2.5 NORTH AMERICA

CANADA
UNITED STATES

TABLE 2.5.1:

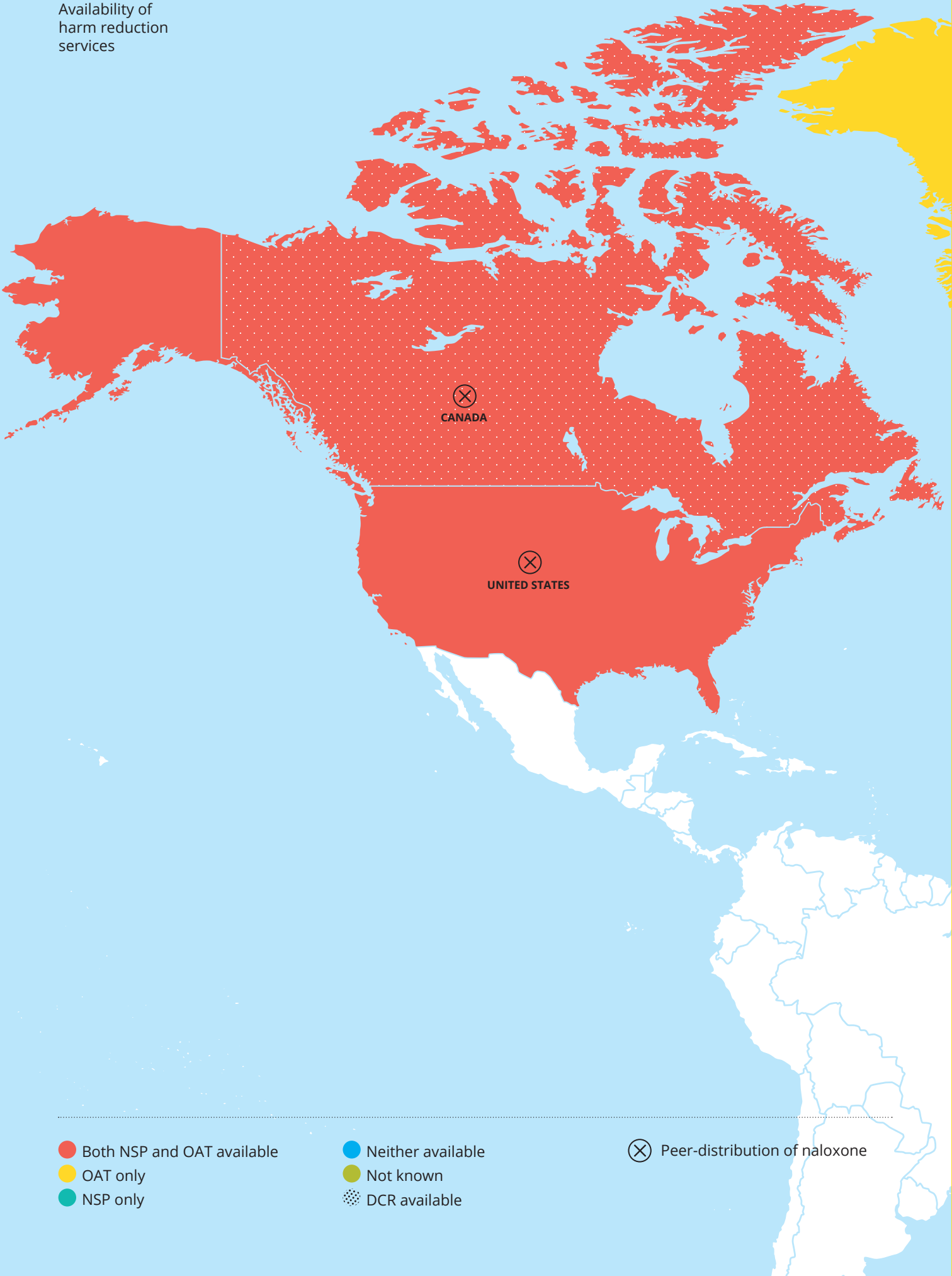
Epidemiology of HIV and viral hepatitis, and harm reduction responses in North America

Country/ territory with reported injecting drug use	People who inject drugs	HIV prevalence among people who inject drugs (%)	Hepatitis C (anti-HCV) prevalence among people who inject drugs (%)	Hepatitis B (anti-HBsAg) prevalence among people who inject drugs (%)	Harm reduction response			
					NSP[1]	OAT[2]	Peer distribution of naloxone	DCRs[3]
Canada	130,000[1]	14.6[2]	70.6[3]	nk[3]	✓[4]	✓(M,B,BN,H,O)	✓	✓40[4]
United States	2,248,500[3]	8.7[3]	53.1[3]	4.8[3]	✓>418[5][5]	✓[6](M,B,TN)	✓	x

nk = not known

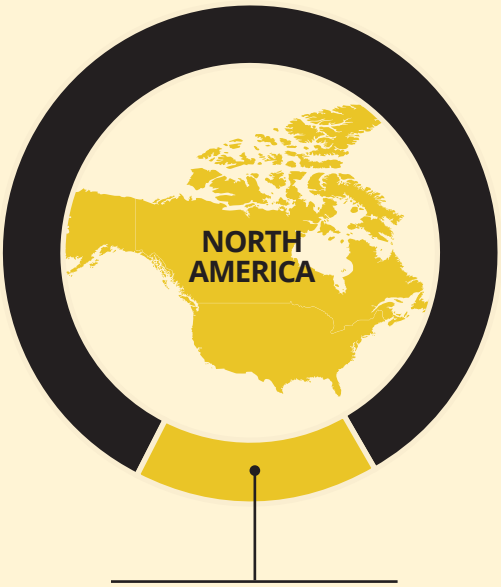
1 All operational needle and syringe programme (NSP) sites, including fixed sites, vending machines and mobile NSPs operating from a vehicle or through outreach workers.
2 Opioid agonist therapy (OAT), including methadone (M), buprenorphine (B) and any other form (O) such as morphine and codeine.
3 Drug consumption rooms, also known as supervised injecting sites.
4 No estimate is available for the total number of NSPs in Canada.
5 This is the number of NSPs registered with the North American Syringe Exchange Network and is therefore a minimum figure for the number of NSPs operating in the United States. These services operate in 44 of the 50 states.
6 OAT is available in every state.

MAP 2.5.1:
Availability of harm reduction services



2.5
Harm reduction in North America

GLOBAL POPULATION OF PEOPLE WHO INJECT DRUGS



16%

NORTH AMERICA IS HOME TO 16% OF THE GLOBAL POPULATION OF PEOPLE WHO INJECT DRUGS.

OVERDOSE, OVERDOSE RESPONSE AND DRUG CONSUMPTION ROOMS (DCRS)

FROM 1999 TO 2018, THERE WERE

769,935

DRUG OVERDOSE DEATHS

RECORDED IN THE UNITED STATES.

IN 2018, THERE WERE

67,367

OVERDOSE DEATHS,

70% OF WHICH INVOLVED AN OPIOID, MOST COMMONLY ILLICITLY MANUFACTURED FENTANYL OR ITS ANALOGUES.

DRUG CONSUMPTION ROOMS (DCRs)

40 OUT OF 130 DCRs IN THE WORLD ARE IN CANADA

> *People of colour, and most acutely Black people, are discriminated against at every stage of the judicial process in the United States: policing, pre-trial, sentencing, parole and post-incarceration.*

1. Overview

Author:
Sam Shirley-Beavan
Harm Reduction International

North America is home to 16% of the global population of people who inject drugs.[6] Canada is among the most progressive countries in the world with regard to the implementation of harm reduction, though there remain significant issues in accessibility and service provision. The United States lags considerably behind Canada and other high-income countries in the implementation of almost all harm reduction services.

Needle and syringe programmes (NSPs)[7] and opioid agonist therapy (OAT) programmes[8] are in operation in both Canada and the United States. Since 2018, more jurisdictions have enabled access to NSPs. Methadone and buprenorphine are the most widely used medications for OAT across North America, and are the only medications available in the United States. In Canada, recent changes have led to the availability of heroin-assisted therapy (HAT) in the form of diacetylmorphine and hydromorphone in at least three provinces.

North America continues to experience a crisis of overdose deaths. In 2018, almost 70,000 overdose deaths were recorded in the United States alone.[7] In Canada, the number of federally regulated drug consumption rooms (DCRs) increased from 24 in 2018 to 40 in 2020. There remain no officially licensed DCRs in the United States, but there is at least one unsanctioned programme in an undisclosed location.[8,9] While regulations on access to naloxone have loosened in the United States since 2018, naloxone is still designated a prescription-only medication, creating barriers to access.

Despite the high prevalence of the use of stimulants in North America, the harm reduction response to stimulants remains limited compared with the response to opioids. Harm reduction programmes in some cities in Canada and the United States report the distribution of safer smoking and inhalation equipment.

In Canada, recent changes have led to the availability of heroin-assisted therapy (HAT) in the form of diacetylmorphine and hydromorphone in at least three provinces.

Drug checking is available in at least two provinces in Canada, and since 2019 has been available as an overdose prevention response often co-located with DCRs. In the United States, federal and state restrictions on drug checking are tighter and, as a result, access to drug checking is more limited.

In correctional settings, Canada is considerably more advanced in harm reduction implementation than the United States, with OAT available in all federal prisons and NSPs operational in 11 prisons. There is one operational prison DCR in Canada. However, civil society actors have expressed concern over its operation and the misconception among correctional staff that this may replace the need for an NSP. In the United States, no prison-based NSPs or DCRs are operational, and access to OAT in prisons is severely limited.

7 In the United States, these programmes are commonly called syringe service programmes (SSPs).
8 In the United States, these programmes are commonly called medications for opioid use disorder (MOUD).

