CATIE STATEMENT

on the distribution of a full range of harm reduction supplies as an evidence-based approach to reducing a range of preventable harms

Harm reduction supplies include a range of equipment that support people who use drugs to implement safer injecting, smoking and snorting practices. The distribution of these supplies is an evidence-based approach to reducing a range of preventable harms. Despite these benefits, a full range of injecting, smoking and snorting supplies are not distributed in all regions of Canada, and where they are, they may not be distributed in adequate quantities.

To maximize the effectiveness of the distribution of harm reduction supplies, we must advocate for increased access to a full range of harm reduction supplies, distributed in adequate quantities, through a variety of approaches and settings, in every province and territory in Canada. We must also encourage education about how to use harm reduction supplies and about how they prevent harms, and support uptake of these supplies.

This CATIE statement was developed to help service providers in Canada evaluate and adapt their programs where necessary and advocate for evidence-based improvements to the distribution of harm reduction supplies. The statement begins with a simple key message, followed by recommendations for service providers and a list of available resources. It also provides a review of the evidence that service providers can use to support their advocacy efforts and funding proposals.

APRIL 2023

CATIE
Canada's source for HIV and hepatitis C information

KEY MESSAGE

The distribution of a full range of harm reduction supplies for safer injecting, smoking and snorting is fundamental to supporting the health and wellness of people who use drugs in Canada. Distributing a full range of harm reduction supplies in adequate quantities to meet community needs can reduce the transmission of hepatitis C and HIV and prevent a range of other potential harms associated with substance use. A full range of harm reduction supplies need to be distributed in adequate quantities in all provinces and territories, within a variety of settings, such as harm reduction programs, hospitals, correctional facilities and shelters. These supplies should be available at no cost to service users to ensure coverage among people who use drugs.

For more information, please see the evidence review below.

RECOMMENDATIONS

The distribution of harm reduction supplies for safer substance use is fundamental to supporting the health and wellness of people who use drugs. It is an evidence-based public health intervention that reduces a range of preventable harms related to substance use.

The distribution of harm reduction supplies also provides frontline service providers with key tools to connect with individuals who use drugs, build relationships and trust, provide education about safer substance use practices, provide education about preventing and responding to drug poisoning and overdose, distribute naloxone and support people to access other health and social services. It is crucial that supplies meet the needs of people who use drugs and that they are distributed in adequate quantities.

Each jurisdiction has its own system for funding harm reduction supplies and policies that influence their distribution. A range of stakeholders make decisions about funding for harm reduction supplies in each province and territory. In some provinces and territories, policy-makers in provincial or territorial governments and/or in regional public health units make decisions about funding and about which supplies to purchase and distribute. In other provinces and territories, frontline organizations independently purchase and distribute harm reduction supplies for their regions with available funds.

Below are recommendations for policy-makers at all levels and service providers in all provinces and territories to consider in regard to the distribution of harm reduction supplies in their regions.

1. Distribute a full range of harm reduction supplies.

A full range of harm reduction supplies should be available and distributed for free in all provinces and territories. In alignment with the Best Practice Recommendations for Canadian Programs that Provide Harm Reduction Supplies to People Who Use Drugs and are at Risk for HIV, HCV, and other harms, the full range of harm reduction supplies refers in this statement to the following items:

Safer injecting supplies: These supplies include needles and syringes of various brands, barrel sizes, types, gauges and volumes; alcohol swabs; cookers; sterile water; filters; tourniquets; post-injection dry swabs and ascorbic acid.

Safer smoking supplies: These supplies include straight stems, brass screens, push sticks, bowl pipes, mouthpieces, straws and foil that can be used to smoke drugs.

Safer snorting supplies: These supplies include straws for snorting drugs.

Distribution of each of these supplies is considered a best practice because they are each essential to reducing preventable harms related to injecting, smoking and/or snorting drugs.

Consistent and convenient access to a full range of harm reduction supplies supports people to use their preferred route of consumption and to implement practices that can prevent harms associated with substance use. Distributing a full range of harm reduction supplies can also help service providers to connect with people who use drugs who might not otherwise access harm reduction services. Through these connections, service providers can provide education, such as how to prevent and respond to drug poisoning and overdose, to a broader range of people who use drugs and support them to access other health and social services.

The distribution of harm reduction supplies must be flexible to adapt to community needs. There may be region-, community- or population-specific circumstances or trends that require the distribution of additional harm reduction supplies beyond those listed above. Involving people who use drugs in decisions about the distribution of harm reduction supplies is crucial to identifying changing trends and needs.

For further information on materials and other specifications to consider regarding harm reduction supplies, please refer to the Best Practice Recommendations for Canadian Programs that Provide Harm Reduction Supplies to People Who Use Drugs and are at Risk for HIV, HCV, and other harms.

