



GLOBAL
COMMISSION ON
DRUG POLICY

POSITION PAPER

THE OPIOID CRISIS IN NORTH AMERICA

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EXECUTIVE SUMMARY

North America is facing an epidemic of opioid addiction and opioid overdose with an unprecedented level of mortality. The crisis was spurred by a broad expansion of medical use of opioids, which began in the 1990s as a legitimate response to the under-treatment of pain, but which was soon exploited by the unethical behavior of pharmaceutical companies eager to increase their revenue. The rise in supply fed high levels of diversion among an economically stressed and vulnerable population. The present wave of opioid dependence differs from the heroin crises of the 1980s and 1990s, both in the sheer extent and in the social backgrounds of a large part of the affected populations. In Canada, which is second only in per capita opioid consumption to the United States, the rise in fatal overdoses is more linked to higher potency or ad-mixing of other drugs in areas where there was already a relatively high incidence of heroin use.

Initial reactions were to limit prescriptions and to introduce pills that were harder to manipulate. The reduced supply of prescription opioids, however, drove an important minority of people with addiction to less expensive and more accessible street heroin. Under what has become known as the “iron law of prohibition”, cheaper and more potent opioids—including fentanyl and its derivatives—increasingly appeared on the market. This has even further accelerated the rate of fatal overdoses.

Media and government attention has primarily focused on the supply through doctors. The fact that most addictions start with diverted supplies rather than among pain patients has been largely ignored. Policymakers have also failed to address the role of economic upheaval, unemployment, inequality, and other systemic sources of despair in increasing the risk for addiction and decreasing the odds of recovery. Health systems were completely unprepared and treatment is still dominated by abstinence-focused programs, where no regulatory standards have to be met. Furthermore, among other factors, prejudice against the most effective treatments for opioid addiction—opioid substitution therapy (OST)—has translated into lack of treatment for those in need. Opioid substitution therapy has proven effective in treating addictions to heroin and should be offered to those dependent on or addicted to prescription opioids.

While in recent years media and politicians have been more open to viewing addiction as a public health problem, leadership is needed to turn this into an urgent and commensurate response to the crisis.

To mitigate the current crisis, the Global Commission on Drug Policy recommends:

- Do not cut the supply of prescription opioids without first putting supporting measures in place. This includes sufficient treatment options for people with addiction and viable alternatives for pain patients.
- Make proven harm reduction measures and treatment widely available, especially naloxone distribution and training, low-threshold opioid substitution therapy, heroin-assisted treatment, needle and syringe programs, supervised injection facilities, and drug checking. In states that have not yet done so, legally regulate the medical use of marijuana.
- This crisis shows the need for well-designed regulation with proper implementation, including guidelines and training on prescription, and regular monitoring. The aim is to achieve the right balance in regulation to provide effective and adequate pain care, while minimizing opportunities for misuse of these medications. This includes improving the regulation of relationships between the pharmaceutical industries on the one hand and doctors and lawmakers on the other; prescription guidelines that ensure adequate relief for pain patients; and training for physicians on evidence-based opioid prescribing, which is funded by neutral bodies.
- Decide to de facto decriminalize drug use and possession for personal use at municipal, city or State/Province levels. Do not pursue such offenses so that people in need of health and social services can access them freely, easily, and without fear of legal coercion.
- More research is needed in critical areas:
 - The most effective treatments for addiction to prescription opioids
 - The link between economic, physical and psychological problems and the opioid crisis (“crisis of despair”).
 - The exact role of fentanyl and its derivatives in overdoses, especially how and when fentanyl is added and whether the distribution of test kits could play a positive role.

While these recommendations, if followed, would help curb opioid-related mortality in the United States and Canada, underlying problems remain. The Global Commission on Drug Policy has consistently called for the decriminalization of personal use and possession, and for alternatives to punishment for non-violent, low-level actors in illicit drug markets. The criminalization of drug use and possession has little to no impact on the levels of drug use but instead encourages high-risk behaviors, such as unsafe injecting, and deters people in need of drug treatment from seeking it and from using other health services and harm reduction programs that would help them. The health, economic and social benefits of decriminalization have been shown in countries that took this step decades ago.

The Global Commission on Drug Policy also calls for the elimination of illicit drug markets by carefully regulating different drugs according to their potential harms. The most effective way to reduce the extensive harms of the global drug prohibition regime and advance the goals of public health and safety is to get drugs under control through responsible legal regulation. Therefore, the commission adds two more far-reaching recommendations:

- End the criminalization and incarceration of people who use drugs nation-wide in Canada and the United States.
- Allow and promote pilot projects for the responsible legal regulation of currently illicit drugs including opioids, to replace and bypass criminal organizations that drive and benefit from the current black market.



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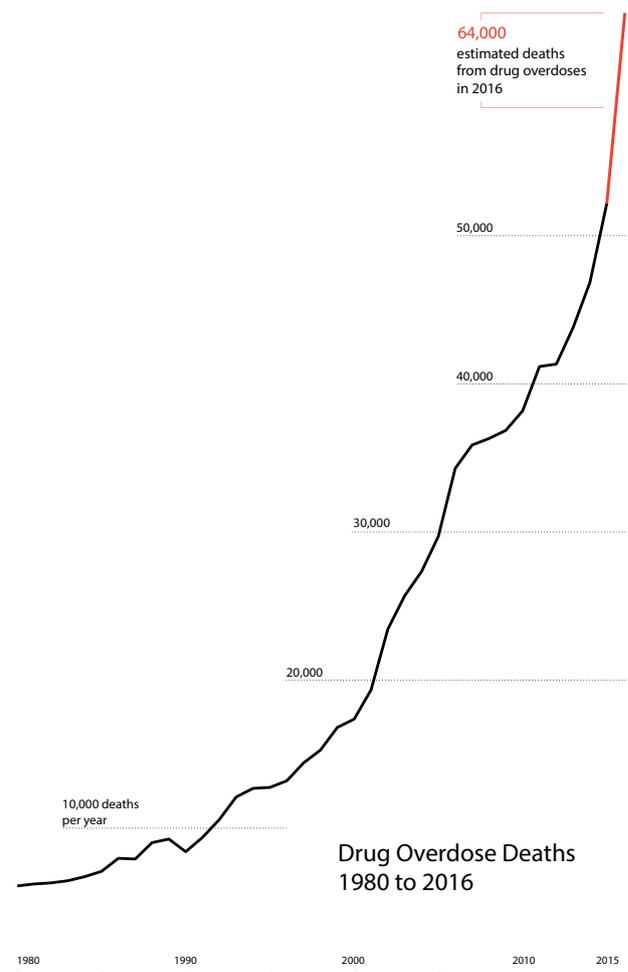
CURRENT SITUATION

About 64,000 people died from drug overdoses in the United States in 2016.¹ The vast majority of these deaths involved an opioid drug,² which is the classification that includes the opium derivatives heroin, morphine, oxycodone and synthetic drugs, including the various forms of fentanyl. Most opioid overdose deaths involved a combination of drugs (polydrug use), i.e. an opioid and, typically, a substance in the depressant class, such as alcohol or anti-anxiety medications like benzodiazepines, although stimulants like cocaine also sometimes contribute.³ Overdose is now the leading cause of unintentional injury death in the United States. Annually, it kills more than car accidents and takes more lives than US soldiers were lost in the deadliest year of the Vietnam War (16,899 in 1968) or at the height of the HIV/AIDS epidemic in the United States (43,115 in 1995).