2. Developments in harm reduction implementation

2.1 NEEDLE AND SYRINGE PROGRAMMES (NSPs)

As reported in 2018, NSPs are operational in both Canada and the United States. In both countries, individual states, provinces and territories are responsible for the legal status of NSPs. The overall trend in the region is for an increase in the availability of services.

NSPs are available in all Canadian provinces and territories except the Northwest Territories and Nunavut.[1] An estimated 50 million syringes were distributed in 2016, equivalent to 291 per person who injected drugs.[1] This is below the 300 syringes per person that the World Health Organization (WHO) recommends to achieve hepatitis C elimination by 2030.[10]

A United States government study found that 32.1% of people who inject drugs reported sharing syringes and 54.5% reported sharing any injecting equipment (including cookers and cotton wool).[11] Only 52.8% of people reported receiving syringes from NSPs, though this figure varied by city (from 93.1% in San Francisco to 0.9% in Houston).[11] Since 2018, in the United States, at least three states have taken steps to facilitate the establishment and operation of NSPs. New state legislation was passed in Idaho, Illinois and Florida to legalise or facilitate the establishment of NSPs.[12–15] At the federal level, in 2019 the Office of the Assistant Secretary of Health (OASH) launched an effort in collaboration with regional health administrators, the Centers for Disease Control and Prevention (CDC) and other federal, state and local stakeholders to promote the implementation of NSPs.[16] As of 2020, there are six states in which no legal NSPs operate: Alabama, Kansas, Mississippi, Nebraska, South Dakota and Wyoming.[9][5,12,17–19]

Civil society organisations in Canada and the United States report that the primary barrier to accessing NSPs is the lack of availability in certain jurisdictions, most acutely in rural areas (refer to rural communities box).[20–22] A lack of funding, a hostile political environment and municipal bylaws can all obstruct the establishment of services in these areas.[20,22] Even where NSP implementation is extensive, there is a lack of tailored and targeted programmes for marginalised subpopulations, such as women, young people and Indigenous communities.[20,21]

Stigma remains a significant barrier to accessing NSPs in Canada and the United States, as evidenced in pharmacies.[20,21,23,24] Only one state (Delaware) expressly prevents the sale of syringes in pharmacies, but many states allow for significant pharmacist discretion.[23] This frequently manifests in stigma and denial of service to people who inject drugs, as found in a 2019 study in Arizona.[23]

Law enforcement also has a negative impact on the accessibility of NSPs in North America. For example, state law in West Virginia permits the operation of NSPs but, in some cases, city ordinances prohibit the possession of drug paraphernalia including injecting equipment.[24] The result is that people who inject drugs do not access NSPs for fear of arrest.[24] In 2018, such contradictory local policies forced a West Virginia NSP to close as they could no longer operate in line with best practices.[25]

> *As of 2020, there are six states in which no legal NSPs operate: Alabama, Kansas, Mississippi, Nebraska, South Dakota and Wyoming.*

9 In some of these states it may be possible to purchase syringes from pharmacies, but no programmes distribute injecting equipment for free to people who inject drugs.

Rural communities

Almost 20% of people in Canada and the United States live in rural areas, as defined by their respective governments.[26] Rural communities have been affected by the ongoing crisis of overdose deaths. For example, the Appalachian region of the United States has experienced a disproportionate number of overdose deaths in recent years, and states in the region have the highest hepatitis C prevalence among people who use drugs in the country and have experienced a number of HIV outbreaks in communities that use drugs.[27–30] Rural populations in both the United States and Canada face unique challenges in accessing harm reduction services.

Civil society organisations report that rural areas are particularly underserved by harm reduction services, with facilities concentrated around urban centres.[20,21,31] In small communities, service providers find it difficult to maintain confidentiality, which creates a significant barrier to access due to anticipated stigma and discrimination.[20] Additionally, more than 60% of rural counties in the United States have no physician licensed to prescribe buprenorphine, and many people living in rural areas must travel long distances to Opioid Treatment Centres which are the only facilities that can prescribe methadone.[32,33]

To address these deficiencies, some harm reduction service providers have found innovative solutions. To increase the availability of naloxone to rural populations, providers in New Brunswick (Canada) have provided online training for clients, while in Alaska (United States) naloxone distribution sites have been asked to provide numerous naloxone kits at each visit.[31] In Saskatchewan (Canada), major efforts have been made to address hepatitis C among Indigenous and rural communities by implementing nurse-led treatment; for example collaboration with Indigenous leadership both on and off reserve to actively screen and treat Indigenous people living with hepatitis C.[34] Telemedicine for viral hepatitis treatment and OAT has been introduced in Alberta, British Columbia, Ontario and Quebec.[34] In rural areas of New York and California, an online mail order NSP is operational.[22,35] Finally, vending machines are now present in rural areas of British Columbia to enable access to harm reduction services there, with applications including providing sterile injecting equipment and naloxone, and potentially OAT medication, without the presence of a fixed-site harm reduction service.[36]

2.2 OPIOID AGONIST THERAPY (OAT)

OAT is available in both Canada and the United States. In Canada, provincial governments are responsible for OAT. In the United States, the federal government continues to maintain primary control of regulations and some states impose even greater restrictions. This results in more limited access and a more restricted range of medications available for OAT, currently limited to only methadone and buprenorphine.[10] [38] As reported in 2018, the expansion of buprenorphine prescribing in the United States to some nurses and physician assistants in 2016 was a crucial step to improving access to effective OAT. It resulted in an increase in the rate of buprenorphine prescribing from 1.97 prescriptions per 100,000 of the population in 2009 to 4.43 in 2018.[39] However, according to data from 2018, less than 4% of physicians in the United States are licensed to prescribe buprenorphine and in almost half of US counties, there is no physician licensed to prescribe it.[40] In addition, each prescriber is permitted to prescribe to a maximum of 30, 100 or 275 buprenorphine clients depending on their experience.[24,41] There is also evidence of racial disparity in access, with Black clients 77% less likely to be prescribed buprenorphine than white clients.[42]

In the United States, methadone is only accessible through federally certified Opioid Treatment Programmes and only in oral formulations.[43,44] Whilst these programmes exist in 49 states and the District of Columbia, none operate in Wyoming, meaning that methadone OAT (or any other full opioid agonist) is unavailable in the state.[43] Further federal and state restrictions limiting doses risk client safety by increasing the risk of overdose when using illicit opioids, and the predominant requirement for supervised doses requires clients to attend a clinic daily or near-daily.[44] Urine drug screening is common, and in some jurisdictions positive tests or missed doses can result in the termination of treatment or further reduction in dosage.[33] Further state-level restrictions are in place on the establishment of programmes: in Georgia, Indiana, Louisiana, Mississippi and West Virginia there is a limit on the total number of programmes (Ohio recently lifted an equivalent restriction), and in Indiana OAT programmes must demonstrate they have strong community support.[44,45] Some restrictions, such as on take-home doses and urine testing, have been waived during the COVID-19 pandemic (see COVID-19 chapter),

10 Naltrexone is also available for people who use opioids. However, community groups such as the International Network of People who Use Drugs have raised significant concerns over the use of naltrexone for OAT, arguing the opioid antagonist is coercive and based on ideals of abstinence rather than harm reduction.[1]

and civil society organisations and service providers hope that these changes will be made permanent.[22]

In Canada, the primary medications used for OAT are methadone and buprenorphine, with hydromorphone and diacetylmorphine[11] (also known as heroin-assisted therapy or HAT) increasingly available in some settings.[21] From May 2018, family physicians no longer require an exemption from the federal drug laws to prescribe methadone, enabling expanded access.[46] OAT is in some cases available in take-home form, and limitations on access to take-home OAT have in large part been loosened during the COVID-19 pandemic (see COVID-19 chapter).[20,21] In May 2019, the Canadian federal Department of Health announced changes to increase the accessibility of diacetylmorphine and hydromorphone.[20,21,46–48] However, only a small number of physicians in a limited number of locations are permitted to prescribe the medications.[48] Coverage is highest in Vancouver and in principal is available across British Columbia. At least one service operates in Ontario (in Ottawa) and at least two pilot sites operate in Alberta.[48]

Civil society actors in Canada have called for the removal of barriers to accessing hydromorphone and diacetylmorphine in the form of 'safe supply' programmes.[48] These programmes, according to the Canadian Association of People who Use Drugs, must provide access to a legal and regulated supply of drugs and must respect that people use drugs not just for maintenance, but also for the psychoactive effects. Accordingly, doses should be adjusted to client preference as this is likely to limit reliance on the illicit market.[49] In addition to existing safe supply programmes in British Columbia, some related initiatives began in 2019 in Alberta and Ontario, and new guidelines have been published in British Columbia.[20,21]

Overall, civil society actors deem the provision of OAT in Canada to be insufficient, with a lack of tailored services for women, Indigenous communities and young people.[20,21] Indigenous Services Canada provides OAT to Indigenous populations, but civil society actors report that these programmes often specifically target abstinence rather than harm reduction.[46]

2.3 AMPHETAMINE-TYPE STIMULANTS (ATS), COCAINE AND ITS DERIVATIVES, AND NEW PSYCHOACTIVE SUBSTANCES (NPS)

North America remains the world region with the highest past year prevalence of stimulant use at 2.1% compared to the global prevalence figure of 0.6%.[6] People who use stimulants in North America frequently report that they do not believe harm reduction services such as NSPs and DCRs are relevant to their needs.[50] Examples of this include limitations on the number of syringes that can be acquired at a time (stimulant use is associated with more frequent injection) and the exclusion of people who smoke or inhale drugs rather than inject from DCRs (stimulants are more likely to be smoked or inhaled than opioids).[50]