2. Ensure that a full range of harm reduction supplies are distributed in adequate quantities.

A full range of harm reduction supplies must be distributed in adequate quantities to meet community needs. An adequate quantity means that a sufficient amount of each piece of equipment is distributed for people who use drugs to be able to consistently and conveniently access the supplies they

need to implement safer substance use practices every time they inject, smoke or snort drugs. When people do not have access to all the harm reduction supplies they need for these practices, they may reuse supplies, borrow or share supplies from others or use household items or homemade supplies that can cause a range of harms.

Adequate quantities for each category of harm reduction supply are defined as follows:

Safer injecting supplies. Safer injecting supplies are intended for single use. This means that all new sterile equipment is needed for every injection. Each province and territory should aim to distribute a quantity of needles and syringes that ensures that more than enough sterile needles and syringes are available for every injection. Recent estimates indicate that meeting this coverage target requires distributing at least 500–750 needles and syringes per person who injects drugs every year. For every needle and syringe distributed, at least one sterile cooker, one ampoule of sterile water, one filter, one alcohol swab, one post-injection dry swab and one tourniquet should also be offered. Ascorbic acid (vitamin C powder) should be offered as needed to people who inject drugs that require an acidifier to dissolve in water (i.e., crack cocaine or tar heroin).

Safer smoking supplies. Safer smoking supplies should not be shared but can be reused by an individual. If safer smoking supplies are reused, they should be replaced if they have any traces of blood on them, if they are cracked, chipped or burnt, or if they have been used by another person. Straight stems, bowl pipes, straws and foil should be distributed in sufficient quantity to ensure they are consistently accessible to people who use drugs. There are no known estimates for the quantities of safer smoking supplies necessary to achieve adequate coverage to reduce sharing and other harms. At least one mouthpiece should be offered with every straight stem and every bowl pipe. A push stick and at least one package of screens should also be offered with every straight stem.

Safer snorting supplies. Straws for snorting should not be shared but can be reused by an individual. If safer snorting supplies are reused, they should be replaced if they have any traces of blood on them or have been used by another person. Straws should be distributed in sufficient quantity to ensure they are consistently accessible to people who use drugs. There are no known estimates for the quantities of safer snorting supplies necessary to achieve adequate coverage to reduce sharing. Distributing straws in multiple colours can help people to ensure they do not accidently share supplies.

There should be no limit on the quantity of any supply that an individual can take. All supplies should be distributed for free without requiring exchange or return of used supplies. Requiring return or exchange can limit access to new supplies required for safer substance use. Exchange is not necessary to achieve high rates of equipment return.

Working toward the distribution of a full range of harm reduction supplies in adequate quantities will probably require increased funding from provinces and territories. This is because greater quantities of supplies will probably be required, and frontline service providers will need additional funding to distribute supplies and provide related education.

Multiple factors may contribute to people who use drugs experiencing challenges implementing safer substance use practices. Policy-makers and service providers should ensure that inadequate quantities of harm reduction supplies are not a barrier.

3. Increase the accessibility of harm reduction supplies to people who use drugs.

To maximize the effectiveness of the distribution of harm reduction supplies, people who use drugs need to have consistent and convenient access to the supplies they need to implement safer substance use practices. To increase access, harm reduction supplies should be distributed using a range of approaches and in a range of settings, including harm reduction programs, hospitals, correctional facilities and shelters. When people do not have access to new supplies, there is an increased risk of harms related to substance use (e.g., infections caused by sharing used supplies, harms caused by using household items or homemade supplies).

Multiple barriers can impact access to harm reduction supplies. These can include policy and funding barriers (e.g., criminalization, lack of policy and political support for harm reduction, local opposition, zoning bylaws that restrict where harm reduction programs can operate) and program-level barriers (e.g., operational hours, location of services, cultural safety).

Policy-makers at all levels (i.e., federal, provincial, municipal) can work to address policy and funding barriers. Strategies that have helped increase the accessibility of harm reduction supplies in some provinces include ensuring that public health policies explicitly recognize the effectiveness of harm reduction, mandating that harm reduction supplies are available in all regions of their jurisdiction, and creating funding and provincial or territorial programs dedicated to purchasing and distributing harm reduction supplies. These strategies can

overcome barriers to implementation as they can mitigate political barriers, expand access in all public health regions and enable frontline service providers to distribute a full range of harm reduction supplies without purchasing them from their own operational budgets. Policy- and decision-makers can also work to address barriers that restrict or deny people access to harm reduction supplies in hospitals, correctional facilities, shelters and other settings.

