least 3,996 Canadians died from an opioid overdose, representing a 33% increase in overdose deaths from 2016.¹⁸ Although every part of Canada has been affected by the overdose crisis, not all provinces and territories have been impacted equally. Specifically, British Columbia has seen the highest number of opioid overdose deaths in Canada: in 2018, there were 1,489 confirmed or suspected illicit overdose deaths in BC, which translates to a rate of 31 deaths per 120,000 individuals, or 4.5 times the total number of motor vehicle accident deaths in the same time period.¹ Preliminary data indicates that illicit fentanyl was detected (alone or in combination with other drugs) in approximately 82% of overdose deaths in 2017 and 85% of overdose deaths in 2018.¹ At a population level, life expectancy at birth, which had steadily increased by three years from 2000 to 2013 (80.27 to 83.02 years of age), actually declined by 0.38 years from 2014 to 2016 as a direct consequence of the overdose crisis.¹⁹ Despite increased investments in harm reduction programs and the ready availability of take-home naloxone in many BC communities, overdose deaths have remained high, with some communities impacted more than others. For example, in 2017, the death rate in Vancouver's Downtown Eastside neighbourhood, where harm reduction programs and services are highly concentrated and more accessible than elsewhere in BC, was estimated at almost 250 deaths per 100,000 individuals—around eight times higher than the BC average.²⁰ Similarly, while efforts are underway to establish a functioning, evidence-based addiction treatment system across the province, the reality is that many who have died were not severely opioid-addicted (e.g., not street-entrenched and dying at home), or in other cases were not interested in engaging with

addiction treatment.^{1,21,22} In this context, while the establishment of a functioning addiction treatment and recovery system is absolutely critical, government is also obligated to establish and evaluate programs and policies that can immediately reduce serious harms, deaths, organized crime and gang violence associated with prohibition.²

B.C.'s Organized Crime Emergency

Innovative thinking and solution-oriented approaches are urgently required to overcome the crises identified above, including interventions that ultimately acknowledge and address the structural mechanisms underlying and causing organized crime's tremendous profitability (i.e., drug prohibition). British Columbia has long been a key centre of illegal drug market activity and related public health and safety concerns in Canada, and significant law enforcement resources have been dedicated toward efforts to suppress the illegal drug supply and its contribution to organized crime in the province.^{23,24} However, as was observed with the emergence of a violent illegal market in the United States under alcohol prohibition in the 1920s,²⁵ the vast illegal market that has emerged under modern drug prohibition has, for many years, proven remarkably resistant to law enforcement's efforts.^{4,26,27} This has resulted in a range of unintended negative consequences for people who use drugs and for society at large.²⁻¹⁰

A critically under-acknowledged consequence of drug prohibition is the tremendous wealth-generating potential for organized crime and the knock-on effects of money laundering on housing affordability in many parts of BC. Increased public attention related to this has emerged as a result of near daily reports of high profile money laundering—where organized crime groups seek to hide the vast financial proceeds of drug market revenue by laundering them through local casinos, business ventures and the real estate market.

One means of concealing drug-related financial proceeds that has received recent attention is the laundering of funds through the gaming industry. Peter German's report *Dirty Money* involving an independent review

of money laundering in Vancouver casinos concluded that organized crime profits being laundered in BC casinos are from "primarily drug trafficking" and that "the most lucrative crimes in Vancouver are related to illegal drug sales."²⁸ In February 2019, a CBC news investigation demonstrated that the amount of organized crime profits flowing through BC casinos could be closer to \$1 billion, nearly 10 times higher than estimates included in the *Dirty Money* report.²⁹

One impact of organized crime's tremendous profits in BC has been the impact on the province's real estate market. Specifically, the Attorney General of BC David Eby has identified the clear links between BC's overdose crisis, money laundering and the real estate market in the province.^{30,31} In a November 2018 investigative series, Global News reporters tracked how organized crime groups laundered suspected drug money in BC real estate, estimating that \$5 billion in drug and organized crime profits was used to buy Vancouver-area homes in 2012 alone.³² This is noteworthy because these were the profits available to organized crime groups selling heroin and other drugs (e.g., cannabis, cocaine), before the emergence of illicitly manufactured fentanyl. A 2017 BC Supreme Court case drew the conclusion that organized crime groups can cut one kilogram of heroin (worth \$70,000) with \$12,500 worth of fentanyl (and bulking agents) into 100 kilograms of counterfeit "heroin" worth as much as \$7 million on the street.³³ Subsequent disclosures have led the Attorney General to conclude that as much as \$2 billion in organized crime dollars was laundered through casinos and real estate in the Lower Mainland annually.³⁰ This has resulted in the BC Government and Service Employees Union calling for a public enquiry into organized

One kilogram of fentanyl
1 million hits

\$10,000,000



*Photos: Images from a 2018 Global News investigative series, "Fentanyl: Making a Killing", which detailed how organized criminals are getting rich off the illicit drug trade, primarily through fentanyl sales, and laundering billions of dollars through real estate.
(Source: Global News)*



crime's contributions to the overdose crisis, money laundering and the inflation of the province's real estate market.³⁴ Similar concerns related to the fentanyl epidemic, organized crime and money laundering have recently been raised by Vancouver City Council, which has observed money in suitcases and shopping bags being used to pay taxes at Vancouver City Hall.³⁵ While calls for a public enquiry may be valid, this report argues that the best use of public resources that can ultimately address the organized crime and drug poisoning crisis in BC would be to immediately employ and evaluate strategies to directly confront the structural reason for organized crime's success and opioid overdose deaths in BC: heroin prohibition.

In addition to the problems related to the profitability of heroin prohibition to organized crime, health and safety from violence are

among the primary concerns of communities around the world, and research from many settings has demonstrated clear links between high-level gang violence and the illicit drug trade, particularly in urban settings.^{9,10} Importantly, while drug-related gang violence has traditionally been poorly understood among the public and used to justify the criminalization of people who use drugs, violence in drug markets is better understood as a consequence of prohibition and the means for drug gangs to gain or maintain their share of the lucrative illicit drug market.^{9,10} For instance, a recent systematic review of studies examining the association between drug law enforcement and drug market violence found that nearly all research studies examining this question have shown that increasing drug law enforcement expenditures may actually increase drug market violence.⁹ The links between organized crime and



Photo: A 2015 seizure by the Combined Forces Special Enforcement Unit of fentanyl powder and pills with an estimated street value of \$3.5-4.5M. (Source: Handout)

cannabis prohibition were recently well articulated by Prime Minister Justin Trudeau, who stated: “The other piece of it is there are billions upon billions of dollars flowing into the pockets of organized crime, street gangs and gun-runners, because of the illicit marijuana trade, and if we can get that out of the criminal elements and into a more regulated fashion we will reduce the amount of criminal activity that’s profiting from those, and that has offshoots into so many

use of illegal firearms emerge from this lower-level activity and from efforts to control and grow a market.”²³

Similarly, according to a report of the federal Standing Committee on Justice and Human Rights: “The Committee was told, on a number of occasions, that a common feature of urban gangs is that the primary focus of activity involves illicit drugs. Crimes committed for drug-related reasons include property

“The most lucrative crimes in Vancouver are related to illegal drug sales.” - Peter German, *Dirty Money*

other criminal activities.”³⁶ Of course, there is nothing particularly unique about the role that cannabis prohibition has had in fuelling organized crime and gang violence, and, arguably, the heroin and fentanyl markets have historically been associated with more gang violence and social dysfunction than the cannabis market.^{9,10}

Others have drawn similar conclusions regarding the link between drugs and gang violence in BC. For instance, according to the provincial Illegal Firearms Task Force Final Report: “B.C. gangs sell drugs. High-level organized crime figures operating at the international and national level, such as outlaw motorcycle gangs, traditional organized crime, and newer formations originally based in Russia, the Middle East and Latin America, exist in B.C., as in all jurisdictions in Canada. They facilitate the production, transportation and distribution of illegal products. They supply resources and weapons to lower-level crime groups, such as those operating in B.C., and then manage and launder the profits. Open-air violence and the

offences, robbery, assault, and homicide. Another aspect of drugs and organized crime is the exploitation of drug-addicted youth.”³⁷ This is consistent with a recent BC RCMP report which concluded that organized crime groups in BC have even been luring pre-teens through social media with the intention of getting them to run drugs.³⁸ Obviously, addressing the profits of prohibition is the optimal way to address these concerns.