Civil society organisations in North America report the adulteration of ATS, cocaine and new psychoactive substances as a significant source of potential harm associated with stimulant use.[21] For example, in British Columbia, fentanyl was detected in three-quarters of cocaine- and methamphetamine-related deaths - a pattern which is repeated across the region and is also indicative of high levels of polysubstance use.[50] The risk is particularly high for opioid-naïve people who use stimulants.[50] Fentanyl testing strips are a significant and low-threshold innovation in the response to fentanyl adulteration. These strips allow people to determine if a sample contains fentanyl (though they cannot determine the quantity), and are commonly available at harm reduction services in Canada and the United States. In June 2019, the New York City Health Department launched a campaign distributing informational flyers and coasters to bars and nightclubs in the city, as well as naloxone and first aid equipment. The programme particularly targets people who use cocaine occasionally and might not be aware of the presence of fentanyl in the supply.[51]

Higher-threshold drug checking services can provide detailed information on the content of substances, including strength and adulterants. Such services have become more widespread in Canada since 2018, and are available in some areas of Alberta, British Columbia and Ontario, but remain largely focused on opioid use because of local harm reduction priorities.[20,21] This includes services based at DCRs (in all DCRs in Vancouver, in three DCRs in Toronto since October 2019), walk-in centres, festival drug checking, and services available by mail.[52–57] Get Your Drugs Tested is

11 Diacetylmorphine is a chemical name for heroin, and hydromorphone is an opioid agonist significantly more potent than methadone.

a service launched in 2019 with financial support from the Vancouver Dispensary Society which makes drug checking by mail available to people anywhere in Canada.[53]

Drug checking is considerably less widespread in the United States than in Canada, largely due to greater legal barriers to implementation and the categorisation of testing equipment as drug paraphernalia.[58] DrugsData.org provides services by mail,[59] while DanceSafe has 16 chapters nationwide and sells home testing kits to the public and provides onsite drug analysis where possible at electronic music events.[60] Recent changes include a law in 2018 in Maryland exempting drug checking kits and fentanyl testing strips from drug paraphernalia laws.[61] Though drug checking has high acceptability among people who use stimulants,[62] it continues to face considerable regulatory barriers in most US states, and services in Canada require formal exemption from federal and state drug laws in order to operate legally.[21,61]

Additionally, in practice, drug checking is unavailable to the most vulnerable people who use stimulants.[50,62] Studies have found the most marginalised people (including people experiencing homelessness and people from racial and ethnic minorities) are less likely to use available services, and may be unable to obtain drugs from alternative sources even if they know they are adulterated.[50,62]

No substances are widely approved in North America for use as medical supply for people who use stimulants. Though there is emerging evidence of the effectiveness of a variety of substances (including methylphenidate, dexamphetamine, extended release amphetamine, modafinil, bupropion and mazindol), the use of any of these for people who use stimulants is mostly considered 'off-label'.[50,63,64] In the context of the COVID-19 pandemic, the British Columbia Centre on Substance Use released interim clinical guidance recommending the prescription of dexamphetamine and methylphenidate to people who use stimulants.[65]

The distribution of inhalation equipment for safer use of stimulants can be effective in reducing health harms, notably reducing the risk of viral hepatitis transmission.[66] In the United States, 46% of people who use methamphetamine reported smoking it,[67] indicating that any harm reduction approach to the substance must address the needs of people who smoke as well as those who inject. Several projects exist in North America to provide safer smoking equipment to people who smoke stimulants and opioids. One such project, launched in 2020, is a collaboration between harm reduction services and the police department in New Haven, Connecticut.[68] Other programmes delivering harm reduction supplies to people who use drugs include those operating in nightclubs and other party settings. TRIP! and Pieces to Pathway are two such services in Toronto, distributing syringes, pipes, condoms, straws and chewing gum, and providing chill-out spaces for people who use drugs at parties.[21,69]

In the United States, many states have exempted syringes from their state paraphernalia laws. However, that is not the case for safer smoking and inhalation equipment, which in many states remains technically illegal to distribute.[22]

2.4 OVERDOSE, OVERDOSE RESPONSE AND DRUG CONSUMPTION ROOMS (DCRs)

From 1999 to 2018, there were 769,935 drug overdose deaths recorded in the United States.[7] In 2018, there were 67,367 overdose deaths, 70% of which involved an opioid, most commonly illicitly manufactured fentanyl or its analogues.[7] This is the second highest annual number of overdose deaths on record.[7] The highest rates of overdose death in 2018 were in Virginia (51.5 per 100,000 population) and Delaware (43.8).[7] In recent years, stimulant-involved overdoses have dramatically increased with the rate of cocaine-involved overdoses tripling between 2012 and 2018, and methamphetamine-involved overdoses increasing five-fold over the same period.[7] Additionally, 28% of people who inject drugs in the United States report having experienced a non-fatal overdose.[11]

In Canada, there were 15,393 opioid overdose deaths from January 2016 to December 2019, 77% of which involved fentanyl or analogues.[70] In 2019, the highest rates of overdose death were in British Columbia (20.7 per 100,000 population) and Alberta (14.7 per 100,000).[70]

DCRs[12] are a key harm reduction intervention to prevent overdose deaths, as well as reduce transmission of HIV and

12 Also known as safe consumption sites or supervised injection facilities.

viral hepatitis.[71] Canada now has more DCRs than any other country in the world, with an increase from 24 facilities in 2018 to 40 facilities in 2020.[4,20,21] The facilities operate in five provinces: Alberta (7), British Columbia (9), Ontario (20, Quebec (4) and Saskatchewan (1). There are ongoing applications or preparations for ten further sites at the time of writing, including in the provinces of Manitoba.[4] In addition, at least 20 overdose prevention sites have been opened and operated since 2017, many by people who use drugs and their allies.[72] These services are primarily volunteer-run and funded.[20]

Although DCRs are widespread in Canada, the number and accessibility of the facilities remain insufficient to meet need, particularly outside major cities (see rural communities box).[20,21] Organisations proposing DCRs must apply for an exemption to federal drug laws on a case-by-case basis.[20,73] Civil society organisations report that the application process is overly burdensome and contains irrelevant criteria, preventing harm reduction actors from responding to public health emergencies quickly and effectively.[20,74] Restrictions also obstruct the ability of DCRs to provide services catering to the specific needs of marginalised groups such as women, people with disabilities, Indigenous people and young people.[20,21,74] The only site until 2020 to provide a safe smoking space, in Lethbridge, Alberta, had its government funding revoked in July 2020 and is now expected to close.[4,20,75,76] A site in Saskatoon, Saskatchewan, opened in late 2020 with a safe smoking space.[76]

The election of conservative provincial governments in Ontario and Alberta led to reviews of DCR implementation.[20,21,77] In Alberta, the review has been strongly criticised for being politicised and biased by civil society organisations, researchers and health workers.[78] In Ontario, this has led to the introduction of a new model of DCR known as Consumption and Treatment Services. As part of this reformulation, the government seeks to place higher emphasis on referrals to addiction treatment, reduce funding, and cap the number of sites in Ontario at 21 (currently there are 20).[20,21,77] A demonstration of one potential impact of this change came in early 2020 when a DCR in Ottawa reduced its operating hours due to a shortfall in funding after the Ontario provincial government withdrew its support.[79]

Despite a clear need, no licensed DCRs operate in the United States.[13] Civil society and local political actors have

In recent years, stimulant-involved overdoses have dramatically increased in the United States, with the rate of cocaine-involved overdoses tripling between 2012 and 2018, and methamphetamine-involved overdoses increasing five-fold over the same period. Additionally, 28% of people who inject drugs in the United States report having experienced a non-fatal overdose.

13 Though at least one underground DCR operates in an undisclosed location.[2]

pushed for the introduction of facilities in cities across the country. In California, Colorado, Maine, Massachusetts, New York, New Jersey, Rhode Island and Vermont among others, DCRs have secured some degree of support from state legislators but were blocked during the legislative process.[81–86] In Philadelphia, Pennsylvania, where overdose deaths have risen by 200% since 2009, a federal judge ruled that plans to open the Safehouse DCR do not violate federal law after a legal challenge from the Trump administration.[87–89] However, in February 2020, progress was paused pending consultation with the local community.[87] In January 2020, the Mayor of Seattle, Washington, announced that the city would open the first DCR in the United States. The plan is likely to face similar legal obstacles to the project in Philadelphia.[90,91]

Naloxone[14] is increasingly available in Canada, no longer requiring a prescription and available to purchase or for free at pharmacies in take-home doses in injectable or nasal spray forms.[20,21,93] Models of distribution vary by province and territory, but in every jurisdiction naloxone and naloxone training are available for free to people likely to witness an overdose.[94–106] While naloxone is in theory highly available, civil society organisations have expressed concerns that programmes do not do enough to actively seek out marginalised subpopulations, and that stigma towards people who use drugs acts as a barrier to access.[21]

In the United States, naloxone remains officially designated as a prescription-only medication by the federal Food and Drug Administration (FDA), despite the organisation's own insistence that efforts should be made to widen access and the fact that naloxone meets the FDA's criteria for an over-the-counter medication.[44,107] The US Surgeon General, Jerome Adams, released a statement in 2018 explicitly encouraging anyone likely to witness or experience an overdose to carry naloxone and know how to use it.[108] As of 2020, all 50 states and the District of Columbia have passed laws to allow pharmacists to dispense or prescribe naloxone directly, although out-of-pocket costs remain a barrier in some states.[107,109–111]

Only 29 states have laws permitting secondary distribution of naloxone.[109]