Service providers can work to address program-level barriers to help expand access to harm reduction supplies. These barriers will vary in different regions, for different populations and in different settings. People who use drugs need to be involved in the design, delivery and evaluation of systems and programs for the distribution of harm reduction supplies to ensure that barriers are identified and can be addressed. Interventions such as mobile outreach, mail-out distribution, vending machines and secondary (i.e., peer to peer) supply distribution are all potential ways to increase access to harm reduction supplies, particularly in rural or urban areas where distances to services can be significant. Successful implementation of these approaches requires consideration of a range of factors, including community needs, potential barriers and funding. Service providers can also work with communities of people who use drugs (e.g., youth, women, 2SLGBTQ+ people, Indigenous people, racialized communities) to ensure that their sites provide a welcoming atmosphere and their services are culturally safe.

4. Provide people who use drugs with education about safer injecting, safer smoking and safer snorting practices.

Service providers should offer education to service users about harm reduction supplies and safer substance use practices. This education should include information about what each supply is, what it is for and how to use it; safer injecting, smoking and snorting practices; the potential risks of sharing or reusing each injecting supply; the potential risks of sharing smoking or snorting supplies; the potential risks of using household items or homemade supplies; common substance use practices that can cause harms; and proper disposal of used harm reduction supplies. It should also include ongoing education about preventing and responding to drug poisonings and overdoses. Education about harm reduction supplies and safer substance use practices needs to be supported with adequate funding, training and other resources for frontline service providers.

5. Address underlying factors that cause harms for people who use drugs.

It is important to recognize and address the underlying structural and social factors that lead to health inequities and harms for people who use drugs.

Structural factors that can lead to harms for people who use drugs include the criminalization and prohibition of drug use, colonialism, racism and stigma, among others. As a result of these structural factors, people who use drugs are more likely to experience harms such as drug poisoning or overdose, infections and other health issues. They are also more likely to experience social factors that can create or worsen health inequities and harms. Some of these social factors include poverty, incarceration, housing and food insecurity and discrimination. All of these factors can increase the risk of harms related to substance use.

Policy-makers in federal, provincial and municipal governments need to address underlying factors by changing policies and laws that lead to health inequities and harms for people who use drugs. It is important that people who use drugs are meaningfully involved in the development and evaluation of all policies and laws that affect them.

Service providers working in harm reduction should also aim to support people by addressing any underlying factors that may lead to health inequities. Approaches can include adapting services to reduce barriers and improve access; supporting people to meet needs that are not directly related to substance use (e.g., housing, food security, access to cultural supports); providing timely and appropriate referrals to other services (e.g., opioid agonist therapy, safe supply, healthcare), including navigation support to improve linkage to care; and collaborating with other health and social service providers to address challenges that prevent people who use drugs from accessing quality care.

TOOLS AND RESOURCES

CATIE resources

- Harm Reduction Fundamentals: A toolkit for service providers – CATIE
- Safer substance use video series – CATIE videos
- Sharp Shooters – CATIE booklet
- Safer Crystal Meth Smoking – CATIE booklet
- Safer Crack Smoking – CATIE booklet

Guidelines, position statements, policy and program resources

- Best Practice Recommendations for Canadian Harm Reduction Programs – Working Group on Best Practice for Harm Reduction Programs in Canada
- Connecting: A Guide to Using Harm Reduction Supplies as Engagement Tools – Ontario Harm Reduction Distribution Program
- Position Statement: Safer Injection – Harm Reduction Nurses Association
- Canadian Harm Reduction Policy Project – Canadian Research Initiative in Substance Misuse
- Safer tablet injection: A resource for clinicians providing care to patients who may inject oral formulations – British Columbia Centre on Substance Use
- A Handbook for Starting and Managing Needle and Syringe Programmes in Prisons and Other Closed Settings – United Nations Office on Drugs and Crime

EVIDENCE REVIEW

Availability of harm reduction supplies in Canadian provinces and territories

Evidence about the distribution of harm reduction supplies is often incomplete or not up to date, and the availability of supplies can change on the basis of funding and other political factors.[1–3] As a result, it is challenging to determine the current status of the distribution of harm reduction supplies in every province and territory and within each health service region of a given province or territory. However, the available evidence suggests that there is variation between provinces and territories, and between regions of some provinces and territories.

Most provinces and territories distribute safer injecting supplies, with some distributing more than others.[4] Needles and syringes and alcohol swabs appear to be distributed in all provinces and most territories.[4] Other safer injecting supplies (e.g., cookers, sterile water, filters) are commonly distributed with needles and syringes. However, safer injecting supplies may not be distributed in adequate quantities.

Distribution of safer smoking supplies has historically been limited in Canada. However, it appears to be increasing rapidly. Many harm reduction programs began distributing safer smoking supplies for crack cocaine (i.e., straight stems, mouthpieces, push sticks and brass screens) within the past 10 years.[5] Distribution of safer smoking supplies for methamphetamine (i.e., bowl pipes and mouthpieces) in many provinces and territories appears to have expanded significantly over the past five years.[6–15] Distribution of foil remains limited to a few provinces.[6,13,15]

There is very little information available about the distribution of safer snorting supplies. Straws appear to be distributed only by provincial harm reduction supply distribution organizations in a couple of provinces.[2] Frontline organizations in other regions may purchase and distribute them, but evidence on this is lacking.