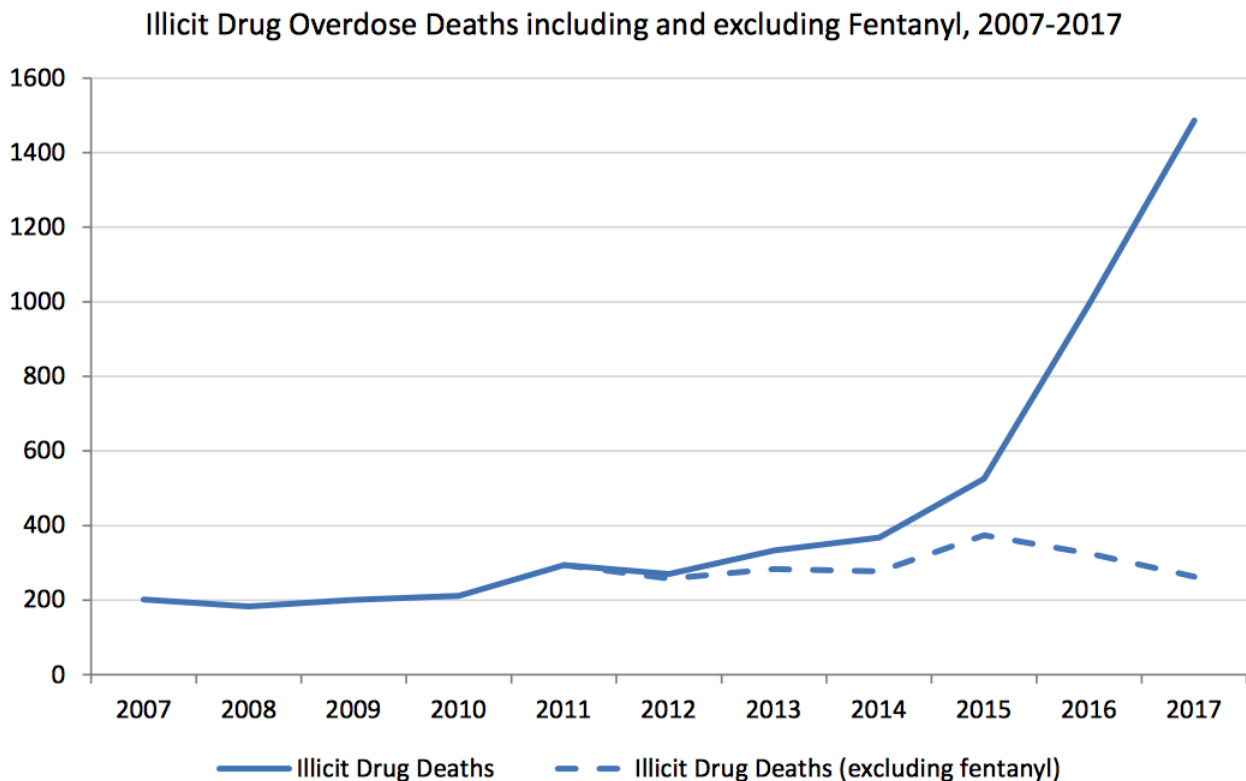
Clearly, urgent action is required, and long overdue, to address the structural basis of organized crime’s proliferation in BC—specifically, the profits afforded by heroin prohibition.

The Failure of Supply Reduction Strategies

Evidence clearly demonstrates that supply-reduction strategies—which aim to reduce heroin availability and, in turn, drive drug prices up to ultimately decrease demand—have failed. Prior to the fentanyl epidemic, recent reports had suggested that the worldwide supply of illicit opiates (primarily heroin) had increased by more than 380% in recent decades.⁷ Drug seizures, arrests, criminal convictions and other commonly reported indices of drug law enforcement “success” have actually been ineffective in reducing the availability of illegal drugs.³⁹ Recent reports from south of the border have suggested that, despite a more than 600% inflation-adjusted increase in the US federal anti-drug budget since the early 1980s,

heroin prices in the US have decreased by approximately 80% during this period;⁷ heroin purity, meanwhile, has increased by more than 900%.⁷

While it has quickly been eclipsed by the fentanyl epidemic, British Columbia is also still grappling with a serious prescription opioid epidemic driven by unsafe prescribing, iatrogenic addiction and prescription opioid overdose deaths.⁴⁰ Data from British Columbia have demonstrated the area-level relationship between rates of prescription opioid dispensation and rates of unintentional prescription opioid related deaths in BC.⁴¹ Importantly, with respect to highlighting issues related to diversion, research has



Above: Fentanyl was detected in 79% of all illicit drug overdose deaths in B.C. from 2016-2018 (Source: BC Coroners Service)

shown that over an approximate nine-year period, 46% of women and 71% of men who died of a prescription opioid overdose did not have an active prescription in the 60 days prior to their death.⁴¹ Issues of unsafe prescribing are also highlighted by the report of a British Columbian patient documented to have received more than 23,000 pills of oxycodone through more than 50 physicians and 100 pharmacies before authorities finally became aware of the issue.⁴² In this context, diverted prescription opioids may be particularly risky for youth, who may

prescription opioids, not contaminated with fentanyl.

The failure to reduce the supply of illicit opioids has also been clearly demonstrated in the fentanyl era. The widespread availability of fentanyl across BC is indicated by all health statistics, including regional mortality data.¹ Similarly, when we look to drug availability estimates in urban centres such as Vancouver, recent survey data suggest that vulnerable populations, including street-entrenched youth, can easily access fentanyl.⁴⁸ For

More than 70% of youth drug users in Vancouver said they had immediate access to street fentanyl

perceive them to be lower risk than other opioids such as heroin.⁴³⁻⁴⁵ Studies from British Columbia and other settings have also shown how initial prescription opioid use is associated with initiation into intravenous drug use among high-risk youth.⁴⁶ Importantly, studies have also shown how initial addiction to prescription opioids can subsequently result in use of fentanyl and overdose death.⁴⁷ While somewhat out of scope for this report, BC clearly needs a holistic strategy that can actively address issues that contribute to the high rates of addiction (e.g., trauma, poor access to evidence-based pain care). Unsafe prescribing and the widespread availability of prescription opioids to vulnerable populations (e.g., those who have never used opioids) must be addressed, while also ensuring that those who become addicted to opioids and those already on prescription opioids for chronic pain have access to opioids, including

instance, among more than 500 youth drug users surveyed as part of the At-Risk Youth Study (ARYS), more than 70% said they had immediate access (i.e., within 10 minutes) to street fentanyl, and more than 85% said they could access fentanyl within 90 minutes.⁴⁸ Among more than 1,400 adult drug users surveyed, more than 80% indicated they could access fentanyl within 10 minutes and 95% within 90 minutes.⁴⁸ Other commonly reported metrics also demonstrate the urgent need to take innovative action. For instance, a recent US seizure was estimated to contain enough fentanyl to kill more than 26 million people.⁴⁹ Similarly large seizures have been reported elsewhere;⁵⁰ a recent example is the acquittal of a BC man charged with the possession of 27,000 fentanyl pills.⁵¹ In terms of the success of provincial supply-reduction efforts, the authors of this report were unable to identify any relevant reports or data.

Alternatives to Prohibition

In an effort to reduce use of illicit opioids, oral opioid “replacement” therapies have emerged in recent decades as a key addiction treatment intervention. The use of opioid agonist medications (e.g., methadone, buprenorphine) as a treatment for opioid addiction was initially controversial among the general public, as well as in law enforcement and government circles.⁵² However, over time and with clear evidence of its benefits, opioid agonist treatment gained wider acceptance and is now considered the standard of care internationally.⁵³ Extensive research has shown that these medications can be safe, effective and life-saving⁵⁴⁻⁵⁶ and are rightly included on the World Health Organization’s List of Essential Medicines.⁵⁷ At present, in some areas of BC, including those where fentanyl is easily accessible through the illicit drug market, access to opioid agonist medications and other forms of effective treatment and recovery services remains limited,^{11,48,58} highlighting the urgent need to establish a functioning provincial addiction treatment system.

Since oral opioid agonist medications are not always acceptable or effective among people with severe opioid addiction, clinical programs that offer diacetylmorphine (i.e., “prescription heroin”) have also emerged in a number of international settings, including the Crosstown Clinic in Vancouver. Similar to oral opioid agonist treatment medications, research has demonstrated that when delivered as part of a structured and supervised clinical program, injectable opioid agonist treatment (iOAT) is effective for reducing harms, including risk of death, among people with severe opioid addiction.⁵⁹

There have been a number of challenges, however, in scaling up iOAT programs in BC to address the opioid overdose crisis.

The first challenge is cost. While research has shown that iOAT is cost effective,⁶⁰ the implementation and operation of iOAT service models is costly and requires dedicated infrastructure and resources. To date, health authorities and government have been hesitant to make the type of investments in this area that would enable access for more than a very small fraction of the population with opioid addiction. It is noted that other, less controversial, areas of health care receive substantially more funding than addiction care. Again, this speaks to the need to establish a functioning addiction treatment system that is inclusive of evidence-based interventions such as iOAT, in order to address the longstanding challenge of untreated addiction in the province. Nevertheless, in the absence of this investment, new economical models to address the fundamental cause of the overdose crisis (i.e., fentanyl contamination of the drug supply) are required.