While Canada does not keep national statistics, in 2016 there were 2,458 known opioid overdose deaths, excluding Quebec where data is not available.⁴ Regional variance, differences in demographic variables, and lack of national surveillance data from Canada, means that there is currently no good way to accurately compare its epidemic to that of the United States but a comparison of two localities might give an idea of the extent of the crisis. The hardest hit county in the United States—McDowell County, West Virginia—had an overdose death rate of 93 per 100,000 in 2013-2015.⁵ The hardest hit township in Canada—Vancouver Coastal—has a rate of 42 per 100,000 in 2017 so far.⁶ There are indications that First Nations are disproportionately affected⁷ and that the rise in overdose deaths caused by higher potency or ad-mixing of other drugs in areas where there was already a relatively high incidence in heroin use plays a bigger role in Canada than in the United States.

Although media and politicians in the United States have traditionally portrayed opioid addiction as a problem concentrated in the African-American community and associated with poverty—and responded with harsh criminal justice penalties—research shows that since the 1960s, at least half of all people with opioid use disorders have been white. By 2010, 90% of all new users were white.⁸ And while heroin addiction has typically been framed as an urban problem, the current epidemic has hit rural communities hard. Although opioid addiction is still most concentrated among the poorest people, this epidemic is especially dire among the people who have fared the worst since the financial crash of 2008: the working class and those who have fallen out of the middle class, or expected, but did not attain, middle class lifestyles.⁹

American drug policy has a history of racial bias, and law enforcement has disproportionately affected communities of color. Current drug policy is characterized by repressive law enforcement, lengthy mandatory minimum sentences and the mass incarceration of people of color.¹⁰ In contrast, the current problem is seen as primarily affecting white people and a new portrayal has been emerging: that of an innocent victim worthy of empathy and deserving less punitive responses.¹¹ In recent years, the media and politicians have been more open to viewing addiction as a public health problem and expanding treatment and harm reduction measures like naloxone distribution.¹²



Sources: Centers for Disease Control and Prevention; state health departments, county coroners and medical examiners

THE NEW YORK TIMES

The New York Times (adapted)

ROOTS OF THE CRISIS

INCREASE IN PRESCRIPTION OPIOIDS

The current problem began with efforts to address the genuine issue of under-treatment of pain, which were soon exploited by pharmaceutical companies eager to expand their market. Lenient regulation of pharmaceutical marketing and direct selling to doctors by pharmaceutical representatives increased drug-related harm. In both Canada's universal health care system and the market-based system in the United States, many practices that incentivize increased prescribing are legal. Some examples are: use of data by pharma representatives to target specific doctors to try to get them to prescribe more; bonuses for salespeople who are able to spike prescribing; targeted payments to doctors for speaking engagements and other services; inaccurately representing risks¹³ and (in the United States) emphasizing patient satisfaction measures.¹⁴

Attempts to expand opioid prescribing from use for acute pain and terminal cancer patients to chronic pain began in the early 1990s. However, a major catalyst for the epidemic was the introduction of extended-release oxycodone (Oxycontin) in 1996—along with claims by its manufacturer that it was less addictive and effective for a full 12 hours.¹⁵ These claims have harmed both patients and illicit users. When pain patients were left in agony in under those 12 hours, they were told to take higher doses, rather than use it more frequently.

Some users rapidly discovered that the pills could be crushed to defeat the time-release mechanism and snorted or injected to produce a highly addictive short-acting drug. Moreover, news of how to misuse the drug, accompanied by enticing discussions of its effects, spread rapidly through the growing use of the internet and via stories in other media. One study found that six months after the increase in sensational media coverage of opioids, related mortality rose in concert, explaining 88% of the variance in death rates.¹⁶

INCREASE IN NON-MEDICAL USE

Opioid prescriptions for chronic pain rose dramatically from the mid-1990s onwards.¹⁷ But 65% of all opioid prescriptions are still given for acute pain, such as from surgery or dental work—and these, too, rose sharply.¹⁸ Typically only one third (1/3) of a prescription for acute pain is used by the patient¹⁹ and the unused pills have high monetary value: each pill can sell for US\$30 or more. In the context of rising inequality, along with the disappearance of manufacturing jobs, long-term unemployment and the economic catastrophe of 2008, the temptation to use the drugs for emotional relief or sell them for cash grew.

DEPENDENCE VS ADDICTION

In order to understand the opioid epidemic, it is critical to distinguish between two concepts that unfortunately are often conflated: addiction and dependence.

Dependence means relying on a substance to function and to avoid suffering withdrawal symptoms on abrupt cessation. It is a natural result of regularly taking certain medications (including opioids, some blood pressure medications and antidepressants). It will affect nearly all patients who take opioids daily for months.

Addiction, in contrast, is defined by the US National Institute on Drug Abuse (NIDA) as a condition "characterized by compulsive drug seeking and use, despite harmful consequences."²⁰ It only affects a minority of people who take opioids. The best estimate suggests that fewer than 8% of chronic pain patients who have not previously suffered from an addiction and who take opioids long-term develop new addictions.²¹

Stable methadone and buprenorphine patients in opioid substitution therapy, for example, have dependence, not addiction, and it is important to make the distinction.²² Unfortunately, the American Psychiatric Association's Diagnostic and Statistical Manual (DSM) used the term "substance dependence" to refer to addiction²³ until the publication of the current manual DSM-5 in 2013, where its equivalent is called "Substance Use Disorder, Severe".

The World Health Organization's International Classification of Diseases (ICD), now ICD-10, still uses "dependence" to mean compulsive use of a substance despite negative consequences,²⁴ rather than simply needing a drug to function.

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) in turn defines problematic drug use (or high-risk drug use) as "recurrent drug use that is causing actual harms (negative consequences) to the person (including dependence, but also other health, psychological or social problems), or is placing the person at a high probability/risk of suffering such harms."²⁵

Throughout the crisis, media accounts have tended to highlight “innocent victims”—people who became addicted following medical exposure to opioids. However, data from the United States from recent years shows that 70-80%²⁶ of people who misuse medical opioids get them from sources other than their doctor: usually from family and friends or simply by taking them from other people’s medicine cabinets. And while chronic pain is highest among older people, addiction risk is highest among the young. New addictions are uncommon among pain patients who do not have current or past addictions (including alcoholism) or mental illness.²⁷ It has further been reported that the availability of prescription opioids has increased among those already using drugs.²⁸

INADEQUATE TREATMENT AND OTHER SERVICES

North Americans who have become addicted to prescription opioids find health systems completely unprepared to deal with their needs. In both the United States and Canada, treatment is still dominated by abstinence-focused programs.²⁹ Relapse following detoxification is extremely

common and, in this period, the risk of overdoses is heightened due to loss of tolerance.³⁰ In contrast, opioid substitution therapy has been proven to reduce mortality, typically using methadone or buprenorphine.³¹

Prejudice against opioid substitution therapy with methadone and buprenorphine—and the over-regulation of these drugs—has negatively affected the response to the crisis. In the United States, as of 2015, only 8-10% of treatment programs offered opioid substitution therapy,³² often provided for periods too limited to be effective.³³ Insurance coverage of addiction treatment has improved to some extent and “parity” with treatment for physical conditions is required under the Affordable Care Act. Treatment providers are not required, however, to meet any federal standards, and the care on offer is rarely based on evidence.³⁴ Outright fraudulent, abusive and neglectful treatment is common.³⁵

Over-regulation of opioid substitution therapy also means that methadone treatment is provided only in specialized,

OPIOID SUBSTITUTION THERAPY, MAINTENANCE AND MEDICATION ASSISTED TREATMENT

Opioid substitution therapy (OST), also called opioid replacement therapy (ORT), opioid agonist therapy (OAT) or maintenance, involves replacing street opioid use with medical use under some degree of supervision, typically with a longer-acting opioid. Commonly used drugs for opioid substitution therapy are methadone or buprenorphine (Suboxone, Subutex).