Within some provinces and territories, there may be variation in the types and amounts of supplies distributed (e.g., needles and syringes are distributed, but other safer injecting supplies are not; safer injecting supplies are distributed, but safer smoking and snorting supplies are not).[4,16–19]

Rationale for distributing a full range of harm reduction supplies

Potential harms from injecting

Injecting drugs can lead to a range of potential health issues. This includes infections caused by viruses such as hepatitis C, hepatitis B and HIV. In Canada between 2017 and 2019, a national survey of people who inject drugs found that 64% of respondents had ever had hepatitis C, 36% had a current hepatitis C infection and 10% had HIV.[20] These viruses can be passed when needles and other supplies used to inject drugs (e.g., cookers, filters and water) are reused by another person.[21–25] When individuals are preparing and using drugs, blood can be left behind on supplies and sometimes the blood is not visible. If the blood contains hepatitis C, hepatitis B and/or HIV and the supplies are reused by another person, they can be exposed to these viruses.[23] Transmission is possible if someone uses injecting supplies that a person with hepatitis C, hepatitis B, and/or HIV previously used.

Injecting drugs can also lead to infections caused by bacteria, including skin infections such as cellulitis and abscesses, blood poisoning, heart infections such as endocarditis, and bone infections such as osteomyelitis.[26,27] Bacteria commonly found on the skin and in the mucous membranes of the throat, mouth and nose can cause infections when they enter the bloodstream. Bacteria may enter the bloodstream during the injection process in multiple ways, including the following:

- if the injection site is not properly cleaned with an alcohol swab;[2]

- if injecting supplies are reused by the same person or someone else[28–30] because bacteria can remain and grow in used supplies such as cookers;[31]
- if household items or homemade supplies are used to prepare drugs, because these items can be contaminated by bacteria or fungi.[2,32] These may include spoons (as an alternative to sterile cookers), cigarette filters (as an alternative to sterile filters) and lemon juice (as an alternative to ascorbic acid).

Other harms that can be related to injecting drugs include blood clots, embolisms and vein damage. These harms can result from multiple factors and may be reduced by using new safer injecting supplies and following safer injecting practices. For example, blood clots can form due to damage or irritation at the injection site, which may be caused by particles in drugs not being filtered out or injecting with a used needle. Vein damage can be caused by injecting with used needles or using household items or homemade supplies (e.g., using a belt as a tourniquet, using vinegar or lemon juice instead of ascorbic acid).[2,32]

Distribution of safer injecting supplies

Distributing safer injecting supplies helps people who use drugs to follow safer injecting practices and reduces the risk of sharing supplies.[2,33,34] Distributing safer injecting supplies can prevent or reduce the harms associated with injecting drugs.[27,34] Reuse of any supply or use of household items or homemade supplies can introduce a range of preventable harms, as discussed in the previous section. Distributing safer injecting supplies can also support people who inject drugs to access education about drug poisoning and overdose prevention and response.

Potential harms from smoking

Smoking drugs is associated with a range of potential health issues. This includes cuts, burns and sores on the mouth, lips and gums. In turn, cuts, burns, and sores on the mouth can provide a route for transmission of viruses and other infections if pipes or other smoking supplies are shared.[35] The risk of harms from smoking drugs is higher when household items or homemade supplies are used to smoke drugs.[35] Among people who smoke drugs, there is evidence that hepatitis C and B may be passed when supplies used to smoke drugs are shared.[2,36] This is because these viruses are very hardy; hepatitis B can survive for more than a week on surfaces and hepatitis C can survive on metal, plastic or rubber for up to 28 days.[2,37]

Other infections that may be passed when smoking supplies are shared include pneumonia and tuberculosis.[2]

Distribution of safer smoking supplies

Distributing safer smoking supplies can prevent or reduce the harms associated with smoking drugs.[2,35] Distributing safer smoking supplies has been shown to support people to access education about safer smoking practices, to implement safer smoking practices and to reduce the number of times smoking supplies are reused.[35,38] It can also support people who smoke drugs to access education about drug poisoning and overdose prevention and response.