Another challenge has been that approximately 60% of those who died from an opioid overdose in BC were non-injection users (i.e., people who smoke, snort or orally ingest drugs) and in some cases non-opioid (e.g., stimulant drug) users who ingested fentanyl-contaminated drugs, who would not benefit from access to an iOAT program.²² Finally, many people who are dying of opioid overdoses are intermittent (i.e., non-addicted) users²¹ or are people who, regardless of the availability of opioid agonist or other forms of addiction treatment, are not engaged in addiction care for a variety of reasons, including personal choice.^{21,22} For all of these reasons, novel alternatives to prohibition that seek to address the poisoning of the illicit drug supply—that go beyond scaling up traditional approaches such as opioid agonist treatment—are urgently required.

BENEFITS OF REGULATION AND CONTROL

- **Availability:** Regulatory tools can be used in an effort to effectively control access, particularly through the use of age and place restrictions.
- **Drug market violence:** By seeking to eliminate the illegal opioid market, violence arising from conflict among those involved in opioid supply will likely be reduced.
- **Organized crime:** Seeking to move from an unregulated to regulated heroin market will help eliminate a key source of revenue for organized crime groups.
- **Law enforcement resources:** A regulated market for heroin creates opportunities for enforcement resources to be redeployed towards improving and maintaining community health and safety rather than addressing harms of prohibition.
- **Reduced stigma:** Moving from the criminalization model to a public health and safety model can help reduce stigma towards people with addiction.
- **Revenue for addiction services:** Regulating heroin sales could create new sources of revenue for providing services and supports for people with addiction.

What is a Compassion Club Co-op?

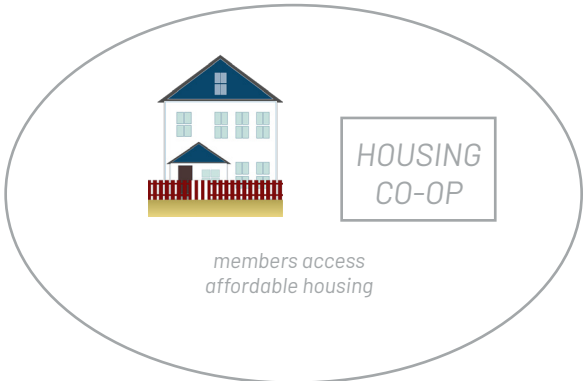
The compassion club cooperative model described in this report is inspired by cannabis compassion clubs and buyers clubs, both of which emerged in the 1980s and 1990s in response to the AIDS epidemic. At that time, compassion clubs functioned (and still do so today) to provide a safe place for people to access medicines and connect with a range of health services, while buyers clubs procured life-saving treatment for patients living when government inaction limited access to these medicines. Similar small user-driven underground initiatives to ensure access to heroin exist today, but they are risky, illegal and without a secure supply of fentanyl-unadulterated heroin. This severely limits access and sustainability. This report proposes an updated, members-only cooperative model through which heroin could be legally obtained from a pharmaceutical manufacturer and securely stored in much the same way as it is already obtained and stored for heroin prescription programs, while also undertaking scientific evaluation.

The compassion or buyers club would function as a cooperative (or “co-op”), as an autonomous and democratic enterprise owned and operated by its members who share its benefits as they work towards mutually set goals.⁶¹ General principles of cooperatives include voluntary membership; democratic control of the enterprise; economic participation by members; autonomy and independence; sharing information, training and other resources; cooperation among cooperatives; and concern for the community.⁶¹ Common types of cooperatives include consumer co-ops, which are retail enterprises owned and maintained by their consumers who receive discounted goods in return for their contribution. Co-op grocery stores are a common example of this model. Similarly,

housing cooperatives are a unique mode of home ownership whereby members jointly own and maintain the complex with shared purchasing and decision-making power, with aims to create a strong sense of community-bonding and to provide safe and secure housing to their members. Housing co-ops also operate on the principle of affordability regardless of economic status, offering sliding scale pricing based on ability to pay. Some models are subsidized for all members, while others have a proportion of higher means members cover extra cooperative costs, ensuring accessibility for lower-income tenants. The heroin compassion clubs could operate in the same way, with a sliding scale and subsidies determined by the membership.

In addition to its democratic and inclusive values, the economic resilience of the cooperative model has led to its adoption in a wide range of industries as well as the financial and public sectors.^{62,63} This economic sustainability is attributed to the pooling of member resources, ability to take advantage of economies of scale, and the equitable distribution of financial risk.⁶⁴ Thus, cooperatives are reportedly more sustainable than other forms of enterprise in turbulent socioeconomic climates.⁶⁵ For example, a recent report found that the five-year survival rate of co-ops in BC was close to 67%, compared to a five-year survival rate of 39% for conventional start-ups in Canada.⁶⁵ Over the last few decades, there have been a growing number of cooperatives established in BC, partly due to government-funded policies and programs that support their formation and the long-term success of cooperative businesses and activities in benefitting BC communities. See the BC Government’s Cooperative Associations page for more information.

The cooperative model exists across sectors, including consumer co-ops, whose economic sustainability is attributed to the pooling of member resources, ability to take advantage of economies of scale, and the equitable distribution of financial risk.



Member-Driven Purchasing Cooperatives

A member-driven purchasing cooperative is an arrangement among businesses or individuals whereby members agree to aggregate their demand in order to purchase a certain product at a lower price from a supplier.⁶⁶ This typically involves jointly soliciting bids from competing suppliers or service providers and awarding purchasing contracts in order to meet common needs.^{66,67}

A representative example of a purchasing cooperative is group purchasing in the healthcare supply chain. By aggregating their purchase orders and relevant resources, members are able to take advantage of volume discounts, price protection, shared storage and distribution facilities and costs, and other economies of scale to reduce their overall purchasing costs for medical technologies, pharmaceutical products, facility maintenance supplies and other necessities.^{64,67} Data from the US show that 72% of total community hospital expenditures takes place through purchasing cooperatives.⁶⁸

Another key advantage of group purchasing is improved product quality control, standardization programs and influence on how market conditions evolve. Bulk purchasing allows cooperative members to gain leverage with suppliers and impose quality standards on the market.⁶⁴ Government entities and public institutions also meet a significant portion of their procurement requirement through cooperative purchasing, not only to minimize costs to the public, but also to impose pricing and quality benchmarks over the long term.⁶⁶⁻⁶⁸

There are also historical and modern examples of consumer-driven purchasing cooperatives for prescription drugs (i.e.,

antiretroviral drugs for HIV, hepatitis C)^{69,70} and other substances (e.g., vaporized nicotine products, cannabis, kava)⁷¹⁻⁷³ that are not available, not approved, unregulated, or illegal in the countries where they are established. Reputable buyers clubs help consumers to navigate otherwise dangerous or illegal purchasing and importation processes for restricted and controlled substances, sometimes by operating within legal frameworks (e.g., special access schemes) or legal “grey areas” (e.g., personal importation laws), but also illegally. Although the structure and operation of these consumer groups vary across jurisdictions, most are non-profit and “closed circuit” enterprises built on human rights principles which people who use drugs have been following for decades: self-supply, self-organization, and harm reduction.⁷¹ Strengths of these models include providing a safe environment for peer-delivered risk mitigation and harm reduction practice, preventing illicit transactions, quality control, shifting economic surplus to consumers from criminal organizations, and increased consumer protections, agency and responsibility.^{5,71} Cannabis compassion clubs and social clubs in particular have a long history, and there is a wealth of information available regarding successful implementation and sustained operation of user-driven and -regulated models within different legal regimes and sociopolitical contexts (e.g., blueprints and “lessons learned”).^{6,72}

Cooperative Governance Structures

The governance structure of a cooperative reflects its ownership and control by its members. To achieve this end, cooperative enterprises typically comprise variations of the following elements.^{74,75} First, cooperatives normally have a board of directors, often democratically elected to represent each member organization. The directors are responsible for the development and communication of the cooperative's overarching mission, vision and objectives; identification and mitigation of conflicts of interest and diverging expectations; development of operational policies and strategies to meet the goals of the membership; acquisition, preservation and allocation of collective assets and resources; hiring and supervision of management teams; and informing the members. Often, a general manager is hired by the board of directors to implement the policies and strategies specified by the board. The manager is in charge of forming necessary working groups and overseeing the day-to-day operations of the cooperative. Providing the board of directors with progress reports and recommendations for long-term planning is also among the manager's responsibilities. The members control the cooperative by electing the board of directors from fellow members and actively voting on cooperative policies and bylaws. Sales would be restricted to eligible members.