Opioid substitution therapy, continued as long as needed, including indefinitely, is the only treatment repeatedly shown to cut the death rate from opioid addiction by 50% or more³⁶ and it is the most effective known treatment for opioid addiction according to the World Health Organization (WHO).³⁷ It is endorsed by several UN agencies,³⁸ the US National Institute on Drug Abuse,³⁵ Health Canada,⁴⁰ the U.K.’s National Institute of Health and Care Excellence,⁴¹ the US Institute of Medicine,⁴² and many others. It has been repeatedly shown to reduce the spread of HIV and other blood-

borne diseases, reduce drug use and injecting, as well as cutting crime.⁴³

When on opioid substitution therapy, a person does not get “high” and does not suffer from withdrawal symptoms. Craving is reduced. Addiction is replaced by physical dependence. Once stabilized, most patients can drive, work and care for their families,⁴⁴ benefiting from no longer being criminalized. Other patients, however, can still benefit from opioid substitution therapy because it reduces overdose risk by maintaining tolerance to opioids (i.e. a patient who relapses and uses heroin can withstand the dose they were used to) and reducing the rate of use.

There is significant literature from Europe demonstrating that providing supervised access to pharmaceutical heroin itself (heroin-assisted treatment or HAT) is effective for the small number of people for whom methadone treatment does not work.⁴⁵ Drugs like hydromorphone

(Dilaudid) are also showing promise.⁴⁶

In the United States, a monthly injectable form of long-acting naltrexone (Vivitrol) was approved in 2010 as a third medication option for opioid addiction treatment.⁴⁷ In the United States, opioid substitution therapy and extended release naltrexone are grouped together in the category “medication assisted treatment” (MAT), to distinguish these treatments from abstinence-only methods. Less than half a dozen trials of long-acting naltrexone have been published and they show promising results in terms of reducing relapse.⁴⁸ There is little long-term data, however, and extended-release naltrexone has not been shown to reduce mortality or disease. It may even increase overdose death risk upon cessation.⁴⁹ Vivitrol is not approved in Canada, although it is available under the country’s special access program in reaction to the opioid crisis.⁵⁰

highly regulated clinics. Buprenorphine can be prescribed by doctors outside clinics but numerous administrative hurdles are involved, resulting in the number of qualified prescribers being extremely limited. In addition, despite often overwhelming demand, each doctor is limited to a maximum of 275 patients.⁵¹

MOVE FROM PRESCRIPTION OPIOIDS TO HEROIN AND SYNTHETIC OPIOIDS

In 2010 the government began cracking down on “pill mills”, which issued opioid prescriptions regardless of a patient’s actual medical need.⁵² In the same year an “abuse deterrent” formula of Oxycontin was introduced.⁵³ As a result, some of the people who were addicted to prescription opioids shifted to heroin, which was cheaper and easier to use.⁵⁴ Around 80% of people with opioid use disorder start by taking prescription pills. Of those who start with prescription opioids, only fewer than 4% ever try heroin.⁵⁵ Nonetheless, given the large number of people who had started taking opioid pills, 4% of that large number switching to heroin has been sufficient to exacerbate the overdose crisis—especially when heroin mixed with fentanyl and its derivatives started to appear. The number of fentanyl-related deaths in the United States rose by 72% between 2014 and 2015 alone.⁵⁶

The rise of fentanyl is an expression of Richard Cowan’s “Iron Law” of prohibition,⁵⁷ which suggests that strict bans on one substance will promote the use and sale of similar but more potent drugs that are easier to smuggle. This is true for fentanyl: it is completely synthetic (no need to grow and harvest poppy) and cheaper to make and transport. Fentanyl is about 50 times more potent than morphine per milligram – and some derivatives are even stronger. Carfentanil, for example, is 10,000 times more potent than morphine.⁵⁸

THE EPIDEMIC IN CANADA

Whereas Canada is second only to the United States in per capita opioid consumption, and rates of overdose have risen along with prescribing in recent years,⁶¹ no nationwide figures on annual overdose rates are available. It is therefore not entirely clear how Canadian overdose rates compare to those in the United States and how much of Canada’s opioid epidemic is associated with medical use.

The prescribing of high doses of opioids in Canada has been linked with greater numbers of opioid-related emergency department visits and hospital admissions.⁶² However, nearly half of Canada’s known opioid overdose deaths occur in British Columbia, which has had high rates of injecting drug use for decades. More than 80% of overdose victims in this region are male⁶³—while, in

THE INDIANA HIV EPIDEMIC

In rural Scott County, Indiana (est. pop. in 2016: 23,730), a number of people were addicted to a prescription opioid, Opana. In 2012, the drug was “reformulated” to deter misuse by snorting; unfortunately, this drove users to start injecting.⁵⁹ The county’s only HIV testing site, a branch of Planned Parenthood, was defunded and shuttered in 2013.⁶⁰ The spread of HIV was dramatic: while in 2014, five people tested positive for HIV, by the end of 2015 nearly 200 were infected.

Indiana’s government had long opposed the provision of clean needles to people who use drugs on moral grounds, despite overwhelming data showing that such programs do not increase drug use but do fight disease. It took four months during which up to 20 new infections were reported per week, until eventually Governor (now Vice President) Mike Pence agreed to the implementation of a needle exchange program. This harm reduction measure was effective in ending the rise in new infections.

The transition from licit prescription opioids to illicit heroin also demonstrates once again how narrow and often arbitrary the boundaries between licit and illicit psychoactive substances are. There can be little justification for prohibiting and repressing the use of the latter, while allowing almost uncontrolled consumption of the former.

contrast, chronic pain populations tend to be more than half female.⁶⁴ This suggests that the Canadian epidemic is also driven by illegal, rather than medical, use.

There are indications that the recent rise in deaths is linked with toxicity from the current flood of illegally manufactured fentanyl and derivatives, rather than an increase in the number of people with addiction linked to pain prescribing. Data from British Columbia shows that the rise in deaths is exclusively seen in those linked to fentanyl and derivatives; other types of opioid overdose deaths have not risen.⁶⁵ Without better national data, however, it is impossible to know whether this is true for all of Canada.