Distributing safer smoking supplies can also support people to reduce how frequently they inject drugs or to switch from injecting to smoking their drugs.[35,39] This can help to reduce injection-related harms (e.g., vein damage, infections from viruses and bacteria).[35,40,41] Conversely, lack of safer smoking supplies can increase binge or heavy use, lead to the consumption of larger doses and increase the likelihood that people will inject their drugs; all of these practices are associated with a higher risk of infections and other harms.[2]

Potential harms from snorting

Snorting drugs is associated with a range of potential health issues. When snorted, drugs can cause small blood vessels in the nose to rupture and bleed. The nasal passage can also be damaged by exposure to drugs (or fillers in drugs) or by sharp edges on snorting equipment.[2] Irritation of the inner lining of the nose can make it more susceptible to infections. Snorting drugs over a long period of time can damage the cartilage that divides the nose (called the septum).[2] The septum can become thinner or wear away entirely.[2]

Among people who snort drugs, there is evidence that hepatitis C may be passed when supplies are shared.[2,42] Evidence of hepatitis C virus has been found in blood left on straws used to snort drugs.[42]

Snorting can also lead to infections caused by bacteria and fungi. This can happen when people use household items such as banknotes to snort drugs. Research has found evidence of bacteria and fungi on banknotes,[43] which may lead to an infection if they are used to snort drugs.[2]

Distribution of safer snorting supplies

Distributing safer snorting supplies can reduce harms in multiple ways. They can help reduce many of the harms associated with snorting drugs by providing people with straws for their personal use, which reduces sharing.[2] The distribution of straws can also help to attract a broader range of people who use drugs to harm reduction services.[2] Distributing safer snorting supplies can also provide people with the option

to snort rather than smoke or inject.[2] This can reduce harms because snorting carries a lower risk of infection and other harms.[2] Distributing safer snorting supplies can also support people who snort drugs to access education about drug poisoning and overdose prevention and response.

Evidence about changing needs and inequities in harm reduction supply distribution

Evidence indicates that the need for safer injecting supplies may be increasing and that needs related to smoking and snorting supplies are changing. Evidence also suggests that inequities exist in the quantities of harm reduction supplies distributed by provinces and territories and that these quantities may not be meeting targets. Inequities also exist in the distribution of harm reduction supplies within certain settings.

Increasing need for safer injecting supplies

Trends among people who inject drugs indicate that the distribution of safer injecting supplies needs to increase to ensure adequate quantities. These trends include a growing population of people who inject drugs, increased injecting frequency, evidence of continued sharing of needles and syringes, and increased sharing of other injecting supplies.

Evidence indicates that the population of people who inject drugs in Canada is growing. A study estimated that the number of people who inject drugs in Canada increased from 130,000 people in 2011 to 171,900 people in 2016.[44] The quantity of safer injecting supplies that are distributed will need to increase to meet the growing need.

Shifts in drug use patterns are another factor suggesting the need for greater quantities of safer injecting supplies.[2,45] Changes in drug use patterns can influence how frequently people use or inject drugs, how frequently people reuse or share supplies and other practices that can increase or reduce the risk of harms.[46,47] National data indicate that between 2003–2005 and 2017–2019, there were increases in the proportion of people who inject drugs who reported injecting cocaine (60% to 80%), hydromorphone (30% to 50%), methamphetamine (7% to 44%), fentanyl (2% to 24%) and amphetamines (8% to 22%).[20] Many of these drugs are associated with higher injection frequency (e.g., fentanyl, methamphetamine, cocaine) and an increased likelihood of sharing supplies.[41,45,48]

Among people who inject drugs in Canada, there have also been shifts in the reuse and sharing of harm reduction supplies. National data indicate a reduction in the sharing of needles and syringes but an increase in the sharing of other injecting supplies (e.g., cookers, water, filters, tourniquets, alcohol swabs, ascorbic acid). Between 2017–2019, 12% of people who inject drugs reported injecting with used needles or syringes.[20] This represents a decrease from 2003–2005, when over 20% reported injecting with a used needle or syringe.[20] However, there has been an increase in the proportion of people who inject drugs who reported borrowing other injecting supplies, from 30% in 2003–2005 to 38% in 2017–2019.[20,49]

These findings indicate a continuing need to ensure that new needles and syringes are available for every injection. They may also indicate a growing need to ensure that other injecting supplies are distributed in adequate quantities. Lack of access to these supplies may be a factor driving increased sharing. It may also indicate the need for further education about the potential risks of sharing other injecting supplies.

Changing needs for safer smoking and snorting supplies

Data related to smoking or snorting drugs are more limited in Canada. However, the available data indicate that smoking and snorting are common routes of consumption among people who use drugs, that there have been changes to the drugs that are commonly smoked and that smoking and snorting supplies are frequently shared.