In Canada, the federal Good Samaritan Drug Overdose Act was passed in 2017. It ensures that people calling emergency services and those present at the scene of an overdose cannot be charged for possession of controlled substances.[20,21,112] The US state of Maine passed a Good Samaritan law in late 2019[113] meaning that, at the time of writing, 47 US states have enacted such laws (all states except Kansas, Texas and Wyoming).[114] However, only 25 of these states include provisions in their law to protect people from arrest for possession of controlled substances when attended by emergency services, and only 18 provide immunity from arrest for possession of paraphernalia.[109] Even in these cases, some states (such as Washington) do not protect people from arrests related to outstanding warrants, probation or parole violations, or crimes other than drug possession (including drug manufacture and delivery).[22]

Drug checking (see p.134) has emerged in response to the presence of fentanyl[15] in the opioid supply in the region. Fentanyl testing strips, which can identify the presence of fentanyl in a sample though not the concentration, are used in DCRs in Canada.[4,115] In the United States, the absence of DCRs as a key means of contact between health services and people who use drugs means that fentanyl testing has been less systematically implemented.[116] However, projects operate in Oregon and Rhode Island,[116,117] and were legalised and implemented in Maryland in 2018.[61,118] In parts of the United States, heroin has been almost entirely supplanted by fentanyl, meaning that testing services provide little value.[33] One such city is Baltimore, where harm reduction messaging is instead focused on encouraging people who use fentanyl to 'go slow', using small doses initially to prevent overdose.[119]

Moving from injection to smoking opioids is associated with a lower risk of overdose.[120–122] To this end, the People's Harm Reduction Alliance in Seattle specifically designed a pipe for smoking heroin (as pipes for smoking meth and crack cocaine can block when used with heroin). From the end of June to November 2019, the programme had distributed over 40,000 pipes. Alongside the primary aim of reducing overdose incidence, the project also reduces the risk of infection from injection and sharing pipes, and enables greater inclusion of people who smoke opioids in harm reduction programmes.[123]

14 Naloxone is a medication that can reverse the effects of opioid overdose. The World Health Organization recommends that states take every step to ensure that anyone likely to witness an overdose has access to naloxone.[3]

15 Fentanyl is an opioid up to 100 times more potent than morphine.

2.5 ANTIRETROVIRAL THERAPY (ART)

According to the latest available data, 2018 was the fourth consecutive year of increasing new HIV infections in Canada, with an 8.2% increase from 2017 to 2018.[124] New HIV infections in the general population remained stable in the United States from 2013 to 2017.[125]

Of all new HIV diagnoses in 2018, 7% in the United States and 18% in Canada were among people who reported injecting drugs.[124,125] Among women in Canada, 28.4% of cases were in those who inject drugs.[124] A study in 23 cities in the United States in 2019 found that 6.4% of people who inject drugs were living with HIV, compared with the general population HIV prevalence of 0.04%.[11,126] The same study found that only 54.8% of those people who inject drugs had been tested for HIV in the last year, and only 69.6% of those living with HIV were receiving antiretroviral therapy.[11] Several HIV outbreaks (for example in Indiana, Massachusetts, Washington and West Virginia) have occurred in the United States since 2018, in part due to the lack of adequate harm reduction services.[22,80,127]

People living with HIV in Canada have access to publicly funded ART, with each province or territory managing services for its residents. In six provinces and territories,[16] antiretroviral therapy is universally available for free to people living with HIV. In the other seven jurisdictions, the client is liable for some out-of-pocket costs (however, these costs are commonly waived for those with low income).[128] In addition, there are federal programmes covering all costs for certain populations (such as Indigenous people, military veterans, people in prison and refugees).[128]

Key barriers to HIV testing and treatment for people who use drugs in North America include stigma based on HIV status and drug use, a lack of access to anonymous HIV testing, and the criminalisation of HIV non-disclosure.[20,129] A qualitative study in New York City in 2019 found that people who use opioids are more likely to access HIV care where it is integrated into services for people who use opioids, such as OAT.[129]

In both Canada and the United States, people who inject drugs are among eligible populations for pre-exposure prophylaxis (PrEP) prescriptions, however low awareness had led to limited uptake.[130–132] The integration of PrEP prescription[17] into existing harm reduction services, most importantly NSPs, represents a significant opportunity to reduce the transmission of HIV among people who use drugs.[133]

2.6 HARM REDUCTION IN PRISONS

The United States has both the highest prison population and highest rate of incarceration in the world.[134] In 2018, approximately 1.5 million people were imprisoned in the country (including 1% of the entire male population), a rate of 655 per 100,000 of the population.[134,135] The United States imprisons its people at six times the rate of Canada (where 107 of every 100,000 people are in prison).[134] At least 17 states have prison systems that operate above their capacity, meaning that facilities are overcrowded.[135] Among other health concerns, this has made jails and prisons in the United States particularly dangerous during the COVID-19 pandemic (see COVID-19 section, p 33).[22]

Drug use is criminalised in both the United States and Canada.[20,21] In state prisons in the United States, 14.4% of people in prison are detained for drug offences, while in federal prisons the figure is 47.1%.[135] The proportion is higher among women (25.4% in state prisons and 57.9% in federal prisons).[135]

Despite the large population of people who use drugs in prisons, there is still no NSP operating in any prison in the United States. Canada introduced prison NSPs in 2018, and at the time of writing there are 11 such services operating in federal prisons.[20] While this is a positive development, coverage remains low: federal prisons account for only 40% of prison capacity in Canada, and no NSPs operate in provincial or territorial prisons.[136–138] Only 25% of federal prisons are covered by the programmes in operation.[136–138]

Where NSPs do operate in Canadian prisons, civil society organisations and Canada's Correctional Investigator have raised concerns about significant barriers that make the services largely unavailable in practice.[20,21,139] Security staff

16 Alberta, British Columbia, New Brunswick, Northwest Territories, Nunavut and Prince Edward Island.
17 PrEP is a medication that can provide short-term protection from HIV infection.

act as gatekeepers to access and can veto requests to participate in NSPs.[20] Prison staff continue to carry out daily inspections of cells during which they can apply disciplinary measures if a person is found in possession of drugs, or if equipment acquired from the NSP is found to be damaged, altered or missing.[139] In addition, confidentiality is limited, syringes are only provided on a one-for-one exchange basis, little information is given to people in prison about the availability of the NSP, and there are long waiting lists and high rates of rejection from the programme.[20,21,139] As a result, many people in prison are not even aware of the existence of the programmes, and participation is limited to only a handful of people in each prison.[20,21,139] As a result of these deficiencies, in 2020, a former prisoner and four HIV organisations continued to pursue a constitutional challenge against the federal government over its failure to provide easy, confidential and effective access to NSPs in prisons.[140]

The Union of Canadian Correctional Officers officially opposes prison NSPs and has advocated replacing the services with onsite DCRs.[140,141] The world's first prison DCR opened in Drumheller, Alberta, in June 2019.[20] The site was accessed more than 300 times by 23 people in its first four months of operation.[141] While the introduction of DCRs in prison is commendable, it must not be considered a replacement for an effective NSP. Not providing NSPs violates people in prisons' right to the same standard of health care as in the community.[140]

In Canada, OAT is officially available in all 43 federal prisons, but there are ongoing barriers to access. It is available in some but not all provincial and territorial prisons. Barriers include long waiting lists and a lack of prescribers, and there is evidence that treatment has been denied or terminated based on unfounded fears of diversion.[20] In Canadian federal prisons, OAT can be both continued from the community and initiated in prison. In provincial prisons where OAT is available, some deny people in prison the right to initiate OAT by failing to establish links with prescribing physicians.[20] In these cases, OAT can only be provided where it is a continuation from the community.[20]

As reported in 2018, OAT is available in only a small number of United States correctional facilities. In July 2019, the National Sheriffs' Association said that OAT is available in 270 (9%) of 3,100 state prisons and jails.[142] Since 2018, state governments in California, Delaware, Maine, Virginia, Washington and Wisconsin have committed to expanding access to OAT in prisons.[142] Since 2018, the Bureau of Prisons has pressured state prison authorities to enable access to OAT, while simultaneously denying access to those resident in the federal prisons under its own jurisdiction.[143] In 2019, a female prisoner in Massachusetts became the first known person to receive OAT in a federal prison after successfully suing the Bureau of Prisons, citing Eighth Amendment rights to freedom from cruel and unusual punishment.[142] Implementing prison OAT can also have a significant impact on the wider prevalence of overdose deaths. One study in Rhode Island, United States, found that implementing OAT in jails and prisons and providing linkage to community care on release reduced the overall number of overdoses in the state by 12%.[144]

There is a significantly increased risk of death from drug overdose in the period immediately following release from prison.[145–147] As such, it is essential that people in and recently released from prison have access to naloxone. In Canada, overdose prevention training is limited in most prisons, and naloxone is available to some people on release from prison.[20] In all prisons, naloxone is unavailable to prisoners themselves, but health staff - and in some prisons security staff - have access.[20] An evaluation of an overdose education and naloxone distribution project in San Francisco found that very few of those trained had been trained previously outside prison, and that one third of those released with naloxone reported using it to reverse an overdose.[148] Similar programmes have been implemented in California, Illinois, Maryland, Michigan and New York among other states.[149]

Incarceration of people who inject drugs is associated with an increased risk of viral hepatitis, tuberculosis and HIV, and accordingly it is essential that people in prison have access to testing and treatment services.[150,151] In Canada, health services in federal and most provincial prisons are provided not by the federal or provincial department of health but by the federal or provincial public safety authorities, endangering the equivalence of care between prison and the community.[20] This is especially true with regard to drug use and harm reduction, with prison health services more likely to prioritise security over health.[20] As a result, HIV, viral hepatitis and tuberculosis testing and treatment is widely available in prisons, but stigma and a lack of confidentiality impede access.[20]