Why Heroin?

There are various opioids that could be made available through a cooperative approach, and, in the context of the public health emergency, many models should be urgently considered for evaluation. This report recommends the use of diacetylmorphine (pharmaceutical trade name “Heroin”) for several reasons. First, while there are licensed opioid analgesic (pain) medications that may be attractive due to their status as legal drug products approved by Health Canada (e.g., morphine, hydromorphone), most people with opioid addiction and at immediate risk of overdose prefer heroin to prescription opioids. Evidence for this comes from the recently completed SALOME trial,⁷⁶ which, in the face of federal government opposition to providing prescription heroin, compared the effectiveness of hydromorphone (a licensed opioid pain medication) to heroin. In their ground-breaking clinical trial, the SALOME research team demonstrated that these medications were similarly effective.⁷⁶ However, after the trial concluded, only a fraction of patients stayed on hydromorphone: of the approximately 135 clients currently engaged in care at the Crosstown Clinic, more than 85% have either switched to or stayed on prescription heroin when given a choice between the two options.⁷⁷ These data are consistent with a recent survey of more than 650 persons who use opioids (predominantly street fentanyl) which found that approximately 80% expressed a preference for heroin (if it were available), 16% expressed a preference for fentanyl, and only 4% expressed an interest in prescription opioid pills such as morphine or hydromorphone.⁴⁸ Second, among those in the community experiencing fentanyl-related harms (e.g., instability, frequent non-fatal overdose), there are also

a number of reports of individuals seeking out illicit heroin (which can be confirmed as fentanyl-unadulterated by drug-checking services) and benefiting substantially from transitioning from fentanyl to exclusive heroin use. Indeed, the cooperatives model proposed in this report emerged from the descriptions of individuals with lived experience who have been advocating for this type of unadulterated and regulated heroin supply for many years. Third, heroin may provide advantages with respect to reducing diversion and experimentation with opioids among high-risk populations not addicted to opioids. Specifically, while many vulnerable populations, including high-risk youth,⁴³⁻⁴⁵ often view prescription opioids as safer for experimentation,⁷⁸ there is a more widespread understanding of the health risks of heroin use.⁷⁹ In this context, it is noteworthy that widespread use of the prescription painkiller hydromorphone (and a clear lack of knowledge regarding the risks of overdose) in Ontario⁸⁰ resulted in hydromorphone being the second-largest contributor to opioid overdose deaths between 2014 and 2016, according to data released by Ontario’s Chief Coroner (555 deaths in comparison to fentanyl’s 752 deaths).⁸¹ Further, the provision of heroin may increase the likelihood that the cooperatives would largely be restricted to experienced opioid users who may already be using extremely high-risk drugs such as fentanyl. Fourth, organized crime groups have proven highly adept at creating fentanyl-containing counterfeit pills that look exactly like prescription medications (e.g., counterfeit Xanax, Oxycontin, etc.) with deadly consequences, including among non-addicted experimenting youth.⁸²⁻⁸⁴ As such, while this report supports the evaluation of a full range of efforts to reduce exposure to fentanyl, strategies that solely rely on the provision

of prescription analgesic medications in pill form could be undermined by organized crime groups that react by producing fentanyl-containing pills that look identical to pills provided through public health interventions. Fifth, the establishment of a regulated and controlled supply of fentanyl-unadulterated heroin may increase demand for street heroin among persons who use street opioids, and force organized crime groups to return to the provision of heroin as part of the illicit drug market. Sixth, if the cooperative models are effective in reducing organized crime and overdose deaths without the development of unexpected harms, this may present a model that could be evaluated with other illegal or unregulated substances in circumstances where prohibition has contributed to public health and safety issues.⁸⁵ Seventh, it is noted that evaluating a model for the regulation of heroin accessibility to people who use opioids may not be inconsistent with reducing overall rates of opioid use in BC. For instance, while it is now estimated that more than 120,000 British Columbians are addicted to opioids¹¹ due to both unsafe opioid prescribing and the illegal drug market feeding the province's opioid epidemic,¹⁵ studies have demonstrated that modernizing drug policy is not inconsistent with reducing rates of use. This is true of Switzerland, which observed a dramatic reduction in new heroin users coinciding with the widespread access to opioid agonist treatment, including prescription heroin, and concluded: "The harm reduction policy of Switzerland and its emphasis on the medicalization of the heroin problem seems to have contributed to the image of heroin as unattractive for young people."¹⁷ Similarly, in some western European jurisdictions that have pioneered the use of supervised injecting facilities, there are models where illicit heroin is procured by a

"house dealer" who is responsible for providing an unadulterated supply of the drug. Similarly, while the Portugal model of drug control has involved a range of interventions seeking to assertively provide addiction treatment and care to heroin users, it is noteworthy that the country has seen a dramatic reduction in harms related to heroin coinciding with these interventions and the decriminalization of personal amounts of heroin and other drugs.⁸⁶ Similarly, according to a World Health Organization survey carried out in Colombia, Mexico, United States, Belgium, France, Germany, Italy, Netherlands, Spain, Ukraine, Israel, Lebanon, Nigeria, South Africa, Japan, People's Republic of China and New Zealand: "Globally, drug use is not distributed evenly and is not simply related to drug policy, since countries with stringent user-level illegal drug policies did not have lower levels of use than countries with liberal ones."¹⁶ While explanations for these observations require additional research, it may be that treating drug use as a health issue has the potential to reduce phenomena related to demand (e.g., "forbidden fruit") and supply (e.g., organized crime profit motive) that result directly from prohibition. Finally, while it is out of scope for this report, it is well recognized that heroin production in countries such as Mexico and Afghanistan contributes to major organized crime, high-level violence and other related concerns, including terrorism, in drug-producing nations.⁸⁷⁻⁸⁹ As such, various expert groups have recently articulated how regulating drug use in consumer markets has potential to reduce organized crime concerns, not only where drugs are sold, but also in nations where illegal drugs are produced.^{2,5,6,10}

Members-Only: Heroin Compassion Clubs

This report represents a white paper describing a thoughtful model that could be urgently implemented and evaluated using experience from other cooperative frameworks (e.g., cannabis buyers clubs) and tailored towards the specific need for a strategy of heroin provision focused on public health and safety. Some areas for consideration are described below.

Board Composition

While basic elements of heroin compassion clubs could be based on other cooperative models, there are unique elements that should be considered. For instance, given the highly prevalent need for public health, trauma-informed addiction treatment, culturally safe care for Indigenous peoples, and integrated recovery services to be provided to people who may become addicted to heroin, the cooperative board could include in its structure a strategy to recruit board members or representatives with expertise in these areas to work alongside board members with lived experience. Having members with lived experience governing the cooperative could allow for broader culture changes in the opioid drug market promoting health and welfare of people who use drugs.

Heroin Acquisition and Storage

In terms of the legal approach to obtain heroin, one mechanism that would support these cooperatives is Health Canada's recently implemented Drugs for Urgent Public Health Need (UPHN). This mechanism is designed specifically to support population (rather than individual patient) needs and jurisdictional (provincial or territorial) requirements. The UPHN regulatory pathway enables provincial and territorial public health officials to request quantities of drugs deemed necessary for use in their

jurisdictions for an urgent public health need. Unfortunately, the UPHN mechanism's authorization indication is for "substitution therapy in case of severe heroin dependence as part of a treatment program with prescription heroin" and therefore could be viewed as out of scope for the cooperative model proposed in this report. However, in light of the national devastation of the overdose crisis, a discussion with the federal government could be broached to determine the best regulatory pathway for off-label use of diacetylmorphine.

While the UPHN mechanism likely precludes the need, an alternative would be to access diacetylmorphine via a Section 56 exemption mechanism. According to the *Controlled Drugs and Substances Act*, under Section 56 "The Minister may, on any terms and conditions that the Minister considers necessary, exempt from the application of all or any of the provisions of this Act or the regulations any person or class of persons or any controlled substance or precursor or any class of either of them if, in the opinion of the Minister, the exemption is necessary for a medical or scientific purpose or is otherwise in the public interest." While the public health emergency is a sufficient rationale, to ensure that there are no unintended consequences of the cooperatives model, a robust evaluation strategy would be established and implemented in parallel, and the exemption mechanism could be provided for both health and research purposes.