Data from surveys of people who inject drugs indicate that consumption of drugs by routes other than injecting (e.g., orally, smoking, snorting) is common. National data indicate that between 2017 and 2019, people who inject drugs reported using crack cocaine (48%), powder cocaine (47%) and methamphetamine (43%) by non-injection routes in the past six months.[20] Among people who accessed harm reduction services in British Columbia, the proportion of people who identified smoking as their preferred route of consumption increased from 52% in 2018 to 64% in 2021.[50,51] Four percent of people who accessed harm reduction services in British Columbia identified snorting as their preferred route of consumption in 2021.[50]

There have also been changes in the drugs that are commonly consumed through routes other than injecting. National data indicate that between 2003–2005 and 2017–2019 there were increases in the proportion of people who used methamphetamine (11% to 43%) and decreases in the proportion of people who reported using crack cocaine (67% to 48%).[20,52] National and regional data also indicate that consumption of opioids by non-injection routes such as smoking is common.[20,53] Among people who used opioids and accessed harm reduction services in British Columbia in 2019, 68% reported smoking opioids.[53] This type of information is

important to understanding the types of supplies that people will need.

National data suggest that supplies used to smoke or snort drugs are commonly shared. In 2017–2019, 56% of people who injected drugs reported borrowing used smoking or snorting supplies.[20]

These findings reinforce the need to ensure that adequate quantities of safer smoking and snorting supplies are distributed and that the distribution of safer smoking supplies adapts to shifting drug use trends to ensure that supplies appropriate for commonly used drugs are accessible (e.g., distributing bowl pipes and mouthpieces for safer smoking of methamphetamine; distributing foil for safer smoking of opioids).

Inequities in the quantities of harm reduction supplies distributed

Available data indicate that harm reduction supplies are not being distributed in adequate quantities for people to implement safer substance use practices every time they use.

There are multiple international and national targets for the coverage of needles and syringes needed to reduce rates of HIV or hepatitis C infection. Coverage refers to the quantity of supplies distributed per person per year. The "gold standard" for the distribution of needles and syringes is a new needle and syringe for every injection.[54] Research suggests that higher levels of coverage (e.g., distributing 150% more needles and syringes than required) are associated with a significantly reduced risk that individuals will share supplies.[33]

National surveillance data estimate that the median injection frequency in Canada is 408 injections per person who injects drugs per year.[54] On the basis of this estimate, in 2019 the Blueprint to Inform Hepatitis C Elimination Efforts in Canada proposed a target coverage of 500 needles and syringes per person who injects drugs by 2025 and 750 by 2030.[54] However, these targets may be based on older data and it is possible that injection frequency has increased since these targets were established. Injection frequency may have increased due to changes in the drug supply and changing drug use patterns, meaning that larger quantities of needles and syringes could be needed to achieve adequate coverage.

The most recent data indicate that needle and syringe distribution in Canada is not meeting this coverage target. In 2016, it was estimated that across Canada there was an average of 291 needles and syringes distributed per person who injects drugs.[44] There is also significant variation in the coverage of needles and syringes between the provinces and territories. The 2016 coverage estimates for each province and territory for which data are available are as follows:[44] Alberta (883 needles and syringes per person who injects drugs), Saskatchewan (719), Nova Scotia (465), Prince Edward Island (416), British Columbia (315), Ontario (236), New Brunswick (220), Manitoba (207), Quebec (168), Yukon (156) and Newfoundland and Labrador (134). These data suggest that significant increases in the quantity of needles and syringes distributed in most provinces and territories are needed to meet coverage targets.

In provinces and territories that distribute needles and syringes, other safer injecting supplies (e.g., cookers, sterile water, filters) are also commonly distributed. However, these other injecting supplies may not be distributed in adequate quantities, distributed within all health service regions of the province or territory or distributed consistently throughout the year.[6,16,18,55–57] Ensuring that other safer injecting supplies are distributed in adequate quantities (i.e., at least one sterile cooker, one ampoule of sterile water, one filter, one alcohol swab, one tourniquet and one post-injection dry swab for every needle and syringe) is crucial to ensuring that people who inject drugs can consistently implement safer injecting practices.

The distribution of safer smoking and snorting supplies is not systematically tracked in Canada. There is limited information and no national or international targets regarding the quantities of safer smoking and snorting supplies needed to achieve adequate coverage. Ensuring that safer smoking and snorting supplies are available within all regions of each province and territory may help to ensure that people who use drugs can consistently implement safer smoking and snorting practices.

Inequities in harm reduction supply distribution can be caused by inadequate funding and political factors.1–3 These factors can limit the range of supplies that are distributed (e.g., funding may be available for needles and syringes, but not for other safer injecting supplies or for smoking or snorting supplies). They can also limit the distribution of harm reduction supplies within certain settings, such as hospitals, correctional facilities and shelters.[58, 59] For example, despite their effectiveness and safety,[59] prison-based needle and syringe programs exist in only nine of 43 federal correctional facilities in Canada and multiple barriers reduce people's ability to access them.[60] Inadequate funding can also limit the quantities available for distribution. To address the root causes of these inequities, jurisdictions across Canada must ensure that the full range of harm reduction supplies are available for distribution and that there is an adequate quantity for people to implement safer substance use practices every time they use.