Race, incarceration and drug policy in the United States

The murder of George Floyd by a police officer in Minneapolis in May 2020 catalysed a global wave of protests and brought a renewed energy to questions about the structures of racial oppression and discrimination. The United States has a long history of using the language and policies of the 'war on drugs' to perpetuate the systemic racial discrimination of the Jim Crow era of enforced racial segregation and, ultimately, the legacy of slavery.[152] A powerful example of this entrenched rhetoric lies in the county coroner's report into the death of George Floyd, which suggested potential drug use as a contributing factor, and minimised the role of police brutality in his death.[153]

People of colour, and most acutely Black people, are discriminated against at every stage of the judicial process: policing, pre-trial, sentencing, parole and post-incarceration.[154] [18]

Black people are over three times more likely to experience arrest for drug offences by the age of 29 than white people.[155] Black drivers are more likely to be stopped without cause by police, and once stopped are three times more likely to be searched and twice as likely to be arrested compared with white drivers.[154,156,157] Research finds that these disparities cannot be accounted for by rates of drug use or drug offences, but are due to racial prejudice and discrimination by police officers and racial biases that are inherent in certain policing practices. [155,157,159]

At sentencing, racial disparities in mandatory minimum sentencing[19] for drug offences mean that people of colour are not only incarcerated more often, but also for longer sentences. Almost half of all mandatory minimum sentences for drug offences are given to Hispanic people, and almost one third are given to Black people. Possession thresholds in particular, result in significant racial disparities. For example, crack cocaine continues to be subject to much lower thresholds, than powder cocaine, with possession of just 28 grams sufficient to trigger a five-year minimum sentence (compared with 500 grams for powder cocaine). In 2016, 85% of people subject to mandatory minimum sentences related to crack cocaine were Black.[160]

As a result of racial disparities in policing and sentencing, Black men are incarcerated at five times the rate of white men.[135] More than one third of all federal prisoners are Black, meaning their representation is almost three times that in the general population (13% of Americans identify as Black).[135] In the state of Georgia, 3% of all Black men are in prison.[161] Almost half of Black people and 60% of Hispanic people in prison are incarcerated for drug offences.[135]

18 An example includes 'broken windows policing', a focus on low level public order offences that disproportionately targets Black and other minority communities.[4]

19 Mandatory minimum sentencing requires that offenders serve a predefined term for certain crimes, including some drug offences.

3. Policy developments in harm reduction

Civil society organisations report that housing policy is a key failure in the effort to ensure that people who use drugs can experience good health and access social services.[20,21] This is due to both a lack of affordable housing, and the effect of drug-related offences on a criminal record as a barrier to accessing social housing and other services.[20,21] Additionally, civil society actors report low rates of social assistance for people with disabilities, and the prevalence of stigma and discrimination against people who use drugs when accessing social services.[20,21]

At the international level, the Canadian government has been supportive of harm reduction in international forums, including statements in favour of harm reduction at all sessions of the UN Commission on Narcotic Drugs since 2018.[20,21]

Civil society organisations report that housing policy is a key failure in the effort to ensure that people who use drugs can experience good health and access social services.

4. Funding developments for harm reduction

In Canada, harm reduction services are funded primarily by provincial governments.[21] In addition, the federal Harm Reduction Fund is providing a total of CAD 30 million (USD 23 million) from 2017-2022 to projects that help to reduce HIV and viral hepatitis among people who inject or inhale drugs.[20] The fund primarily finances peer outreach and capacity building programmes, and explicitly commits to the meaningful inclusion of people who use drugs, stigma reduction, gender-based analysis and mental health promotion.[162,163] Non-state funders in Canada include the Open Society Foundations, MAC AIDS Fund and the Levi Strauss Foundation, as well as other local foundations.[20,21]

The reliance on provincial governments for funding for harm reduction makes it sensitive to political changes at the provincial level. For example, the election of a conservative government in Ontario in 2018 led to a reduction in funding for harm reduction.[21] Overall, civil society organisations in Canada report that domestic funding is still well below the level needed to respond to the health issues faced by people who use drugs, and that prison harm reduction services are particularly underfunded. The lack of funding is also a barrier to the emergence of new networks in the harm reduction sector.[20]

Almost one third of the entire drug-related expenditure of the United States government for 2021 will be spent on domestic law enforcement (US$10 billion), without even accounting for the cost of incarceration.[164] A significant funding barrier in the United States is the ban on federal funding for NSPs, which means that such programmes are reliant on local, state or private sources of funding.[33] However, recent attention on the opioid overdose crisis has led to some federal funding for overdose response, notably naloxone, and can in some cases be used to fund support staff in needle and syringe programmes (though still cannot be used for the purchase of sterile paraphernalia).[22]

The reliance on provincial governments for funding for harm reduction makes it sensitive to political changes at the provincial level. For example, the election of a conservative government in Ontario in 2018 led to a reduction in funding for harm reduction. Overall, civil society organisations in Canada report that domestic funding is still well below the level needed to respond to the health issues faced by people who use drugs, and that prison harm reduction services are particularly underfunded. The lack of funding is also a barrier to the emergence of new networks in the harm reduction sector.