In contrast to the United States, Canada has a universal

health care system which should, if international experience is a guide, offer some protection from a further rise of opioid overdoses. For example, one study from the U.K. found that a doubling of prescribing was not associated with an increase in overdose deaths—and the authors suggested that one reason for this protection is the U.K.’s National Health Service.⁶⁶ Other factors, such as having lower levels of inequality and having suffered less from the 2008 financial crash compared to the United States, should also indicate that the opioid crisis will affect Canada to a lesser extent.

Even though the Conservative government, in power until two years ago, fought against the expansion of harm reduction services, such as safe injection sites, Canada does provide relatively more maintenance treatment and harm reduction services compared with the United States. Heroin-assisted treatment exists but is only available to several hundred people.⁶⁷ The new Canadian government supports the expansion of harm reduction, but as of now, the number of people who need it far exceeds its availability and reach.⁶⁸

REACTIONS BY AUTHORITIES AND OTHERS

Both the United States and Canada have reacted to the epidemic by creating guidelines for doctors aimed at reducing opioid prescribing⁶⁹ and by cracking down on those seen as overprescribing. These policies have indeed reduced the medical supply—but the overdose death rate has continued to rise.⁷⁰

The Canadian government views addiction as a health problem rather than one for the criminal justice system⁷¹ and this approach also has bipartisan support in the United States—stopping short of actual decriminalization, however. The current administration has, nevertheless, been sending some mixed signals with parts seemingly supporting a health-centered approach and others reverting to “law and order” rhetoric.

There are some examples of positive developments. In regions of North Carolina, intensive education for physicians combined with emergency measures have resulted in decreased mortality.⁷² In Seattle, a program called Law

Enforcement Assisted Diversion (LEAD) was developed to avoid arresting people who use drugs and instead provide them with needed social services, including treatment, if desired. It is now being tested in at least seven other states and tests are scheduled to start in many more.

Another successful intervention to prevent overdose is also possibly going to be expanded. “Supervised injection facilities” (SIFs), which have a very positive trajectory in Europe, were pioneered in North America by a program in Vancouver called Insite. Supervised injection facilities allow people who take drugs to do so in safe, hygienic, calm conditions, with medical help available in the event of an overdose. No one has ever died of an overdose in a SIF, which now operate in around 66 cities in ten countries.⁷³ Research on Insite suggests that it has cut the local overdose death by 35%⁷⁴ and other studies show that SIFs increase treatment admissions, cut drug-related crime and disease and do not encourage riskier drug use.⁷⁵ In the United States, the legal framework for SIFs is not clear,⁷⁴



Known as “Needle Park”, Platzspitz in Zurich became the biggest open drug scene in Europe in the late 1980s and early 1990s. Harm reduction and treatment services, such as Safe Injection Facilities and Heroin-Assisted Treatment, proved to be a highly effective response: the open drug scenes rapidly disappeared and drug-related deaths dropped 50% within ten years.

but nonetheless Seattle, New York and San Francisco are considering opening SIFs. A secret site in the United States has already monitored some 2,500 injections over three years with zero deaths.⁷⁷

Over half a dozen studies now suggest that medical marijuana can reduce opioid use, both as a treatment for pain and as a safer alternative for people with addiction. According to one of them, states with medical marijuana access have 25% lower opioid addiction and overdose rates;⁷⁸ another study found that in medical marijuana states, each doctor writes 1,800 fewer annual opioid

prescriptions.⁷⁹ A Massachusetts study found that increased distribution of the overdose reversal medication naloxone cut overdose death rates nearly in half.⁸⁰ Both the United States and Canada have moved to expand access to naloxone in a number of different ways. Many states now provide it to first responders, such as police and firefighters. Over 600 American programs that distribute naloxone directly to people who use drugs and their loved ones were operating as of 2014.⁸¹ And at least 30 states now have “standing orders” or other measures that make naloxone available without a prescription at pharmacies, at sites like syringe exchange programs, and at rehabilitation centers.⁸²

LESSONS LEARNED

Exponentially increasing a poorly controlled supply of opioids to a population under severe economic stress—and thereby providing both a source of short-term solace and a source of income to distressed communities—has had very adverse consequences. While some pain patients have benefited from increased access, flooding the streets with these drugs has done tremendous harm at a time when a large portion of the population in the United States was suffering from wage stagnation, uncertain economic prospects, and unemployment.

The crackdown on the medical supply, carried out without providing adequate treatment and harm reduction measures, pushed illicit users who had previously taken drugs of known dose and purity to impure street drugs, where the dosage of the active ingredient is unknown. This has increased overdose and mortality.

LACK OF HARM REDUCTION MEASURES AND TREATMENT

Unfortunately, recognizing that a problem originated with an increased medical supply does not mean that simply cutting that supply will solve it. Closing “pill mills” and expelling patients suspected of drug misuse from medical care does not treat addiction: it merely offers drug traffickers a large group of new customers.

To avoid expanding illegal markets, people who lose access to prescription opioids need to be offered immediate access to appropriate harm reduction services and treatment. No patient should be summarily cut off from opioids: if misuse is discovered, patients should be able to seamlessly transition to maintenance treatment or other alternatives as needed. Otherwise, the result will be increased amounts of harm and death.



Insite in Vancouver, BC, was the first Safe Injection Facility to open in North America ten years ago.
©2011 AFP/Laurent Vu The

Furthermore, while some patients can benefit from counseling and intensive psychiatric or job-training services in addition to opioid substitution therapy, there is no evidence that requiring such participation improves outcomes.⁸³ Mandating attendance, however, does increase cost (limiting the number of patients who can get care), while also deterring those who would accept medication with fewer strings attached. This is not acceptable when people are dying because they cannot get treatment. Patients seeking abstinence should have access to relevant services, but “low threshold” care should also be available.

Both methadone and buprenorphine are too heavily regulated in the United States: limiting methadone to specialty clinics and limiting the number of patients to whom doctors can prescribe buprenorphine has made opioid substitution therapy far too difficult to get, particularly in rural areas. Canada does allow office-based methadone prescribing, but it has not expanded buprenorphine access sufficiently.

The North American opioid epidemic also highlights how unprepared many communities are to provide appropriate harm reduction and treatment services for people with addiction. Rural communities are hard to serve effectively; these same communities have both the highest levels of overdose deaths and the greatest resistance to expanding harm reduction and maintenance treatment.

Failing to provide treatment for those who have relied on medical opioids after the supply is cut will inevitably increase the overdose risk due to switching from drugs of known purity and potency to those where these factors are variable. The only way to reduce harm for those addicted to opioids is to provide safer alternatives that are acceptable to them, including opioid substitution therapy with methadone, buprenorphine, and medical-grade heroin or hydromorphone.

TREATMENT OF CHRONIC PAIN

The epidemic has also revealed deep problems with the way pain is treated. While opioids clearly do benefit some patients,⁸⁴ they do not work for many and yet there are few alternatives. Health insurance often does not cover enough physical therapy or behavioral support for painful conditions for which these are helpful; access to alternative treatments that show promise (as well as those that are unproven) is also limited.

Given the prevalence of chronic pain from which about 25-50 million people suffer in the United States,⁸⁵ there needs to be a much greater investment in developing new treatments. Understanding of how to best use opioids for those who will benefit also needs to be improved. Meanwhile, numerous pain patients report arbitrary dose

cuts or inability to get opioids at all: one survey by pain patient advocates found that two thirds (2/3) of all patients had their doses either reduced or eliminated⁸⁶—even though no study has been conducted as to whether pain patients who are stable on opioids receive any benefit or are harmed by involuntarily tapering off opioids.⁸⁷ Though there is little data, dozens of associated suicides have been reported both by physicians and by patient advocates.⁸⁸ Chronic pain patients and people at the end of life should not be made to suffer because others misuse these medications.