REFERENCES

1. Hyshka E, Anderson-Baron J, Karekezi K et al. Harm reduction in name, but not substance: a comparative analysis of current Canadian provincial and territorial policy frameworks. *Harm Reduction Journal*. 2017;14(1):1–14.
2. Strike C, Miskovic M, Perri M et al. *Best Practice Recommendations for Canadian Programs that Provide Harm Reduction Supplies to People Who Use Drugs and Are at Risk for HIV, HCV, and Other Harms*: 2021. Toronto: Working Group on Best Practice for Harm Reduction Programs in Canada; 2021. Available from: https://www.catie.ca/best-practice-recommendations-for-canadian-harm-reduction-programs [accessed 2023 Jan 4].
3. Temenos C. Everyday proper politics: rereading the post-political through mobilities of drug policy activism. *Transactions of the Institute of British Geographers*. 2017; 42(4):584–96.
4. Canadian Research Initiative in Substance Misuse. BC, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Newfoundland and Labrador, New Brunswick, PEI, Nova Scotia, Yukon, NWT, Nunavut Case Reports. Edmonton: Canadian Research Initiative in Substance Misuse; 2018. Available from: https://crismprairies.ca/charpp/ [accessed 2023 Jan 30].
5. Strike C, Watson TM. Education and equipment for people who smoke crack cocaine in Canada: progress and limits. *Harm Reduction Journal*. 2017 May 12;14(1):17.
6. Alberta Community Council on HIV. *2018–2019 Annual Report*. Stony Plain (AB): Alberta Community Council on HIV; 2019. Available from: https://static1.squarespace.com/static/5e78e384490bc501575f352c/t/5e7e38f7aff3dd280692f12c/1585330429690/ACCH_AnnualReport+2018-2019.pdf [accessed 2023 Jan 30].
7. ACNL. Safe Works Access Program (SWAP). Available from: https://acnl.net/services/swap/ [accessed 2023 Jan 30].
8. Blood Ties Four Directions. Harm reduction. Available from: https://bloodties.ca/harm-reduction/ [accessed 2023 Jan 30].
9. CACTUS Montreal. How can I get new supplies or dispose of used gear? Available from: https://cactusmontreal.org/en/services-en/drug-use-supplies/ [accessed 2023 Jan 30].
10. Healthy Sexuality and Harm Reduction. *Safer Smoking: Introducing Bubble Smoking Harm Reduction Supply*. Winnipeg (MB): Healthy Sexuality and Harm Reduction; 2022 Jan. Available from: https://streetconnections.ca/files/Safer-Smoking_Bubble-Pipes-Distribution_Report.pdf [accessed 2023 Jan 30].
11. Latimer K. Sask. to provide crack and crystal meth pipes at harm reduction centres. *CBC News*. 2018 Nov 8. Available from: https://www.cbc.ca/news/canada/saskatchewan/sask-plans-for-safer-inhalation-supplies-1.4897188 [accessed 2023 Jan 30].
12. Mainline Needle Exchange. About us. Available from: http://mainlineneedleexchange.ca/about-us/ [accessed 2023 Jan 30].
13. OHRDP. Bowl pipes. Available from: https://ohrdp.ca/supplies/#panel-bowlpipes [accessed 2023 Jan 30].
14. Smith C. Ensemble Moncton's new dispensing machine offers meth pipes, naloxone, hygiene products. *Global News*. 2020 Dec 11. Available from: https://globalnews.ca/news/7517290/ensemble-moncton-dispensing-machine-meth-pipes-naloxone-hygiene-products/ [accessed 2023 Jan 30].
15. Toward the Heart. Harm Reduction Program: supply requisition form. Available from: https://towardtheheart.com/assets/uploads/167528150 1M90r3UpvAQanPhMWYOZuVIxHyjhxwfbOIixOoEO.pdf [accessed 2023 Jan 30].
16. Buxton JA, Preston EC, Mak S et al. More than just needles: an evidence-informed approach to enhancing harm reduction supply distribution in British Columbia. *Harm Reduction Journal*. 2008;5:1–7.
17. Strike C, Watson TM, Lavigne P et al. Guidelines for better harm reduction: evaluating implementation of best practice recommendations for needle and syringe programs (NSPs). *International Journal of Drug Policy*. 2011;22(1):34–40.
18. Canadian HIV/AIDS Legal Network. *Sticking Points: Barriers to Access to Needle and Syringe Programs in Canada. 2007*. Toronto: HIV Legal Network; 2007. Available from: https://www.hivlegalnetwork.ca/site/sticking-points-barriers-to-access-to-needle-and-syringe-programs-in-canada/?lang=en
19. Saskatchewan Ministry of Health. HIV *Prevention and Control Report, 2018*. Regina (SK): Saskatchewan Ministry of Health; 2018. Available from: https://publications.saskatchewan.ca/#/products/64628 [accessed 2023 Jan 30].