References

1. Jacka B, Larney S, Degenhardt L, Janjua N, Høj S, Krajden M, et al. Prevalence of Injecting Drug Use and Coverage of Interventions to Prevent HIV and Hepatitis C Virus Infection Among People Who Inject Drugs in Canada. Am J Public Health 2020;110(1):45–50.
2. Public Health Agency of Canada. Summary: Estimates of HIV incidence, prevalence and Canada's progress on meeting the 90-90-90 HIV targets, 2016. Ottawa: Public Health Agency of Canada; 2018.
3. Degenhardt L, Peacock A, Colledge S, Leung J, Grebely J, Vickerman P, et al. Global prevalence of injecting drug use and sociodemographic characteristics and prevalence of HIV, HBV, and HCV in people who inject drugs: a multistage systematic review. Lancet Glob Health 2017;5(12):e1192–207.
4. Health Canada. Supervised consumption sites: Status of application [Internet]. 2020 [cited 2020 May 6]. Available from: https://www.canada.ca/en/health-canada/services/substance-use/supervised-consumption-sites/status-application.html
5. NASEN. SEP Locations [Internet]. 2020 [cited 2020 May 13]. Available from: http://www.nasen.org/
6. UNODC. World Drug Report 2019. Vienna: 2019.
7. Hedegaard H, Minino AM, Warner M. Drug overdose deaths in the United States, 1999-2018. Hyattsville: National Center for Health Statistics; 2020.
8. Kral AH, Davidson PJ. Addressing the Nation's Opioid Epidemic: Lessons from an Unsanctioned Supervised Injection Site in the U.S. Am J Prev Med 2017;53(6):919–22.
9. Kral AH, Lambdin BH, Wenger LD, Davidson PJ. Evaluation of an Unsanctioned Safe Consumption Site in the United States. N Engl J Med 2020;383(6):589–90.
10. World Health Organization. Consolidated strategic information guidelines for viral hepatitis: planning and tracking progress towards elimination. Geneva: World Health Organization; 2019.
11. Centers for Disease Control and Prevention. HIV Infection Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs—National HIV Behavioral Surveillance: Injection Drug Use, 23 U.S. Cities, 2018. Atlanta: Centers for Disease Control and Prevention; 2020.
12. Associated Press. Bill allowing Idaho needle exchange programs signed into law [Internet]. Spokesm.-Rev.2019 [cited 2020 May 13]. Available from: https://www.spokesman.com/stories/2019/mar/28/bill-allowing-idaho-needle-exchange-programs-signe/
13. Burns J. Florida Picks Harm Reduction Over Politics With New Needle Exchange Law [Internet]. Forbes 2019 [cited 2020 May 13]. Available from: https://www.forbes.com/sites/janetwburns/2019/06/28/florida-picks-harm-reduction-over-politics-with-new-needle-exchange-law/
14. Florida Health. Infectious Disease Elimination Act (IDEA) | Florida Department of Health [Internet]. 2019 [cited 2020 May 13]. Available from: http://www.floridahealth.gov/programs-and-services/idea/index.html
15. Thometz K. Pritzker Signs Bill Legalizing Syringe Exchanges Statewide [Internet]. WTTW News 2019 [cited 2020 May 13]. Available from: https://news.wttw.com/2019/08/20/pritzker-signs-bill-legalizing-syringe-exchanges-statewide
16. HIV.gov. Facilitating Expansion of SSPs [Internet]. HIV.gov2020 [cited 2020 May 13]. Available from: https://www.hiv.gov/federal-response/policies-issues/facilitating-expansion-of-ssps
17. Harm Reduction Center Las Vegas. Trac-B Exchange [Internet]. Harm Reduct. Cent. Las Vegas 2020 [cited 2020 May 13]. Available from: http://harmreductioncenterlv.com
18. Delaware Health and Social Services. Needle Exchange Program [Internet]. 2020 [cited 2020 May 13]. Available from: https://www.dhss.delaware.gov/dph/dpc/needleexchange.html
19. New Mexico Department of Health. Harm Reduction [Internet]. 2020 [cited 2020 May 13]. Available from: https://nmhealth.org/about/phd/idb/hrp/
20. Ka Hon Chu S. Global State of Harm Reduction survey response. 2020.
21. Maghsoudi N. Global State of Harm Reduction survey response. 2020.
22. Huriaux E. Global State of Harm Reduction reviewer response. 2020.
23. Meyerson BE, Lawrence CA, Cope SD, Levin S, Thomas C, Eldridge LA, et al. I could take the judgment if you could just provide the service: non-prescription syringe purchase experience at Arizona pharmacies, 2018. Harm Reduct J 2019;16(1):57.
24. Davis SM, Kristjansson AL, Davidov D, Zullig K, Baus A, Fisher M. Barriers to using new needles encountered by rural Appalachian people who inject drugs: implications for needle exchange. Harm Reduct J 2019;16(1):23.
25. Allen ST, Grieb SM, O'Rourke A, Yoder R, Planchet E, White RH, et al. Understanding the public health consequences of suspending a rural syringe services program: a qualitative study of the experiences of people who inject drugs. Harm Reduct J 2019;16(1):33.
26. World Bank. World Bank staff estimates based on the United Nations Population Division's World Urbanization Prospects: 2018 Revision. [Internet]. Washington DC: World Bank; 2018. Available from: https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS
27. Moorman JP, Krolikowski MR, Mathis SM, Pack RP. HIV/HCV Co-infection: Burden of Disease and Care Strategies in Appalachia. Curr HIV/AIDS Rep 2018;15(4):308–14.
28. Schalkoff CA, Lancaster KE, Gaynes BN, Wang V, Pence BW, Miller WC, et al. The opioid and related drug epidemics in rural Appalachia: A systematic review of populations affected, risk factors, and infectious diseases. Subst Abuse 2020;41(1):35–69.
29. Kim BJ, Harley DA. Needle and Syringe Programs in Rural Areas: Addressing the Intravenous Drug Use Epidemic. Rehabil Res Policy Educ 2019;33(1):56–64.
30. Schranz AJ, Barrett J, Hurt CB, Malvestutto C, Miller WC. Challenges Facing a Rural Opioid Epidemic: Treatment and Prevention of HIV and Hepatitis C. Curr HIV/AIDS Rep 2018;15(3):245.
31. Hanson BL, Porter RR, Zöld AL, Terhorst-Miller H. Preventing opioid overdose with peer-administered naloxone: findings from a rural state. Harm Reduct J 2020;17(1):4.
32. Andrilla CHA, Coulthard C, Patterson DG. Prescribing Practices of Rural Physicians Waivered to Prescribe Buprenorphine. Am J Prev Med 2018;54(6, Supplement 3):S208–14.
33. Vakharia S. Global State of Harm Reduction reviewer response. 2020;
34. The Canadian Network on Hepatitis C. Blueprint to inform hepatitis C elimination efforts in Canada. Montreal: The Canadian Network on Hepatitis C; 2019.
35. NEXT Distro. Get Next [Internet]. Distro2020 [cited 2020 Aug 3]. Available from: https://nextdistro.org/get-next
36. Harper T. Unique vending machine in Nelson offers syringes, naloxone [Internet]. Trail Times 2020. Available from: https://www.trailtimes.ca/news/video-unique-vending-machine-in-nelson-offers-syringes-naloxone/?fbclid=IwAR02HqChUU4s5kYLb52vORJBgIda7B7bvIZNoodbUjhzVReN2u9o_V-KHQw
37. INPUD. Extended-Release Opioid Agonist Drugs: A community position statement. London: International Network of People Who Use Drugs; 2019.
38. Priest KC, Gorfinkel L, Klimas J, Jones AA, Fairbairn N, McCarty D. Comparing Canadian and United States opioid agonist therapy policies. Int J Drug Policy 2019;74:257–65.
39. Olfson M, Zhang V (Shu), Schoenbaum M, King M. Trends in Buprenorphine Treatment in the United States, 2009-2018. JAMA 2020;323(3):276–7.
40. Haffajee RL, Bohnert ASB, Lagisetty PA. Policy Pathways to Address Provider Workforce Barriers to Buprenorphine Treatment. Am J Prev Med 2018;54(6 Suppl 3):S230–42.
41. American Society of Addiction Medicine. Buprenorphine Waiver Management [Internet]. ASAM2020. Available from: https://www.asam.org/advocacy/practice-resources/buprenorphine-waiver-management
42. Lagisetty PA, Ross R, Bohnert A, Clay M, Maust DT. Buprenorphine Treatment Divide by Race/Ethnicity and Payment. JAMA Psychiatry 2019;76(9):979–81.
43. Substance Abuse and Mental Health Services Administration. National Survey of Substance Abuse Treatment Services (N-SSATS): 2018, Data on Substance Abuse Treatment Facilities. Rockville: Substance Abuse and Mental Health Services Administration; 2019.
44. Davis CS, Carr DH. Legal and policy changes urgently needed to increase access to opioid agonist therapy in the United States. Int J Drug Policy 2019;73:42–8.
45. Singer JA. For Those Who Are Serious About Increasing Access to MAT for Opioid Use Disorder... [Internet]. Cato Inst.2019 [cited 2020 Jun 3]. Available from: https://www.cato.org/blog/those-who-are-serious-about-increasing-access-mat-opioid-use-disorder
46. CADTH. Programs for the treatment of opioid addiction: An environmental scan. Ottawa: Canadian Agency for Drugs and Technologies in Health (CADTH); 2019.
47. Fairbairn N, Ross J, Trew M, Meador K, Turnbull J, MacDonald S, et al. Injectable opioid agonist treatment for opioid use disorder: a national clinical guideline. CMAJ 2019;191(38):E1049–56.
48. Maghsoudi N, Bowles J, Werb D. Expanding access to diacetylmorphine and hydromorphone for people who use opioids in Canada. Can J Public Health Rev Can Sante Publique 2020;
49. CAPUD. Safe Supply Concept Document. Ottawa: Canadian Association of People who Use Drugs; 2019.
50. Fleming T, Barker A, Ivsins A, Vakharia S, McNeil R. Stimulant safe supply: a potential opportunity to respond to the overdose epidemic. Harm Reduct J 2020;17(1):6.
51. New York City Health Department. Health Department Teams Up with Brooklyn Bar and Nightclub Owners to Prevent Overdose [Internet]. 2019 [cited 2020 Jul 3]. Available from: https://www1.nyc.gov/site/doh/about/press/pr2019/brooklyn-bars-nightclubs-prevent-overdose.page
52. ANKORS. Drug Checking [Internet]. 2020 [cited 2020 May 14]. Available from: http://ankors.bc.ca/drugchecking/
53. Get Your Drugs Tested. Get Your Drugs Tested [Internet]. Get Your Drugs Test.2020 [cited 2020 May 14]. Available from: https://getyourdrugstested.com/
54. Centre on Drug Policy Evaluation. Toronto's Drug Checking Service [Internet]. CDPE2020 [cited 2020 May 6]. Available from: https://cdpe.org/project/drug-checking-services/
55. BCCSU. Drug checking in British Columbia, March 2020. Vancouver: British Columbia Centre on Substance Use; 2020.
56. McDonald K, Maghsoudi N, Thompson H, Werb D. What's in Toronto's drug supply? Results from samples checked by Toronto's drug-checking service: October 10, 2019 - March 31, 2020. Toronto: Centre for Drug Policy Evaluation; 2020.
57. Vancouver Coastal Health. Drug checking [Internet]. 2020 [cited 2020 May 14]. Available from: http://www.vch.ca/public-health/harm-reduction/overdose-prevention-response/drug-checking