The regulation of pain prescribing must balance the need for legitimate access—including recognition of barriers to care, such as requiring frequent doctor visits for stable patients—with appropriate controls to minimize diversion.⁸⁹ Regulation of opioids needs to balance benefits and harms.

IS THIS A UNIQUELY AMERICAN CRISIS?

At the moment, Europe, Australia and New Zealand are not seeing an opioid epidemic comparable to that in North America:⁹⁰ prescribing rates are lower, universal health care is available in most countries and, while there has been recent economic distress in many places, it has largely occurred in the presence of a stronger social safety net. However, fentanyl and derivatives have recently been showing up in the U.K.—and drug epidemics often strike based to some degree on “fashion” among people who use drugs, which is unpredictable. European countries and others around the world should take heed of the lessons learned in the United States and Canada.

RECOMMENDATIONS

- Do not cut the supply of prescription opioids without first putting supporting measures in place. This includes sufficient treatment options for people with addiction and viable alternatives for pain patients.
- Make proven harm reduction measures and treatment widely available, especially naloxone distribution and training, low-threshold opioid substitution therapy, heroin-assisted treatment, needle and syringe programs, supervised injection facilities, and drug checking. In states that have not yet done so, legally regulate the medical use of marijuana.
- This crisis shows the need for well-designed regulation with proper implementation, including guidelines and training on prescription, and regular monitoring. The aim is to achieve the right balance in regulation to provide effective and adequate pain care, while minimizing opportunities for misuse of these medications. This includes improving the regulation of relationships between the pharmaceutical industries on the one hand and doctors and lawmakers on the other; prescription guidelines that ensure adequate relief for pain patients; and training for physicians on evidence-based opioid prescribing, which is funded by neutral bodies.
- Decide to de facto decriminalize drug use and possession for personal use at municipal, city or State/Province levels. Do not pursue such offenses so that people in need of health and social services can access them freely, easily and without fear of legal coercion.
- More research is needed in critical areas:
 - The most effective treatments for addiction to prescription opioids.
 - The link between economic, physical and psychological problems and the opioid crisis (“crisis of despair”).
 - The exact role of fentanyl and its derivatives in overdoses, especially how and when fentanyl is added and whether the distribution of test kits could play a positive role.

While these recommendations, if followed, would help curb opioid-related mortality in the United States and Canada, underlying problems remain. The Global Commission on Drug Policy has consistently called for the decriminalization of personal use and possession, and for alternatives to punishment for non-violent, low-level actors in illicit drug markets. The criminalization of drug use and possession has little to no impact on the levels of drug use but instead encourages high-risk behaviors, such as unsafe injecting, and deters people in need of drug treatment from seeking it and from using other health services and harm reduction programs that would help them. The health, economic and social benefits of decriminalization have been shown in countries that took this step decades ago.⁹¹

The Global Commission on Drug Policy also calls for the elimination of illicit drug markets by carefully regulating different drugs according to their potential harms. The most effective way to reduce the extensive harms of the global drug prohibition regime and advance the goals of public health and safety is to get drugs under control through responsible legal regulation. Therefore, the commission adds two more far-reaching recommendations:

- End the criminalization and incarceration of people who use drugs nation-wide in Canada and the United States.
- Allow and promote pilot projects for the responsible legal regulation of currently illicit drugs including opioids, to replace and bypass criminal organizations that drive and benefit from the current black market.

REFERENCES

- 1 US Center for Disease Control, National Center for Health Statistics, National Vital Statistics System, 2017. Provisional Count of Drug Overdose Deaths as of 6 August 2017. Available at https://www.cdc.gov/nchs/data/health_policy/monthly-drug-overdose-death-estimates.pdf (accessed on 14 September 2017).
- 2 For 2016 the figured were 52,000 overdose death out of which 33,000 involved an opioid. See Rudd, R.A., Seth, P., David, F., Scholl, L. Increases in Drug and Opioid-Involved Overdose Deaths – United States, 2010–2015. *MMWR Morb Mortal Wkly Rep* 2016;65:1445–1452
- 3 National study finds 49% are polydrug which is an underestimation (many coroners only list one drug even when more are present). Local studies find much higher rates: New York, 100%: Paone, D., et al., 2015. Buprenorphine infrequently found in fatal overdose in New York City. *Drug Alcohol Depend* 155, 298–301.; Virginia: 57%: Wunsch, M.J., Nakamoto, K., Behonick, G., Massello, W., 2009. Opioid Deaths in Rural Virginia: A Description of the High Prevalence of Accidental Fatalities Involving Prescribed Medications. *Am J Addict* 18, 5–14.; West Virginia: 79%: Hall, A.J. et al., 2008. Patterns of abuse among unintentional pharmaceutical overdose fatalities. *JAMA* 300, 2613–2620.
- 4 Health Canada, 2017. National report: apparent opioid-related deaths (2016). Available at <https://www.canada.ca/en/health-canada/services/substance-abuse/prescription-drug-abuse/opioids/national-report-apparent-opioid-related-deaths.html> (accessed on 14 September 2017).
- 5 Drug overdose deaths in West Virginia, County Health Rankings & Roadmaps. Available at <http://www.countyhealthrankings.org/app/west-virginia/2017/measure/factors/138/data> (accessed on 28 August 2017).
- 6 British Columbia Coroners Service, Illicit Drug Overdose Deaths in BC, 1 January 2007 to 30 June 2017, <http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/statistical/illicit-drug.pdf> (accessed on 28 August 2017).
- 7 Russell, C., Firestone, M., Kelly, L., Mushquash, C., Fischer, B., 2016. Prescription opioid prescribing, use/misuse, harms and treatment among Aboriginal people in Canada: a narrative review of available data and indicators. *Rural and Remote Health*; 16: 3974. Available at <http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=3974> (accessed 30 August 2017).
- 8 Cicero, T.J., Ellis, M.S., Surratt, H.L., Kurtz, S.P., 2014. The Changing Face of Heroin Use in the United States: A Retrospective Analysis of the Past 50 Years. *JAMA Psychiatry* 71, 821–826.
- 9 McLean, K., 2016. "There's Nothing Here": Deindustrialization as Risk Environment for Overdose, *International Journal of Drug Policy* no. 29: 19–26; Keyes, K. M., Cerda, M., Brady, J. E., Havens, J. R. and Galea, S., 2014. Understanding the Rural-Urban Differences in Nonmedical Prescription Opioid Use and Abuse in the United States, *American Journal of Public Health* 104, no. 2: e52–e59; Case, A. and Deaton, A., 2015, Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century, *Proceedings of the National Academy of Science* 112, no. 49 (2015): 15078–15083; Webster, L. R., et al, 2011. An Analysis of the Root Causes for Opioid-Related Overdose Deaths in the United States, *Pain Medicine* 12, Supp. 2: S26–35.
- 10 See generally Alexander, M., 2011. *The New Jim Crow*. Ohio St. J. Crim. L. 9, 7.; and Musto, D.F., 1999. *The American Disease: Origins of Narcotic Control*. Oxford University Press.
- 11 Netherland, J., Hansen, H.B., 2016. The War on Drugs That Wasn't: Wasted Whiteness, "Dirty Doctors," and Race in Media Coverage of Prescription Opioid Misuse. *Cult Med Psychiatry* 40, 664–686.
- 12 Maia Szalavitz, 2015. White Parents Are Fighting Back Against the Drug War They Helped Create, https://www.vice.com/en_us/article/3bjw9/white-parents-helped-start-the-drug-war-could-they-end-it-as-well-120
- 13 Van Zee, A., 2009. The Promotion and Marketing of OxyContin: Commercial Triumph, Public Health Tragedy. *Am J Public Health* 99, 221–227.
- 14 Zgierska, A., Miller, M., Rabago, D., 2012. Patient Satisfaction, Prescription Drug Abuse, and Potential Unintended Consequences. *JAMA* 307, 1377–1378.
- 15 Ryan, H., Girion, L., Glover, S., 2016. "You want a description of hell?" OxyContin's 12-hour problem, *LATimes*, <http://www.latimes.com/projects/oxycontin-part1/>
- 16 Dasgupta, N., Mandl, K.D., Brownstein, J.S., 2009. Breaking the News or Fueling the Epidemic? Temporal Association between News Media Report Volume and Opioid-Related Mortality. *PLoS One* 4.
- 17 Boudreau, D., et al, 2009. Trends in long-term opioid therapy for chronic non-cancer pain. *Pharmacoepidemiol Drug Saf* 18, 1166–1175.
- 18 Volkow, N.D., McLellan, A.T., 2016. Opioid Abuse in Chronic Pain – Misconceptions and Mitigation Strategies. *New England Journal of Medicine* 374, 1253–1263.
- 19 Shah, A.S., Blackwell, R.H., Kuo, P.C., Gupta, G.N., 2017. Rates and Risk Factors for Opioid Dependence and Overdose after Urological Surgery. *The Journal of Urology*.
- 20 National Institute on Drug Abuse, *The Science of Drug Abuse and Addiction: The Basics*. Available at <https://www.drugabuse.gov/publications/media-guide/science-drug-abuse-addiction-basics> (accessed on 28 August 2017).
- 21 Volkow, N.D., McLellan, A.T., 2016. Opioid Abuse in Chronic Pain – Misconceptions and Mitigation Strategies. *New England Journal of Medicine* 374, 1253–1263.
- 22 O'Brien, C.P., Volkow, N., Li, T.-K., 2006. What's in a Word? Addiction Versus Dependence in DSM-V. *American Journal of Psychiatry* 163, 764–765.
- 23 Ibid.
- 24 World Health Organization, 1992. The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines.
- 25 EMCDDA. High-risk drug use key epidemiological indicator. Available at <http://www.emcdda.europa.eu/activities/hrdu> (accessed on 28 August 2017).