At the present time, pharmaceutical grade heroin (as approved to treat opioid use disorder) can only be imported into Canada from a manufacturer in Switzerland by a Health Canada licensed dealer. The role of the licensed dealer is outlined in the Narcotic

KEY ELEMENTS OF A HEROIN COMPASSION CLUB

- Could be operated by a non-profit society rather than government, involving experts with lived experience, addiction and public health
- Would provide powder diacetylmorphine (a form to prevent counterfeit pills) obtained from a pharmaceutical supplier through federal government legal means with secure storage and handling (i.e., pharmacy model)
- Would require heroin be purchased and limited to personal amounts to address issues related to diversion (e.g., sale of opioid pills obtained for free)
- Could be available from a range of low-barrier addiction services
- Would involve eligibility screening for all new members by a health care provider including an informed consent process describing risks of heroin
- Would require members to complete overdose prevention and naloxone training, as well as education on the risks of using heroin alone, risks of combining opioids with alcohol or other sedatives and strategies to avoid overdose among themselves and their peers
- Could be established alongside easily accessible and free addiction treatment and trauma-informed recovery services for those with an interest in OAT or other addiction treatment
- Revenue generated would be designated to in-house or other resources, including supports for heroin access for those without financial means (e.g., sliding scale)
- Robust evaluation strategy would be established in parallel

Control Regulations, with compliance requiring specialized knowledge, facilities and processes.⁹⁰ While details would need to be finalized with respect to identifying a licensed dealer and an appropriate compounding pharmacy (or other facility), these challenges could be addressed in a straightforward fashion if heroin is obtained through the same channels as those used by the Crosstown Clinic in Vancouver.

While a completely traditional pharmacy-based drug dispensing model may not be necessary for these cooperatives, a contracted or government pharmacy provider that could adhere to similar principles used in pharmacy environments regarding security, proper documentation, storage and inventory management would be critical so as to avoid diversion and drug shortages. The guidelines from Health Canada's Directive on Physical Security Requirements for Controlled Substances⁹¹ could be instituted to ensure compliance with narcotic control regulations and the minimum accepted level of security as outlined by Health Canada.⁹⁰ Pharmacy expertise would also be required to manage the timing of import and export permits to ensure an adequate supply of heroin while meeting necessary storage requirements. For the purposes of the cooperatives model, it is proposed that members be provided with diacetylmorphine powder rather than a liquid formulation that could only be used for injection. This is consistent with how heroin is traditionally sold in powder form in illicit drug markets, but the heroin available through the cooperatives would be sterile and unadulterated with potentially toxic additives or impurities. It would be precisely measured and dispensed in known quantities and at relatively safe doses. For instance, a "point" of street heroin was traditionally composed

of approximately 60% pure heroin and 40% caffeine to reduce risk of overdose, and similar products have been developed for heroin-assisted treatment programs in other jurisdictions.^{92,93}

Screening Potential Members

Presently, clinical iOAT programs employ a standardized screening process, generally involving a full medical assessment from a physician, to ensure prospective clients meet eligibility criteria. While a lower barrier approach may be required for prospective members of a heroin compassion club, a screening process conducted by an on-site staff member who is a health care provider could help ensure that curious youth and other vulnerable populations (e.g., inexperienced or opioid-naïve) receive balanced and accurate information about the program and the known risks of heroin use, including overdose and addiction. Documentation of informed consent could be required as well as completion of a cooperative membership agreement to confirm that the new member understands and agrees to follow the cooperative's rules to remain a member. Members of a cooperative could use their membership to access heroin from other cooperatives when travelling to other parts of the province.

Public Health and Medical Care Considerations

Due to the inherent risks involved in heroin use, heroin compassion clubs should operate alongside and with the support of public health and social services that could be provided by the regional health authorities. For instance, as a condition of membership, cooperative members could be required to complete overdose prevention and naloxone

training, receive education on the risks of using heroin alone and of combining opioids with alcohol or other sedatives (e.g., benzodiazepines), and know where to access harm reduction services (e.g., overdose prevention sites, needle/syringe distribution programs, take-home naloxone programs) in the community. Although program requirements would not be solely focused on those who inject, due to risks of bloodborne (e.g., HIV, hepatitis C) and deep soft tissue (e.g., endocarditis, osteomyelitis) infections, education on sterile injection technique and the provision of harm reduction supplies could similarly be required. Further, due to risks associated with intravenous use, alternative modes of use could be promoted for those who prefer not to inject or who wish to cease injecting. In this context, it is noteworthy that prescription heroin programs in some jurisdictions offer inhalational use. For example, an intervention to promote the smoking of heroin in Germany had high uptake and was overall quite successful,⁹⁴ as have efforts to avoid transitioning to injecting in the Netherlands.⁹² Additionally, given the known benefits of social supports such as housing to overall health and recovery from trauma and addiction (particularly among street-entrenched users), advocacy and support with addressing these needs could be provided as an adjunct service to members.

Additionally, while risks of diversion are limited under this model by the fact that heroin must be purchased through the cooperative model (risk of diversion of prescription opioids is greatest when medications can be sold after being obtained for free),⁴² to avoid heroin being purchased in bulk by organized crime groups and sold indiscriminately, the quantity of heroin sold to members could be limited to what might be

expected for individual, short-term personal use (i.e., picked up several times per week). In addition to public health considerations, most people who become addicted to heroin will at some point express interest in addiction treatment. As such, cooperatives could be established alongside easily accessible (and free) trauma-informed addiction treatment and recovery services. For instance, since heroin is intermediate-acting and most regular heroin users will experience withdrawal symptoms about six to eight hours after their last use (e.g., overnight), other forms of long-acting opioid agonist treatment (e.g., methadone) could be prescribed by a partnering health care professional or clinical service working alongside and in collaboration with the cooperatives. In fact, since the cooperatives would be generating revenue through the sale of heroin (less any costs of daily operations), the co-op's board may wish to designate revenue to in-house resources that could support providing members access to addiction treatment and recovery services as well as other health and social services. This would be similar to early cannabis compassion clubs, which offered a range of health and social services to members beyond simply supplying cannabis, including therapies to address pain and other comorbidities using a sliding price scale for those of limited means.

Establishing Operations

The support of local, provincial and national governments and agencies will be required to ensure the success and urgent establishment of the cooperative model and evaluation. For instance, all levels of government could provide start-up funding. Local governments could also provide space for the cooperatives to operate, thus reducing overhead costs. The provincial and

federal governments could further move quickly to provide support for operations and evaluation, and provide required legal exemptions as outlined in this report. In British Columbia, the Overdose Emergency Response Centre is perfectly positioned to assist in addressing questions related to diacetylmorphine acquisition and appropriate pharmacy storage and compounding, and to provide support in the establishment of the cooperatives' governance and operation. Additionally, should Vancouver's Downtown Eastside be selected as an initial trial site, Vancouver Coastal Health has established a new Regional Addiction Program that, in partnership with the VCH Public Health Program, would be well positioned to assist in the establishment of a cooperative evaluation. Similarly, the Vancouver Police Department has a longstanding history of partnering with and supporting alternatives to prohibition including the Vancouver heroin prescription trials. Finally, local non-profit societies with experience in providing services and supports to people who use drugs, such as the PHS Community Services Society in Vancouver's Downtown Eastside (if selected as an implementation site), could provide leadership in establishing the heroin compassion club cooperative structure in partnership with local organizations representing individuals with lived experience (e.g., Vancouver Area Network of Drug Users) and Vancouver Coastal Health. With the support of the provincial Overdose Emergency Response Centre, other regional health authorities and local organizations representing individuals with lived experience are well positioned to implement cooperatives in other areas of the province.

Additional Considerations

There is a substantial literature examining how societies might move from a "war on drugs" approach that emphasizes criminalization, drug law enforcement and other supply side interventions towards a public health oriented, regulated market model as described in this report. For instance, in British Columbia, the Health Officers Council has been making thoughtful recommendations for many years on how we might improve public health and safety by moving towards a regulated model for drug control.^{3,85,95} Internationally, the blue ribbon panel known as the Global Commission on Drug Policy—comprised of current and former world leaders, including former presidents of Mexico, Columbia and Brazil—has called for the regulation and legal control of all drugs.^{5,8}

These and other experts have clearly articulated that it is possible to wage economic war on organized crime and improve public health and safety through the regulation of the drug market. The Global Commission on Drug Policy summarizes the situation as follows: "The continued expansion of the illicit trade despite growing enforcement efforts aimed at curtailing it demonstrates the futility of repressive prohibitions. Therefore, following pragmatic harm reduction principles, in the longer term, drug markets should be responsibly regulated by government authorities. Without legal regulation, control, and enforcement, the drug trade will remain in the hands of organized criminals. Ultimately this is a choice between control in the hands of governments or gangsters; there is no third option in which drug markets can be made to disappear."⁹⁶

It is acknowledged that this white paper does not provide all the answers and that key

TAKING CONTROL: PATHWAYS TO DRUG POLICIES THAT WORK



GLOBAL COMMISSION
ON DRUG POLICY

SEPTEMBER 2014

The Global Commission on Drug Policy—comprised of current and former world leaders, including former presidents of Mexico, Colombia and Brazil—has called for the regulation and legal control of all drugs.