58. Drug Policy Alliance. Drug Checking [Internet]. Drug Policy Alliance2020 [cited 2020 May 21]. Available from: http://www.drugpolicy.org/issues/drug-checking
59. DrugsData.org. Lab Test Results [Internet]. 2020 [cited 2020 May 14]. Available from: https://www.ecstasydata.org/results.php
60. DanceSafe. Drug Checking [Internet]. DanceSafe2020 [cited 2020 May 14]. Available from: https://dancesafe.org/drug-checking/
61. Drug Policy Alliance. Preventing overdose deaths with drug checking. New York: Drug Policy Alliance; 2018.
62. Sherman SG, Morales KB, Park JN, McKenzie M, Marshall BDL, Green TC. Acceptability of implementing community-based drug checking services for people who use drugs in three United States cities: Baltimore, Boston and Providence. Int J Drug Policy 2019;68:46–53.
63. Rezaei F, Emami M, Zahed S, Morabbi M-J, Farahzadi M, Akhondzadeh S. Sustained-release methylphenidate in methamphetamine dependence treatment: a double-blind and placebo-controlled trial. DARU J Pharm Sci [Internet] 2015 [cited 2020 May 6];23(1). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4298048/
64. Dürsteler-MacFarland KM, Farronato NS, Strasser J, Boss J, Kuntze MF, Petitjean SA, et al. A Randomized, Controlled, Pilot Trial of Methylphenidate and Cognitive-Behavioral Group Therapy for Cocaine Dependence in Heroin Prescription. J Clin Psychopharmacol 2013;33(1):104–108.
65. BCCSU. Risk mitigation in the context of dual public health emergencies. Vancouver: British Columbia Centre on Substance Use; 2020.
66. Imtiaz S, Strike C, Elton-Marshall T, Rehm J. Safer smoking kits for methamphetamine consumption. Addiction [Internet] [cited 2020 May 14];n/a(n/a). Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/add.14914
67. Substance Abuse and Mental Health Services Administration. Treatment Episode Data Set: Admissions (TEDS-A). Rockville: Substance Abuse and Mental Health Services Administration; 2019.
68. Breen T. Cops Offer Addicts Clean Needles, Pipes [Internet]. N. Hav. Indep.2020 [cited 2020 May 14];Available from: http://www.newhavenindependent.org/index.php/archives/entry/harm_reduction/
69. Rancic M. How Toronto's party scene can get safer using harm reduction [Internet]. Mag.2020 [cited 2020 May 14]. Available from: https://nowtoronto.com/music/features/harm-reduction-toronto-parties
70. Special Advisory Committee on the Epidemic of Opioid Overdoses. Opioid-related Harms in Canada. Ottawa: Public Health Agency of Canada; 2020.
71. EMCDDA. Drug consumption rooms: an overview of provision and evidence. Lisbon: European Monitoring Centre for Drugs and Drug Addiction; 2018.
72. Pivot. Canada's Supervised Consumption and Overdose Prevention Sites [Internet]. pivotlegal.org2020. Available from: https://www.pivotlegal.org/scs_ops_map
73. Health Canada. Apply to run a supervised consumption site: What you need before you start [Internet]. 2018 [cited 2020 May 7]. Available from: https://www.canada.ca/en/health-canada/services/substance-use/supervised-consumption-sites/apply/before-you-start.html
74. Foreman-Mackey A, Kazatchkine C. Overdue for a change: Scaling up supervised consumption services in Canada. Toronto: Canadian HIV/AIDS Legal Network; 2019.
75. Bourque S, Pijl EM, Mason E, Manning J, Motz T. Supervised inhalation is an important part of supervised consumption services. Can J Public Health 2019;110(2):210–5.
76. Hyshka E. Global State of Harm Reduction reviewer response. 2020.
77. Ministry of Health and Long-Term Care (Ontario). Consumption and Treatment Services: Application Guide. Toronto: Ministry of Health and Long-Term Care (Ontario); 2018.
78. Canadian Drug Policy Coalition. OPEN LETTER: Calling on the Alberta Government to retract supervised consumption site report [Internet]. Can. Drug Policy Coalit.2020 [cited 2020 Aug 12]. Available from: https://www.drugpolicy.ca/open-letter-calling-on-the-alberta-government-to-retract-supervised-consumption-site-study/
79. CBC. Injection site scaling back hours due to funding shortfall [Internet]. CBC2019 [cited 2020 May 12]. Available from: https://www.cbc.ca/news/canada/ottawa/clarence-street-injection-site-slashes-hours-due-to-funding-shortfall-1.5349258
80. Strathdee SA. Preventing HIV among people who inject drugs: Plus ça change, plus ça même chose. Boston: 2020.
81. Milman L. Mayor's Plan For Supervised Drug-Use Facility Doesn't Sit Well With State's U.S. Attorney [Internet]. Scout Somerv.2019 [cited 2020 May 21]. Available from: https://scoutsomerville.com/supervised-consumption-site/
82. Staver A. Colorado lawmakers won't vote on safe injection sites in 2019. House Democratic leader blames Denver. [Internet]. Denver Post2019 [cited 2020 May 21]. Available from: https://www.denverpost.com/2019/02/19/safe-injection-sites-denver-colorado/
83. Vestal C. With Safe Injection Sites, 'Somebody Has to Go First.' It Could Be Philadelphia. [Internet]. 2019 [cited 2020 May 21]. Available from: https://pew.org/2q4NqXw
84. Stainton LH. N.J. considering supervised injection sites to blunt impact of opioid epidemic [Internet]. WHYY2019 [cited 2020 May 21]. Available from: https://whyy.org/articles/n-j-considering-supervised-injection-sites-to-blunt-impact-of-opioid-epidemic/
85. Bishari NS. Major Safe Consumption Site Bill Bumped to 2020 [Internet]. SF Wkly.2019 [cited 2020 May 21]. Available from: https://www.sfweekly.com/news/major-safe-consumption-site-bill-bumped-to-2020/
86. Associated Press. State Senate approves supervised injection site proposal [Internet]. Wash. Times 2019 [cited 2020 May 21]. Available from: https://www.washingtontimes.com/news/2019/jun/7/state-senate-approves-supervised-injection-site-pr/
87. Feldman N, Blumgart J. Safehouse hits pause on S. Philly supervised injection site as landlord backs out [Internet]. WHYY [cited 2020 May 7]. Available from: https://whyy.org/articles/safehouse-hits-pause-on-plan-to-open-supervised-injection-site-in-south-philly/
88. Safehouse. Frequently asked questions [Internet]. 2020. Available from: https://www.safehousephilly.org/frequently-asked-questions
89. Mahase E. Judge clears way for US's first drug consumption room. BMJ [Internet] 2019 [cited 2020 May 21];367. Available from: https://www.bmj.com/content/367/bmj.l5884
90. Supportive Care Matters. Seattle Will Open First Safe Injection Site In U.S. [Internet]. [cited 2020 May 13]. Available from: https://www.supportivecarematters.org/news/seattle-will-open-first-safe-injection-site-in-u-s/
91. Kunkler A. What's been happening with safe injection sites? [Internet]. Seattle Wkly.2019 [cited 2020 May 13]. Available from: https://www.seattleweekly.com/news/whats-been-happening-with-safe-injection-sites/
92. WHO. Community management of opioid overdose. Geneva: World Health Organization; 2014.
93. Health Canada. Naloxone [Internet]. aem2017 [cited 2020 May 7]. Available from: https://www.canada.ca/en/health-canada/services/substance-use/problematic-prescription-drug-use/opioids/naloxone.html#4
94. Alberta Health Services. Get Naloxone [Internet]. Alta. Health Serv.2020 [cited 2020 May 7]. Available from: https://www.albertahealthservices.ca/info/Page15586.aspx
95. Communications Nova Scotia. Nova Scotia's Opioid Use and Overdose Framework [Internet]. Nova Scotia's Action Plan Opioid Use Overdose2017 [cited 2020 May 7]. Available from: https://novascotia.ca/opioid/
96. Government of Quebec. Find a Resource That Can Provide Naloxone [Internet]. 2020 [cited 2020 May 7]. Available from: http://sante.gouv.qc.ca/en/repertoire-ressources/naloxone/
97. Government of Yukon. Fentanyl and Naloxone Information [Internet]. 2020 [cited 2020 May 7]. Available from: http://www.hss.gov.yk.ca/fentanyl.php
98. Toward the Heart. Find A Site [Internet]. 2020 [cited 2020 May 7]. Available from: https://towardtheheart.com/site-finder
99. Street Connections. Street Connections: Overdose/Poisoning [Internet]. 2020 [cited 2020 May 7]. Available from: https://streetconnections.ca//content.php?navigation_id=2294
100. Government of Newfoundland and Labrador. Opioids and Naloxone | Health and Community Services [Internet]. 2020 [cited 2020 May 7]. Available from: https://www.gov.nl.ca/hcs/mentalhealth-committee/mentalhealth/opioids-and-naloxone/
101. Government of the Northwest Territories. Backgrounder: Opioid Abuse and Naloxone Availability in the Northwest Territories. Yellowknife: Government of the Northwest Territories; 2020.
102. Government of Prince Edward Island Toolkit. Preventing Opioid-Related Overdoses [Internet]. 2018 [cited 2020 May 7]. Available from: https://www.princeedwardisland.ca/en/information/health-and-wellness/preventing-opioid-related-overdoses
103. Government of Saskatchewan. Take Home Naloxone Program Sites | Opioids [Internet]. Gov. Sask.2020 [cited 2020 May 7]. Available from: https://www.saskatchewan.ca/residents/health/accessing-health-care-services/mental-health-and-addictions-support-services/alcohol-and-drug-support/opioids/take-home-naloxone-program-sites?userLat=50.454722&userLong=-104.606667&searchRadius=25&address=La+Ronge%2c+SK%2c+Canada
104. AIDS New Brunswick. Naloxone [Internet]. 2020 [cited 2020 May 7]. Available from: http://www.aidsnb.com/en/naloxone
105. CMHA. Naloxone 101. Toronto: Canadian Mental Health Association; 2019.
106. Government of Ontario. Recognize and temporarily reverse an opioid overdose | Ontario.ca [Internet]. 2020 [cited 2020 May 7]. Available from: https://www.ontario.ca/page/get-naloxone-kits-free
107. Office of the Commissioner. Statement on continued efforts to increase availability of all forms of naloxone to help reduce opioid overdose deaths [Internet]. FDA2020 [cited 2020 May 14]. Available from: https://www.fda.gov/news-events/press-announcements/statement-continued-efforts-increase-availability-all-forms-naloxone-help-reduce-opioid-overdose
108. Office of the Surgeon General. U.S. Surgeon General's Advisory on Naloxone and Opioid Overdose [Internet]. HHS.gov2018 [cited 2020 May 14]. Available from: https://www.hhs.gov/surgeongeneral/priorities/opioids-and-addiction/naloxone-advisory/index.html
109. The Network for Public Health Law. Legal interventions to reduce overdose mortality: Naloxone access and overdose Good Samaritan laws. Edina: The Network for Public Health Law; 2018.
110. SAFE Project. State Naloxone Access Rules and Resources [Internet]. SAFE Proj.2020 [cited 2020 May 14]. Available from: https://www.safeproject.us/naloxone-awareness-project/state-rules/