- 26 U.S. Department of Health and Human Services - Substance Abuse and Mental Health Services Administration, Results from the 2014 National Survey on Drug Use and Health: Detailed Tables, <https://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs2014/NSDUH-DetTabs2014.htm#tab6-47b> (accessed 8.28.17); and especially Table 6.47B Source Where Pain Relievers Were Obtained for Most Recent Nonmedical Use among Past Year Users Aged 12 or Older, by Age Group: Percentages, Annual Averages Based on 2010-2011 and 2012-2013, available at <https://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabsPDF-WHTML2013/Web/PDFW/NSDUH-DetTabsSect6peTabs47to66-2013.pdf>
- 27 Volkow, N.D., McLellan, A.T., 2016. Opioid Abuse in Chronic Pain – Misconceptions and Mitigation Strategies. *New England Journal of Medicine* 374, 1253-1263.
- 28 Nosyk, B., Marshall, B.D.L., Fischer, B., Montaner, J.S.G., Wood, E., Kerr, T., 2012. Increases in the availability of prescribed opioids in a Canadian setting. *Drug and Alcohol Dependence* 126, 7-12.
- 29 Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS), 2017: 2016. Data on Substance Abuse Treatment Facilities. BHSIS Series S-93, HHS Publication No. (SMA) 17-5039.; also, interviews with Donald McPherson, Executive Director of the Canadian Drug Policy Coalition and Keith Ahmad, Clinician Researcher with the Urban Health Research Initiative (UHRI), Clinical Assistant Professor in the Department of Family Medicine at the University of British Columbia (UBC), July 2017.
- 30 Strang, J., et al., 2003. Loss of tolerance and overdose mortality after inpatient opiate detoxification: follow up study. *BMJ* 326, 959-960.
- 31 Sordo, L., et al., 2017. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ* 357.; Pierce, M., et al., 2016. Impact of treatment for opioid dependence on fatal drug-related poisoning: a national cohort study in England. *Addiction* 111, 298-308.
- 32 Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS): 2015. Data on Substance Abuse Treatment Facilities. BHSIS Series S-88, HHS Publication No. (SMA) 17-5031
- 33 Saloner, B., Daubresse, M., Caleb Alexander, G., 2017. Patterns of Buprenorphine-Naloxone Treatment for Opioid Use Disorder in a Multistate Population. *Med Care* 55, 669-676.
- 34 The National Center on Addiction and Substance Abuse , *Addiction Medicine: Closing the Gap Between Science & Practice*. Available at <https://www.centeronaddiction.org/addiction-research/reports/addiction-medicine-closing-gap-between-science-and-practice> (accessed 28 August 2017).
- 35 STAT and Boston Globe, 2017, Desperate opioid users are pawns in lucrative insurance fraud scheme.
- 36 Pierce, M., et al., 2016. Impact of treatment for opioid dependence on fatal drug-related poisoning: a national cohort study in England. *Addiction* 111, 298-308.
- 37 WHO , *The methadone fix*. Available at <http://www.who.int/bulletin/volumes/86/3/08-010308/en/http://www.who.int/bulletin/volumes/86/3/08-010308/en/> (accessed on 28 August 2017).
- 38 See for example Joint United Nations Programme on HIV/AIDS, World Health Organization, United Nations Office on Drugs and Crime, 2004. Substitution maintenance therapy in the management of opioid dependence and HIV/AIDS prevention: position paper. WHO, Geneva.
- 39 Breen, K., others, n.d. Part B: 20 Questions and Answers Regarding Methadone Maintenance Treatment Research. National Institute on Drug Abuse. Available at <https://www.drugabuse.gov/sites/default/files/pdf/partb.pdf> (accessed on 14 September 2017).
- 40 Health Canada, 2002. Best Practices - Methadone Maintenance Treatment <https://www.canada.ca/en/health-canada/services/health-concerns/reports-publications/alcohol-drug-prevention/best-practices-methadone-maintenance-treatment.html> (accessed on 28 August 2017)
- 41 National Institute on Health and Care Excellence, 2007. Methadone and buprenorphine for the management of opioid dependence, Guidance and guidelines. Available at <https://www.nice.org.uk/guidance/ta114/chapter/4-Evidence-and-interpretation> (accessed on 28 August 2017)
- 42 Institute of Medicine, 1995. Federal Regulation of Methadone Treatment.
- 43 Breen, K., others, n.d. Part B: 20 Questions and Answers Regarding Methadone Maintenance Treatment Research. National Institute on Drug Abuse. Available at <https://www.drugabuse.gov/sites/default/files/pdf/partb.pdf> (accessed on 28 August 2017).
- 44 Soyka, M., 2015. New developments in the management of opioid dependence: focus on sublingual buprenorphine-naloxone. *Subst Abuse Rehabil* 6, 1-14. ; Strand, M.C., Fjeld, B., Arnestad, M., Mørland, J., 2013. Can patients receiving opioid maintenance therapy safely drive? A systematic review of epidemiological and experimental studies on driving ability with a focus on concomitant methadone or buprenorphine administration. *Traffic Inj Prev* 14, 26-38.
- 45 Strang, J., et al., 2015. Heroin on trial: systematic review and meta-analysis of randomised trials of diamorphine-prescribing as treatment for refractory heroin addiction. *Br J Psychiatry* 207, 5-14.
- 46 Oviedo-Joekes, E., et al, 2016. Hydromorphone Compared With Diacetylmorphine for Long-term Opioid Dependence: A Randomized Clinical Trial. *JAMA Psychiatry* 73, 447-455.
- 47 Vivitrol (naltrexone) FDA Approval History. Available at <https://www.drugs.com/history/vivitrol.html> (accessed on 28 August 2017).
- 48 Krupitsky, E., Nunes, E.V., Ling, W., Illeperuma, A., Gastfriend, D.R., Silverman, B.L., 2011. Injectable extended-release naltrexone for opioid dependence: a double-blind, placebo-controlled, multicentre randomised trial. *Lancet* 377, 1506-1513. ; Coviello, D.M., et al, 2012. A Multi-Site Pilot Study of Extended-Release Injectable Naltrexone Treatment for Previously Opioid-Dependent Parolees and Probationers. *Subst Abuse* 33, 48-59. ; Gordon, M.S., Kinlock, T.W., Vocci, F.J., Fitzgerald, T.T., Memisoglu, A., Silverman, B., 2015. A Phase 4, Pilot, Open-Label Study of VIVITROL® (Extended-Release Naltrexone XR-NTX) for Prisoners. *J Subst Abuse Treat* 59, 52-58.; Lee, J.D., et al, 2015. Opioid treatment at release from jail using extended-release naltrexone: a pilot proof-of-concept randomized effectiveness trial. *Addiction* 110, 1008-1014.
- 49 Degenhardt, L., Larney, S., Kimber, J., Farrell, M., Hall, W., 2015. Excess mortality among opioid-using patients treated with oral naltrexone in Australia. *Drug Alcohol Rev* 34, 90-96; see also label information. Available at https://www.accessdata.fda.gov/drugsatfda_docs/label/2010/021897s005s010lbl.pdf (accessed on 12 September 2017).