“In order to reduce drug related harms and undermine the power and profits of organized crime, the Commission recommends that governments regulate drug markets.”

questions related to cooperative function, adjunct services, pricing and financing, supply chain, pharmacy involvement and other issues will require focused energy and discussion and the involvement of experts, including those with lived experience. One key issue that will require careful consideration is that all traditional descriptions of ending the “war on drugs” and transitioning to a regulated market model for heroin have been modelled

after the end of alcohol prohibition.^{5,6,8} In this context, one challenge will be that many people addicted to opioids must engage in income-generating activities that put themselves in highly vulnerable positions. Here, co-located or easily accessible and free addiction treatment involving a diversity of opioid agonist therapies will be critical. Similarly, the cooperatives could include a sliding scale pricing model, similar to some

POTENTIAL BENEFITS OF HEROIN COMPASSION CLUBS

- Addresses growing acknowledgement that overdose response must increasingly focus on the poisoning of the drug supply and fentanyl as the primary cause of deaths
- Directly undermines organized crime profits by allocating revenue to regulated system as has been called for by experts for many years
- Allows for co-location with public health and addiction treatment interventions, as well as referral to recovery services
- Acknowledges the public health harms stemming from prescription opioid perceptions (e.g., safe) and risks (e.g., addiction/overdose), as well as counterfeit pill issue
- Establishes a regulated and controlled supply of heroin which may increase demand for actual heroin among persons who use opioids, altering current fentanyl saturated opioid marketIf effective, presents a model that could be evaluated with other illegal or unregulated substances where prohibition has failed to reduce supply and contributed to public health and safety issues
- Provides the opioid that most opioid-addicted individuals prefer and view as effective, similar to patients seeking medical cannabis through cannabis compassion clubs

original cannabis compassion clubs, that ensured no one who needed access was denied solely based on their ability to pay. Such a model may also address the street-level structural violence (e.g., drug debts) and other drug acquisition concerns faced by many severely heroin-addicted persons. Similarly, it is envisioned that injectable opioid agonist therapy treatment programs (e.g., the Crosstown Clinic model offering heroin-assisted treatment) would still require urgent scale-up and could operate alongside and complementary to heroin compassion clubs, to ensure structured opioid agonist treatment options for those with severe addiction not amenable to oral opioid agonist therapies. The heroin compassion club model also does not preclude a full range of strategies to make a fentanyl-unadulterated opioid supply safely available (e.g., at overdose prevention sites). Fortunately, community members have already been pressing forward seeking to advance this concept, and the provincial and federal governments have recently established structures that are well positioned to address these questions and quickly move to support the implementation and evaluation of this model. In this context, given the number of lives that continue to be lost—as well as the increasing entrenchment of organized crime in British Columbia—moving forward with an emergency response mentality is needed.

It is noted that, due to the availability of drug-checking services, some opioid users are already identifying sources of unadulterated heroin in the illicit drug supply.⁹⁹ In some cases, support workers are assisting in the process of procuring unadulterated heroin. Anecdotal reports suggest dramatic improvements in social functioning and reductions in non-fatal overdoses under

these circumstances. As such, and given that implementing the recommendations of this report will take time, it is the recommendation of the authors of this report that these types of safety and health behaviours not be a target of law enforcement.

SUMMARY

The implementation and evaluation of a full range of evidence-based strategies are required to address the fentanyl contamination of the illicit drug market. This report outlines one blueprint for heroin regulation which, if urgently implemented, could be evaluated in a way that would greatly improve knowledge of strategies to undermine organized crime and the impacts of establishing alternatives to heroin prohibition in Canada. While this might be viewed as controversial in some settings, the recommendations of this report are consistent with recommendations the Health Officers Council of British Columbia has been making since before the fentanyl epidemic.^{85,95}

As with all evidence-based policies, as knowledge is gained, the model could be adjusted to maximize benefits and address any unexpected harms. To move forward, urgent leadership and vision at all levels of government will be required.

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REFERENCES

1. BC Ministry of Justice, BC Coroners Service. Illicit Drug Overdose Deaths in BC: January 1, 2008 - December 31, 2018. Published February 2019. Available at: <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/illicit-drug.pdf>.
2. Csete J, Kamarulzaman A, Kazatchkine M, et al. Public health and international drug policy. *Lancet*. 2016;387(10026):1427-1480.
3. Health Officers Council of British Columbia. Preventing Opioid Related Overdoses/Poisonings and Deaths by Addressing the Determinants of British Columbia's Opioid Overdose Emergency. Published November 10 2017. Available at: <https://healthofficerscouncil.net/wp-content/uploads/2017/12/overdose-emergency-determinants-2017-11-10.pdf>.
4. Wood E, Werb D, Kazatchkine M, et al. Vienna Declaration: a call for evidence-based drug policies. *Lancet*. 2010;376(9738):310-312.
5. Global Commission on Drug Policy. Regulation: The Responsible Control of Drugs. 2018. Available at: http://www.globalcommissionondrugs.org/wp-content/uploads/2018/09/ENG-2018_Regulation_Report_WEB-FINAL.pdf.
6. Transform Drug Policy Foundation. After the war on drugs: blueprint for regulation. 2009. Available at: <https://transformdrugs.org/wp-content/uploads/2018/10/Blueprint.pdf>.
7. Global Commission on Drug Policy. The War on Drugs and HIV/AIDS: How the Criminalization of Drug Use Fuels the Global Pandemic. 2012. Available at: http://www.globalcommissionondrugs.org/wp-content/uploads/2012/03/GCDP_HIV-AIDS_2012_EN.pdf.
8. Global Commission on Drug Policy. War on Drugs: Report of the Global Commission on Drug Policy. 2011. Available at: http://www.globalcommissionondrugs.org/wp-content/uploads/2017/10/GCDP_WaronDrugs_EN.pdf.
9. Werb D, Rowell G, Guyatt G, Kerr T, Montaner J, Wood E. Effect of drug law enforcement on drug market violence: A systematic review. *International Journal of Drug Policy*. 2011;22(2):87-94.
10. Werb D, Rowell G, Guyatt G, Kerr T, Montaner J, Wood E. Effect of drug law enforcement on drug related violence: evidence from a scientific review. Vancouver: International Centre for Science in Drug Policy;2010. Available at: <http://www.icsdp.org/docs/ICSDP-1-FINAL.pdf>.
11. BC Opioid Addiction Rates. 2018. Unpublished data.
12. Fischer B, Jones W, Varatharajan T, Malta M, Kurdyak P. Correlations between population-levels of prescription opioid dispensing and related deaths in Ontario (Canada), 2005-2016. *Preventive Medicine*. 2018;116:112-118.
13. Fischer B, Rehm J. Revisiting the "paradigm shift" in opioid use: Developments and implications 10 years later. *Drug and Alcohol Review*. 2018;37:S199-S202.
14. Gomes T, Mamdani MM, Paterson JM, Dhalla IA, Juurlink DN. Trends in high-dose opioid prescribing in Canada. *Canadian Family Physician*. 2014;60(9):826-832.
15. Beletsky L, Davis CS. Today's fentanyl crisis: Prohibition's Iron Law, revisited. *International Journal of Drug Policy*. 2017;46:156-159.
16. Degenhardt L, Chiu WT, Sampson N, et al. Toward a global view of alcohol, tobacco, cannabis, and cocaine use: findings from the WHO World Mental Health Surveys. *PLoS Med*. 2008;5(7):e141.
17. Nordt C, Stohler R. Incidence of heroin use in Zurich, Switzerland: a treatment case register analysis. *Lancet*. 2006;367(9525):1830-1834.
18. Special Advisory Committee on the Epidemic of Opioid Overdoses. National report: Apparent opioid-related deaths in Canada (January 2016 to March 2018). Ottawa: Public Health Agency of Canada; Published November 15 2018. Available at: <https://www.canada.ca/en/public-health/services/publications/healthy-living/national-report-apparent-opioid-related-deaths-released-september-2018.html>.
19. Ye X, Sutherland J, Henry B, Tyndall M, Kendall PRW. At-a-glance - Impact of drug overdose-related deaths on life expectancy at birth in British Columbia. *Health Promot Chronic Dis Prev Can*. 2018;38(6):248-251.
20. Vancouver Coastal Health. 2019. Unpublished data.
21. BC Coroner's Service Death Review Panel, (Chair: Michael Egilson). A Review of Illicit Drug Overdoses. Report to the Chief Coroner of British Columbia. Published April 5 2018. Available at: https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/death-review-panel/bccs_illicit_drug_overdose_drp_report.pdf.
22. Minister of Public Safety and Solicitor General. Illicit Drug Overdose Deaths in BC: Findings of Coroners' Investigations. Published September 27 2017. Available at: <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/illicitdrugoverdosedeadsinbc-findingsofcoronersinvestigations-final.pdf>.
23. Illegal Firearms Task Force. Final report to the Minister of Public Safety and Solicitor General of British Columbia. Published September 30, 2017. Available at: https://www2.gov.bc.ca/assets/gov/law-crime-and-justice/criminal-justice/police/publications/government/iftf_final_report.pdf.
24. Ministry of Public Safety and Solicitor General. For the record: combatting gangs and organized crime. Published December 14 2010. Available at: http://www.gov.bc.ca/fortherecord/gangs/ga_safety.html.
25. Miron JA. Violence and the US prohibitions of drugs and alcohol. *American Law and Economics Review*. 1999;1(1):78.
26. Storti CC, De Grauwe P. The cocaine and heroin markets in the era of globalisation and drug reduction policies. *International Journal of Drug Policy*. 2009;20(6):488-496.
27. Desroches F. Research on upper level drug trafficking: A review. *Journal of Drug Issues*. 2007;37(4):827-844.
28. German PM, Peter German & Associates Inc. Dirty Money: An Independent Review of Money Laundering in Lower Mainland Casinos conducted for the Attorney General of British Columbia. Published March 31 2018. Available at: https://news.gov.bc.ca/files/Gaming_Final_Report.pdf.
29. Rankin E. "BC gaming investigators repeatedly warned bosses of 'horrendous' money laundering." CBC News. January 11, 2019. Available at: <https://www.cbc.ca/news/canada/british-columbia/b-c-casinos-money-laundering-foi-report-1.4972063>.
30. Meissner D. "Money laundering in B.C. estimated at \$1B a year - but reports were not shared with province, AG says." CBC News. January 18, 2019. Available at: <https://www.cbc.ca/news/canada/british-columbia/money-laundering-billions-bc-david-eby-1.4983471>.
31. Tomlinson K, Xu X. "B.C. vows crackdown after Globe investigation reveals money-laundering scheme." *The Globe and Mail*. March 5, 2018. Available at: <https://www.theglobeandmail.com/news/investigations/real-estate-money-laundering-and-drugs/article38004840/>.
32. Cooper S, Bell S, Andrew R. "Fentanyl kings in Canada allegedly linked to powerful Chinese gang, the Big Circle Boys." *Global News*. November 27, 2018. Available at: <https://globalnews.ca/news/4658158/fentanyl-kingspins-canada-big-circle-boys/>.