111. Board of Pharmacy, Oregon. Oregon Pharmacists Prescribing of Naloxone [Internet]. Oregon.gov2017 [cited 2020 May 14]. Available from: https://www.oregon.gov/pharmacy/Pages/Naloxone.aspx
112. Health Canada. About the Good Samaritan Drug Overdose Act [Internet]. aem2017 [cited 2020 May 11]. Available from: https://www.canada.ca/en/health-canada/services/substance-use/problematic-prescription-drug-use/opioids/about-good-samaritan-drug-overdose-act.html
113. Office of Governor Janet T. Mills. Governor Mills Signs Good Samaritan Bill [Internet]. 2019 [cited 2020 May 14]. Available from: http://www.maine.gov/governor/mills/news/governor-mills-signs-good-samaritan-bill-2019-05-23
114. Vestal C. New Naloxone Laws Seek to Prevent Opioid Overdoses [Internet]. 2019 [cited 2020 May 14]. Available from: https://pew.org/2J65s2I
115. Maghsoudi N, McDonald K, Stefan C, Beriault DR, Mason K, Barnaby L, et al. Evaluating networked drug checking services in Toronto, Ontario: study protocol and rationale. Harm Reduct J 2020;17(1):9.
116. Goldman JE, Waye KM, Periera KA, Krieger MS, Yedinak JL, Marshall BDL. Perspectives on rapid fentanyl test strips as a harm reduction practice among young adults who use drugs: a qualitative study. Harm Reduct J 2019;16(1):3.
117. Outside In. Drug Users Health Services [Internet]. Outs. In 2020 [cited 2020 May 14]. Available from: https://outsidein.org/health-services/needle-exchange/
118. Kawata A. MedStar Health Says It's Seeing Success With Free Fentanyl Test Kit Program [Internet]. CBS Baltim.2020 [cited 2020 May 14]. Available from: https://baltimore.cbslocal.com/2020/02/04/fentanyl-test-kit-medstar-health-program-update/
119. Bmore Power. Go Slow [Internet]. 2020. Available from: https://www.20secondssaves.org/
120. Sterrett C, Brownfield J, Korn CS, Hollinger M, Henderson SO. Patterns of presentation in heroin overdose resulting in pulmonary edema. Am J Emerg Med 2003;21(1):32–4.
121. Warner-Smith M, Darke S, Day C. Morbidity associated with non-fatal heroin overdose. Addiction 2002;97(8):963–7.
122. Novak SP, Kral AH. Comparing Injection and Non-Injection Routes of Administration for Heroin, Methamphetamine, and Cocaine Uses in the United States. J Addict Dis 2011;30(3):248–57.
123. Lupick T. Heroin Pipes: How the 'Hammer' Was Built for Harm Reduction [Internet]. Filter2019 [cited 2020 May 14]. Available from: https://filtermag.org/heroin-pipes-harm-reduction/
124. Haddad N, Robert A, Weeks A, Popovic N, Siu W, Archibald C. HIV in Canada—Surveillance Report, 2018. Can Commun Dis Rep 2019;45(12):304–12.
125. Centers for Disease Control and Prevention. HIV in the United States and Dependent Areas [Internet]. 2020. Available from: https://www.cdc.gov/hiv/statistics/overview/ataglance.html
126. Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2010-2016. Atlanta: Centers for Disease Control and Prevention; 2020.
127. McClung RP. Large HIV outbreak among people who inject drugs, West Virginia, 2018-2019. Boston: 2020.
128. Rapid Response Service. Out-of-pocket costs associated with HIV in publicly funded high-income health care settings. Toronto: Ontario HIV Treatment Network; 2019.
129. Tofighi B, Sindhu SS, Chemi C, Lewis CF, Dickson VV, Lee JD. Perspectives on the HIV continuum of care among adult opioid users in New York City: a qualitative study. Harm Reduct J 2019;16(1):58.
130. Walters SM, Reilly KH, Neaigus A, Braunstein S. Awareness of pre-exposure prophylaxis (PrEP) among women who inject drugs in NYC: the importance of networks and syringe exchange programs for HIV prevention. Harm Reduct J [Internet] 2017 [cited 2019 May 15];14.
131. Harris NS. Vital Signs: Status of Human Immunodeficiency Virus Testing, Viral Suppression, and HIV Preexposure Prophylaxis — United States, 2013–2018. MMWR Morb Mortal Wkly Rep [Internet] 2019 [cited 2020 May 11];68. Available from: https://www.cdc.gov/mmwr/volumes/68/wr/mm6848e1.htm
132. Tan DHS, Hull MW, Yoong D, Tremblay C, O'Byrne P, Thomas R, et al. Canadian guideline on HIV pre-exposure prophylaxis and nonoccupational postexposure prophylaxis. CMAJ 2017;189(47):E1448–58.
133. Walters SM, Coston B, Neaigus A, Rivera AV, Starbuck L, Ramirez V, et al. The role of syringe exchange programs and sexual identity in awareness of pre-exposure prophylaxis (PrEP) for male persons who inject drugs. Int J Drug Policy 2020;77:102671.
134. Walmsley R. World Prison Population List (twelfth edition). London: World Prison Brief; 2018.
135. Carson EA. Prisoners in 2018 [Internet]. Washington DC: Bureau of Justice Statistics; 2020. Available from: http://www.bjs.gov/index.cfm?ty=pbdetail&iid=6846
136. Correctional Service Canada. Institutional profiles - Correctional Service Canada [Internet]. 2020 [cited 2020 May 11]. Available from: https://www.csc-scc.gc.ca/institutions/index-eng.shtml
137. Correctional Service of Canada. The Prison Needle Exchange Program [Internet]. 2019 [cited 2020 May 11]. Available from: https://www.csc-scc.gc.ca/health/002006-2004-en.shtml
138. Walmsley R. Canada. London: World Prison Brief; 2020.
139. Zinger I. Office of the Correctional Investigator Annual Report 2018-2019. Ottawa: Office of the Correctional Investigator; 2019.
140. Canadian HIV/AIDS Legal Network. News release: Prison needle and syringe program [Internet]. 2020 [cited 2020 May 11]. Available from: http://www.aidslaw.ca/site/news-release-prison-needle-and-syringe-program-2/?lang=en
141. CBC. Prison needle use should be supervised for safety, correctional officers say [Internet]. CBC2019 [cited 2020 May 11]. Available from: https://www.cbc.ca/news/canada/calgary/drumheller-prison-drug-needle-exchange-safer-correctional-supervised-injection-1.5327771
142. Horn S. Opioid Epidemic Impacts Prisons and Jails. Prison Leg. News2019;
143. Lynch SN. Woman with opioid addiction to get regular methadone treatment in prison [Internet]. Reuters2019 [cited 2020 May 19]. Available from: https://www.reuters.com/article/us-usa-prisons-opioid-addiction-idUSKCN1T903F
144. Green TC, Clarke J, Brinkley-Rubinstein L, Marshall BDL, Alexander-Scott N, Boss R, et al. Postincarceration Fatal Overdoses After Implementing Medications for Addiction Treatment in a Statewide Correctional System. JAMA Psychiatry 2018;75(4):405–7.
145. Merrall ELC, Kariminia A, Binswanger IA, Hobbs MS, Farrell M, Marsden J, et al. Meta-analysis of drug-related deaths soon after release from prison. Addict Abingdon Engl 2010;105(9):1545–54.
146. Leach D, Oliver P. Drug-Related Death Following Release from Prison: A Brief Review of the Literature with Recommendations for Practice. Curr Drug Abuse Rev 2011;4(4):292–7.
147. Ranapurwala SI, Shanahan ME, Alexandridis AA, Proescholdbell SK, Naumann RB, Edwards D, et al. Opioid Overdose Mortality Among Former North Carolina Inmates: 2000–2015. Am J Public Health 2018;108(9):1207–13.
148. Wenger LD, Showalter D, Lambdin B, Leiva D, Wheeler E, Davidson PJ, et al. Overdose Education and Naloxone Distribution in the San Francisco County Jail. J Correct Health Care 2019;25(4):394–404.
149. Wenger L, Showalter D, Wheeler E, Harris J, Binswanger IA, Lambdin BH, et al. A Primer for Implementation of Overdose Education and Naloxone Distribution in Jails and Prisons. Durham: RTI International; 2019.
150. Kamarulzaman A, Verster A, Altice FL. Prisons: ignore them at our peril. Curr Opin HIV AIDS 2019;14(5):415–422.
151. Stone J, Fraser H, Lim AG, Walker JG, Ward Z, MacGregor L, et al. Incarceration history and risk of HIV and hepatitis C virus acquisition among people who inject drugs: a systematic review and meta-analysis. Lancet Infect Dis [Internet] 2018 [cited 2018 Nov 12];0(0). Available from: https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(18)30469-9/abstract
152. Alexander M. The New Jim Crow: Mass incarceration in the age of colorblindness. New York City: The New Press; 2010.
153. Vera AV. Independent autopsy and Minnesota officials say George Floyd's death was homicide [Internet]. CNN2020 [cited 2020 Jun 11]. Available from: https://www.cnn.com/2020/06/01/us/george-floyd-independent-autopsy/index.html
154. The Sentencing Project. Report to the United Nations on Racial Disparities in the US Criminal Justice System. Washington DC: The Sentencing Project; 2018.
155. Mitchell O, Caudy MS. Race Differences in Drug Offending and Drug Distribution Arrests. Crime Delinquency 2017;63(2):91–112.
156. US Bureau of Justice Statistics. Police Behavior during Traffic and Street Stops, 2011. Washington DC: The Stanford Open Policing Project; 2013.
157. Harris DA. Hearing on 'Ending Racial Profiling in America,' Testimony of David A. Harris. Washington DC: United States Judiciary Committee, Subcommittee on the Constitution, Civil Rights, and Human Rights; 2012.
158. Roberts DE. Foreword: Race, Vagueness, and the Social Meaning of Order-Maintenance Policing. J Crim Law Criminol 1973- 1999;89(3):775–836.
159. Civil Rights Division. Investigation of the Ferguson Police Department. Washington DC: United States Department of Justice; 2015.
160. United States Sentencing Commission. Mandatory Minimum Penalties for Drug Offences in the Federal Criminal Justice System. Washington DC: United States Sentencing Commission; 2017.
161. Drug Policy Alliance. Georgia, the Drug War and Mass Incarceration. New York: Drug Policy Alliance; 2019.
162. Public Health Agency of Canada. Harm Reduction Fund [Internet]. 2020. Available from: https://www.canada.ca/en/public-health/services/funding-opportunities/harm-reduction-fund.html
163. Public Health Agency of Canada. Harm Reduction Fund: Funded projects [Internet]. 2020. Available from: https://www.canada.ca/en/public-health/services/funding-opportunities/harm-reduction-fund/funded-projects.html
164. Office of National Drug Control Policy. National Drug Control Strategy: FY 2021 Funding Highlights. Washington DC: Executive Office of the President of the United States; 2020.