- 50 The Globe and Mail, 2017. Health Canada to allow imports of drugs needed to treat opioid addiction.
- 51 Substance Abuse and Mental Health Services Administration, 2015. Apply to Increase Patient Limits. Available at <https://www.samhsa.gov/medication-assisted-treatment/buprenorphine-waiver-management/increase-patient-limits> (accessed on 28 August 2017)
- 52 Schuchat A, Houry D, Guy GP, Jr, 2017. New data on opioid use and prescribing in the United States. *JAMA* 318, 425-426.
- 53 US Food & Drug Administration, Postmarket Drug Safety Information for Patients and Providers - OxyContin - Questions and Answers. Available at <https://www.fda.gov/drugs/drugsafety/postmarketdrugsafetyinformationforpatientsandproviders/ucm207196.htm> (accessed on 28 August 2017); Ingraham, C., 2017. How an 'abuse-deterrent' drug created the heroin epidemic, *Washington Post*.
- 54 The price of heroin declined by 80% between 1990 and 2007 while purity increased by 60%. Werb, D., Kerr, T., Nosyk, B., Strathdee, S., Montaner, J., Wood, E., 2013. The temporal relationship between drug supply indicators: an audit of international government surveillance systems. *BMJ Open* 3, e003077; for evidence of the shift to heroin, see: Cicero, T.J., Ellis, M.S., Surratt, H.L., 2012. Effect of Abuse-Deterrent Formulation of OxyContin. *New England Journal of Medicine* 367, 187-189; Alpert, A., Powell, D., Pacula, R.L., 2017. Supply-Side Drug Policy in the Presence of Substitutes: Evidence from the Introduction of Abuse-Deterrent Opioids. *National Bureau of Economic Research*; Fischer, B., Vojtila, L., Kurdyak, P., 2017. 'Delisting' OxyContin® to reduce prescription opioid-related harms in Ontario (Canada)—gauging effects 5 years later. *Pharmacoepidemiol Drug Saf*; Larochelle, M.R., Zhang, F., Ross-Degnan, D., Wharam, J.F., 2015. Rates of opioid dispensing and overdose after introduction of abuse-deterrent extended-release oxycodone and withdrawal of propoxyphene. *JAMA Intern Med* 175, 978-987; Dart, R.C., Severtson, S.G., Bucher-Bartelson, B., 2015. Trends in opioid analgesic abuse and mortality in the United States. *N. Engl. J. Med.* 372, 1573-1574.
- 55 Muhuri, P.K., Gfroerer, J.C., Davies, M.C., 2013. Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States, Substance Abuse and Mental Health Services Administration - Center for Behavioral Health Statistics and Quality - Data Review. Available at <https://www.samhsa.gov/data/sites/default/files/DR006/DR006/nonmedical-pain-reliever-use-2013.htm> (accessed on 28 August 2018).
- 56 Center for Disease Control and Prevention, Synthetic Opioid Data. Available at <https://www.cdc.gov/drugoverdose/data/fentanyl.html> (accessed on 28 August 2017).
- 57 Beletsky, L., Davis, C.S., 2017. Today's fentanyl crisis: Prohibition's Iron Law, revisited. *Int. J. Drug Policy* 46, 156-159.
- 58 DrugBank (Ed.), 2017. Carfentanil. Available at <https://www.drugbank.ca/drugs/DB01535> (accessed on 28 August 2017).
- 59 Strathdee, S.A., Beyrer, C., 2015. Threading the Needle – How to Stop the HIV Outbreak in Rural Indiana. *New England Journal of Medicine* 373, 397-399.
- 60 Schumaker, E., 2016. Mike Pence's Defining Moment As Governor? Enabling An HIV Outbreak. *Huffington Post*.
- 61 Canadian Center on Substance Abuse and Addiction, Prescription Drugs. Available at <http://www.cclt.ca/Eng/topics/Prescription-Drugs/Pages/default.aspx> (accessed 28 August 2017).
- 62 Spooner, L., et al, 2016. High-Dose Opioid Prescribing and Opioid-Related Hospitalization: A Population-Based Study. *PLoS One* 11.
- 63 British Columbia Coroners Service, Illicit Drug Overdose Deaths in BC, 1 January 2007 to 30 June 2017. Available at <http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/statistical/illicit-drug.pdf> (accessed on 28 August 2017).
- 64 Mansfield, K.E., Sim, J., Jordan, J.L., Jordan, K.P., 2016. A systematic review and meta-analysis of the prevalence of chronic widespread pain in the general population. *Pain* 157, 55-64.
- 65 Vancouver Sun, 2017. B.C. opioid crisis: Province on pace for more than 1,400 overdose deaths in 2017.
- 66 Weisberg, D.F., Becker, W.C., Fiellin, D.A., Stannard, C., 2014. Prescription opioid misuse in the United States and the United Kingdom: cautionary lessons. *Int. J. Drug Policy* 25, 1124-1130.
- 67 Interviews with Don McPherson, Executive Director of the Canadian Drug Policy Coalition and Keith Ahamad, Clinician Researcher with the Urban Health Research Initiative (UHRI), Clinical Assistant Professor in the Department of Family Medicine at the University of British Columbia (UBC), 6 July 2017.
- 68 Ibid.
- 69 For US: CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016. *MMWR Recomm Rep* 65. For Canada: Busse, J.W., et al, 2017. Guideline for opioid therapy and chronic noncancer pain. *CMAJ* 189, E659-E666.
- 70 Schuchat, A., Houry, D., Guy, G.P., 2017. New Data on Opioid Use and Prescribing in the United States. *JAMA* 318, 425-426.
- 71 See for example Health Canada, 2016. Joint Statement of Action to Address the Opioid Crisis. Available at <https://www.canada.ca/en/health-canada/services/substance-abuse/opioid-conference/joint-statement-action-address-opioid-crisis.html> (accessed on 28 August 2017).
- 72 Albert, S., Brason II, F.W., Sanford, C.K., Dasgupta, N., Graham, J., Lovette, B., 2011. Project Lazarus: Community-Based Overdose Prevention in Rural North Carolina. *Pain Medicine* 12, S77-S85.
- 73 Kral, A.H., Davidson, P.J., 2017. Addressing the Nation's Opioid Epidemic: Lessons from an Unsanctioned Supervised Injection Site in the U.S. *American Journal of Preventive Medicine* 0.
- 74 Marshall, B.D.L., Milloy, M.-J., Wood, E., Montaner, J.S.G., Kerr, T., 2011. Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *Lancet* 377, 1429-1437.
- 75 Kral, A.H., Davidson, P.J., 2017. Addressing the Nation's Opioid Epidemic: Lessons from an Unsanctioned Supervised Injection Site in the U.S. *American Journal of Preventive Medicine* 0.
- 76 Beletsky, L., Davis, C.S., Anderson, E., Burris, S., 2008. The Law (and Politics) of Safe Injection Facilities in the United States. *Am J Public Health* 98, 231-237.
- 77 Kral, A.H., Davidson, P.J., 2017. Addressing the Nation's Opioid Epidemic: Lessons from an Unsanctioned Supervised Injection Site in the U.S. *American Journal of Preventive Medicine* 0.