33. Cooper S, Bell S, Russell A. "Secret police study finds crime networks could have laundered over \$1B through Vancouver homes in 2016." *Global News*. November 26, 2018. Available at: <https://globalnews.ca/news/4658157/fentanyl-vancouver-real-estate-billion-money-laundering-police-study/>.
34. The Canadian Press. "B.C.'s largest public-sector union wants inquiry into money laundering, drugs." *Vancouver Sun*. January 22, 2019. Available at: <https://vancouversun.com/news/local-news/b-c-s-largest-public-sector-union-wants-inquiry-into-money-laundering-drugs>.
35. Fumano D. "Vancouver council directs staff to review money laundering." *Vancouver Sun*. January 29, 2019. Available at: <https://vancouversun.com/news/local-news/vancouver-city-council-to-consider-joining-call-for-public-inquiry-into-money-laundering>.
36. Ingraham C. "Justin Trudeau may have made the best case for legal pot ever." *The Washington Post*. June 10, 2016. Available at: <https://www.washingtonpost.com/news/wonk/wp/2016/06/10/why-people-who-hate-marijuana-should-legalize-it-anyway-according-to-justin-trudeau>.
37. Canada, Parliament, House of Commons, Standing Committee on Justice and Human Rights. *The State of Organized Crime: Report of the Standing Committee, 41st Parl, 1st Sess, No 40 (March 2012)*. (Chair: Dave MacKenzie). Available at: <https://www.ourcommons.ca/Content/Committee/411/JUST/Reports/RP5462995/justrp07/justrp07-e.pdf>.
38. Balco D. "How gangs in Surrey are recruiting elementary school children." *CTV Vancouver*. July 3, 2018. Available at: <https://bc.ctvnews.ca/how-gangs-in-surrey-are-recruiting-elementary-school-children-1.3998964>.
39. Werb D, Kerr T, Nosyk B, Strathdee S, Montaner J, Wood E. The temporal relationship between drug supply indicators: an audit of international government surveillance systems. *BMJ Open*. 2013;3(9).
40. Ho J, DeBeck K, Milloy MJ, et al. Increasing availability of illicit and prescription opioids among people who inject drugs in a Canadian setting, 2010-2014. *American Journal of Drug and Alcohol Abuse*. 2018;44(3):368-377.
41. Gladstone EJ, Smolina K, Weymann D, Rutherford K, Morgan SG. Geographic Variations in Prescription Opioid Dispensations and Deaths Among Women and Men in British Columbia, Canada. *Medical Care*. 2015;53(11):954-959.
42. Clancy N. "Impostor seeking oxycodone lands B.C. doctors and pharmacists in trouble." *CBC News*. June 23, 2015. Available at: <https://www.cbc.ca/news/canada/british-columbia/impostor-seeking-oxycodone-lands-b-c-doctors-and-pharmacists-in-trouble-1.3110305>.
43. Frank D, Mateu-Gelabert P, Guarino H, et al. High risk and little knowledge: Overdose experiences and knowledge among young adult nonmedical prescription opioid users. *International Journal of Drug Policy*. 2015;26(1):84-91.
44. Kenne DR, Hamilton K, Birmingham L, Oglesby WH, Fischbein RL, Delahanty DL. Perceptions of Harm and Reasons for Misuse of Prescription Opioid Drugs and Reasons for Not Seeking Treatment for Physical or Emotional Pain Among a Sample of College Students. *Substance Use & Misuse*. 2017;52(1):92-99.
45. Daniulaityte R, Falck R, Carlson RG. "I'm not afraid of those ones just 'cause they've been prescribed": Perceptions of risk among illicit users of pharmaceutical opioids. *International Journal of Drug Policy*. 2012;23(5):374-384.
46. DeBeck K, Wood E, Dong HR, et al. Non-medical prescription opioid use predicts injection initiation among street-involved youth. *International Journal of Drug Policy*. 2016;34:96-100.
47. Gomes T, Khuu W, Martins D, et al. Contributions of prescribed and non-prescribed opioids to opioid related deaths: population based cohort study in Ontario, Canada. *Bmj-British Medical Journal*. 2018;362.
48. British Columbia Centre on Substance Use. 2019. Unpublished data.
49. Bever L. "Inside a truck in Nebraska, troopers found enough fentanyl to kill millions of people." *The Washington Post*. May 25, 2018. Available at: <https://www.washingtonpost.com/news/to-your-health/wp/2018/05/25/inside-a-semi-truck-in-nebraska-troopers-found-enough-fentanyl-to-kill-26-million-people>.
50. Jorgensen S. "Fentanyl seizure had enough doses to poison all of NYC and New Jersey." *CNN*. January 29, 2018. Available at: <https://www.cnn.com/2018/01/29/health/nj-largest-fentanyl-seizure-trnd/index.html>.
51. Fraser K. "Man acquitted after BC police seizure of 27,000 fentanyl pills thrown out." *Vancouver Sun*. January 22, 2019. Available at: <https://vancouversun.com/news/local-news/man-acquitted-after-police-seizure-of-27000-fentanyl-pills-thrown-out>.
52. Fischer B. Prescriptions, power and politics: The turbulent history of methadone maintenance in Canada. *Journal of Public Health Policy*. 2000;21(2):187-210.
53. Bell J, Dru A, Fischer B, Levit S, Sarfraz MA. Substitution therapy for heroin addiction. *Substance Use & Misuse*. 2002;37(8-10):1149-1178.
54. Degenhardt L, Bucello C, Mathers B, et al. Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies. *Addiction*. 2011;106(1):32-51.
55. Ma J, Bao YP, Wang RJ, et al. Effects of medication-assisted treatment on mortality among opioids users: a systematic review and meta-analysis. *Mol Psychiatry*. 2018.
56. Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ*. 2017;357:j1550.
57. World Health Organization (WHO). *WHO Model List of Essential Medicines, 20th Edition*. Published March 2017 (Amended August 2017). Available at: <https://apps.who.int/iris/bitstream/handle/10665/273826/EML-20-eng.pdf>.
58. McEachern J, Ahamad K, Nolan S, Mead A, Wood E, Klimas J. A Needs Assessment of the Number of Comprehensive Addiction Care Physicians Required in a Canadian Setting. *J Addict Med*. 2016;10(4):255-261.
59. Strang J, Groshkova T, Uchtenhagen A, et al. Heroin on trial: systematic review and meta-analysis of randomised trials of diamorphine-prescribing as treatment for refractory heroin addiction. *Br J Psychiatry*. 2015;207(1):5-14.
60. Nosyk B, Guh DP, Bansback NJ, et al. Cost-effectiveness of diacetylmorphine versus methadone for chronic opioid dependence refractory to treatment. *CMAJ*. 2012;184(6):E317-328.
61. International Cooperative Alliance. *Cooperative identity, values, and principles*.
62. National Association of State Procurement Officials. *Strength in Numbers: An Introduction to Cooperative Procurements*. Available at: https://www.naspo.org/dnn/portals/16/documents/Cooperative_Purchasing0410update.pdf.
63. Co-operatives UK. *The Cooperative Economy 2015*. Available at: https://www.uk.coop/sites/default/files/uploads/attachments/co-op_economy_2015.pdf.
64. Rego N, Claro J, Pinho de Sousa J. A hybrid approach for integrated healthcare cooperative purchasing and supply chain configuration. *Health care management science*. 2014;17(4):303-320.
65. Murray C, BC-Alberta Social Economy Research Alliance. *Co-op Survival Rates in British Columbia*. Published June 2011. Available at: https://auspace.athabasca.ca/bitstream/handle/2149/3133/BALTA_A11_Report_-_BC_Co-op_Survival.pdf.