78 Bachhuber MA, Saloner B, Cunningham CO, Barry CL, 2014. Medical cannabis laws and opioid analgesic overdose mortality in the United States, 1999-2010. *JAMA Internal Medicine* 174, 1668-1673.

79 Bradford, A.C., Bradford, W.D., 2016. Medical Marijuana Laws Reduce Prescription Medication Use In Medicare Part D. *Health Aff* 35, 1230-1236.

80 Walley, A.Y., et al, 2013. Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. *BMJ* 346, f174.

81 Wheeler, E., Jones, T.S., Gilbert, M.K., Davidson, P.J., 2014. Opioid Overdose Prevention Programs Providing Naloxone to Laypersons, Center for Disease Control and Prevention, Morbidity and Mortality Weekly Report 64(23);631-635

82 The Network For Public Health Law- "Over the Counter" Naloxone Access, Explained. Available at https://www.networkforphl.org/the_network_blog/2016/03/01/745/over_the_counter_naloxone_access_explained (accessed 28 August 2017).

83 Schwartz, R.P., et al., 2006. A randomized controlled trial of interim methadone maintenance. *Arch. Gen. Psychiatry* 63, 102-109. See also Amato, L., Minozzi, S., Davoli, M., Vecchi, S., 2011. Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for treatment of opioid dependence. *Cochrane Database Syst Rev* CD004147; Strang, J., Hall, W., Hickman, M., Bird, S.M., 2010. Impact of supervision of methadone consumption on deaths related to methadone overdose (1993-2008): analyses using OD4 index in England and Scotland. *BMJ* 341, c4851.

84 Cochrane, Opioids for long-term treatment of noncancer pain. Available at http://www.cochrane.org/CD006605/SYMPT_opioids-long-term-treatment-noncancer-pain (accessed on 28 August 2017).

85 Nahin, R.L., 2015. Estimates of Pain Prevalence and Severity in Adults: United States, 2012. *The Journal of Pain* 16, 769-780.

86 Pain News Network, 2016. Survey: Opioids Reduced or Stopped for Most Patients. Available at <https://www.painnewsnetwork.org/stories/2016/8/4/survey-opioids-stopped-or-reduced-for-most-patients> (accessed on 28 August 2017).

87 Mundkur, M.L., Gordon, A.J., Kertesz, S.G., 2017. Will strict limits on opioid prescription duration prevent addiction? advocating for evidence-based policymaking. *Substance Abuse* 0, 1-2.

88 Strict limits on opioid prescribing risk 'inhumane treatment' of pain patients, 2017. *STAT.*, available at <https://www.statnews.com/2017/02/24/opioids-prescribing-limits-pain-patients/> (accessed on 14 September 2017). See also As a physician, I urge caution as we cut back opioids, 2017, *The Hill*. Available at <http://thehill.com/blogs/pundits-blog/health-care/326095-as-a-physician-i-urge-other-doctors-to-cut-back-on-prescribing> (accessed on 14 September 2017).

89 World Health Organization (Ed.), 2011. Ensuring balance in national policies on controlled substances: guidance for availability and accessibility of controlled medicines. World Health Organization, Geneva.

90 Fischer, B., Keates, A., Bühringer, G., Reimer, J., Rehm, J., 2014. Non-medical use of prescription opioids and prescription opioid-related harms: why so markedly higher in North America

compared to the rest of the world? *Addiction* 109, 177-181.; van Amsterdam, J., van den Brink, W., 2015. The Misuse of Prescription Opioids: A Threat for Europe? *Curr Drug Abuse Rev* 8, 3-14.

91 Eastwood, N., Fox, E., Rosmarin, A., 2016. A Quiet Revolution: drug decriminalisation across the globe.

ADDITIONAL RESOURCES

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www.incb.org
www.ohchr.org/EN/HRBodies/HRC/Pages/WorldDrugProblem.aspx
www.talkingdrugs.org
www.tdpf.org.uk
www.unaids.org/en/targetsandcommitments/preventinghivamongdrugusers
www.unodc.org
www.who.int/topics/substance_abuse/en/
www.wola.org/program/drug_policy

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GLOBAL COMMISSION ON DRUG POLICY

The purpose of the Global Commission on Drug Policy is to bring to the international level an informed, science based discussion about humane and effective ways to reduce the harms caused by drugs and drug control policies to people and societies.

GOALS

- Review the base assumptions, effectiveness and consequences of the 'war on drugs' approach
- Evaluate the risks and benefits of different national responses to the drug problem
- Develop actionable, evidence-based recommendations for constructive legal and policy reform