66. National Association of State Procurement Officials. Strength in Numbers: An Introduction to Cooperative Procurements. Available at: https://www.naspo.org/dnn/portals/16/documents/Cooperative_Purchasing0410update.pdf.
67. Schneller ES, School of Health Administration and Policy, Arizona State University. The Value of Group Purchasing in Healthcare: The Healthcare Supply Chain. 2016. Available at: https://www.researchgate.net/publication/265358047_The_Value_of_Group_Purchasing_in_the_Health_Care_Supply_Chain.
68. Walker H, Essig M, Schotanus F, Kivisto T. Co-operative purchasing in the public sector. In: Knight L, Harland C, Telgen J, Thai KV, Callender G, McKen K, eds. Secondary Co-operative purchasing in the public sector. London: Routledge; 2007: <https://core.ac.uk/download/pdf/11477488.pdf>.
69. Grillon C, Krishtel PR, Mellouk O, et al. Treatment advocate tactics to expand access to antiviral therapy for HIV and viral hepatitis C in low- to high-income settings: making sure no one is left behind. *Journal of the International Aids Society*. 2018;21.
70. Nathalie V, Alexandra C, Samia H, et al. A buyers' club to improve access to hepatitis C treatment for vulnerable populations. *Swiss Medical Weekly*. 2018;148.
71. Belackova V, Wilkins C. Consumer agency in cannabis supply – Exploring auto-regulatory documents of the cannabis social clubs in Spain. *International Journal of Drug Policy*. 2018;54:26-34.
72. Decorte T, Pardal M, Queirolo R, Boidi MF, Aviles CS, Franquero OP. Regulating Cannabis Social Clubs: A comparative analysis of legal and self-regulatory practices in Spain, Belgium and Uruguay. *International Journal of Drug Policy*. 2017;43:44-56.
73. Gartner C, Bromberg M, Musgrove T, Luong K. Vape Club: Exploring Non-Profit Regulatory Models for the Supply of Vaporised Nicotine Products. *International Journal of Environmental Research and Public Health*. 2018;15(8).
74. Baarda J, US Department of Agriculture. Circle of Responsibilities for Co-op Boards. 2003.
75. USDA Rural Development Cooperative Programs, US Department of Agriculture. Co-op Essentials: What They Are and the Role of Members, Directors, Managers, and Employees. Published August 2014. Available at: http://www.uwcc.wisc.edu/pdf/CIR_11_Co-op_Essentials.pdf.
76. Oviedo-Joekes E, Guh D, Brissette S, et al. Hydromorphone Compared With Diacetylmorphine for Long-term Opioid Dependence: A Randomized Clinical Trial. *JAMA Psychiatry*. 2016;73(5):447-455.
77. Crosstown Clinic Unpublished Data, January 25, 2019.
78. Hirsch A, Proescholdbell SK, Bronson W, Dasgupta N. Prescription Histories and Dose Strengths Associated with Overdose Deaths. *Pain Medicine*. 2014;15(7):1187-1195.
79. Rowe C, Santos GM, Behar E, Coffin PO. Correlates of overdose risk perception among illicit opioid users. *Drug Alcohol Depend*. 2016;159:234-239.
80. Nanowski N. "Hydromorphone has become the second-most deadly drug in Ontario, fresh data shows." CBC News. January 7, 2017. Available at: <https://www.cbc.ca/news/canada/toronto/hydromorphone-fentanyl-drug-overdose-toronto-meeting-naloxone-1.3925240>.
81. Public Health Ontario. Interactive Opioid Tool [internet]. Available at: <https://www.publichealthontario.ca/en/dataandanalytics/pages/opioid.aspx#/drug>.
82. The Canadian Press. "Opioid-related deaths nearly tripled in Ontario from 2000-2015." CBC News. April 27, 2018. Available at: <https://www.cbc.ca/news/health/opioid-deaths-ontario-1.4638111>.
83. The Canadian Press. "Parents warned after student's drugs tested positive for fentanyl in Delta." CBC News. December 14, 2018. Available at: <https://www.cbc.ca/news/canada/british-columbia/parents-told-fentanyl-found-in-students-drugs-1.4947257>.
84. Bolan K. "Surrey fentanyl trafficker caught with 1,000 pills sentenced to two years." The Vancouver Sun. April 10, 2018. Available at: <https://vancouversun.com/news/crime/fentanyl-trafficker-caught-with-1000-pills-sentenced-to-two-years>.
85. Health Officers Council of British Columbia. Public Health Perspectives for Regulating Psychoactive Substances: What We Can Do About Alcohol, Tobacco, and Other Drugs. Published November 2011. Available at: <http://healthofficerscouncil.net/wp-content/uploads/2012/12/regulated-models-v8-final.pdf>.
86. Hughes CE, Stevens A. What Can We Learn From The Portuguese Decriminalization of Illicit Drugs? *British Journal of Criminology*. 2010;50(6):999-1022.
87. Cornell SE. The interaction of narcotics and conflict. *Journal of Peace Research*. 2005;42(6):751-760.
88. Thoumi FE. Illegal Drugs, Anti-Drug Policy Failure, and the Need for Institutional Reforms in Colombia. *Substance Use & Misuse*. 2012;47(8-9):972-1004.
89. Piazza JA. The Opium Trade and Patterns of Terrorism in the Provinces of Afghanistan: An Empirical Analysis. *Terrorism and Political Violence*. 2012;24(2):213-234.
90. Ministry of Justice. Narcotic Control Regulations. 2017. Available at: https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1041/.
91. Health Canada. Directive on Physical Security Requirements for Controlled Substances and Drugs Containing Cannabis. Published October 17 2018. Available at: http://www.hc-sc.gc.ca/hc-ps/pubs/precurs/dealers-distrib/phys_securit_directive/index-eng.php.
92. Klous MG, Nuijen B, van den Brink W, van Ree JM, Beijnen JH. Development and manufacture of diacetylmorphine/caffeine sachets for inhalation via 'chasing the dragon' by heroin addicts. *Drug Dev Ind Pharm*. 2004;30(7):775-784.
93. Broseus J, Gentile N, Esseiva P. The cutting of cocaine and heroin: A critical review. *Forensic Sci Int*. 2016;262:73-83.
94. Stover HJ, Schaffer D. SMOKE IT! Promoting a change of opiate consumption pattern - from injecting to inhaling. *Harm Reduct J*. 2014;11:18.
95. Health Officers Council of British Columbia. A public health approach to drug control in Canada: discussion paper. Published October 2005. Available at: <http://www.cfdp.ca/bchoc.pdf>.
96. Global Commission on Drug Policy. Taking Control: Pathways to Drug Policies that Work. Published September 2014. Available at: http://www.globalcommissionondrugs.org/wp-content/uploads/2016/03/GCDP_2014_taking-control_EN.pdf.
97. Fischer B, Argento E. Prescription Opioid Related Misuse, Harms, Diversion and Interventions in Canada: A Review. *Pain Physician*. 2012;15(3):ES191-ES203.
98. Fischer B, Gooch J, Goldman B, Kurdyak P, Rehm J. Non-medical prescription opioid use, prescription opioid-related harms and public health in Canada: An update 5 years later. *Canadian Journal of Public Health-Revue Canadienne De Sante Publique*. 2014;105(2):E146-E149.
99. Tupper KW, McCrae K, Garber I, Lysyshyn M, Wood E. Initial results of a drug checking pilot program to detect fentanyl adulteration in a Canadian setting. *Drug and Alcohol Dependence*. 2018;190:242-245.