20. Tarasuk J, Zhang J, Lemyre A et al. National findings from the Tracks survey of people who inject drugs in Canada, Phase 4, 2017–2019. *Canada Communicable Disease Report*. 2020;46(5):138–48.

21. Thompson SC, Boughton CR, Dore GJ. Blood-borne viruses and their survival in the environment: Is public concern about community needlestick exposures justified? *Australian and New Zealand Journal of Public Health*. 2003 Dec;27(6):602–7.

22. Hagan H, Thiede H, Weiss NS et al. Sharing of drug preparation equipment as a risk factor for hepatitis C. *American Journal of Public Health*. 2001;91(1):42–6.

23. Shah SM, Shapshak P, Rivers JE et al. Detection of HIV-1 DNA in needle/syringes, paraphernalia, and washes from shooting galleries in Miami: a preliminary laboratory report. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*. 1996 Mar;11(3):301–6.

24. Ball LJ, Puka K, Speechley M et al. Sharing of injection drug preparation equipment is associated with HIV infection: a cross-sectional study. *Journal of Acquired Immune Deficiency Syndromes.* 2019;81(4):e99–e103.

25. Vogt TM, Perz JF, van Houten CK et al. An outbreak of hepatitis B virus infection among methamphetamine injectors: the role of sharing injection drug equipment. *Addiction*. 2006 May;101(5):726–30.

26. Dunn A, Gauthier T. Introduction to Common Wounds for PWID. 2018 Nov. Available from: https://issuu.com/nextdistro/docs/zine_wound_care_web_110118 [accessed 2023 Feb 1].

27. Larney S, Peacock A, Mathers BM et al. A systematic review of injecting-related injury and disease among people who inject drugs. *Drug and Alcohol Dependence*. 2017;171:39–49.

28. Asher AK, Zhong Y, Garfein RS et al. Association of self-reported abscess with high-risk injection-related behaviors among young persons who inject drugs. *Journal of the Association of Nurses in AIDS Care*. 2019 Mar 1;30(2):142–50.

29. Shah M, Wong R, Ball L et al. Risk factors of infective endocarditis in persons who inject drugs. *Harm Reduction Journal*. 2020 Jun 5;17(1):35.

30. Olubamwo O, Onyeka IN, Aregbesola A et al. Association between route of illicit drug administration and hospitalizations for infective endocarditis. *SAGE Open Medicine*. 2017 Dec;5:205031211774098.

31. Kasper KJ, Manoharan I, Hallam B et al. A controlled-release oral opioid supports *S. Aureus* survival in injection drug preparation equipment and may increase bacteremia and endocarditis risk. *PLoS ONE*. 2019;14(9):1–12.

32. Miskovic M, Zurba N, Beaumont D et al. *Connecting – A Guide to Using Harm Reduction Supplies as Engagement Tools*. Kingston (ON): Ontario Harm Reduction Distribution Program, Kingston Community Health Centres; 2020. Available from: https://ohrdp.ca/connecting-guide/

33. Bluthenthal RN, Anderson R, Flynn NM et al. Higher syringe coverage is associated with lower odds of HIV risk and does not increase unsafe syringe disposal among syringe exchange program clients. *Drug and Alcohol Dependence*. 2007 Jul 10;89(2–3):214–22.

34. Palmateer N, Hamill V, Bergenstrom A et al. Interventions to prevent HIV and hepatitis C among people who inject drugs: latest evidence of effectiveness from a systematic review (2011 to 2020). *International Journal of Drug Policy*. 2022;109:103872.

35. Leonard L, DeRubeis E, Pelude L et al. "I inject less as I have easier access to pipes": injecting, and sharing of crack-smoking materials, decline as safer crack-smoking resources are distributed. *International Journal of Drug Policy*. 2008;19(3):255–64.

36. Macías J, Palacios RB, Claro E et al. High prevalence of hepatitis C virus infection among noninjecting drug users: association with sharing the inhalation implements of crack. *Liver International*. 2008 Feb 27;28(6):781–6.

37. Ciesek S, Friesland M, Steinmann J et al. How stable is the hepatitis C virus (HCV)? Environmental stability of HCV and its susceptibility to chemical biocides. *Journal of Infectious Diseases*. 2010 Jun 15;201(12):1859–66.

38. Jozaghi E, Lampkin H, Andresen MA. Peer-engagement and its role in reducing the risky behavior among crack and methamphetamine smokers of the Downtown Eastside community of Vancouver, Canada. *Harm Reduction Journal*. 2016 Jun 8;13(1):19.

39. Bourque S, Pijl EM, Mason E et al. Supervised inhalation is an important part of supervised consumption services. *Canadian Journal of Public Health*. 2019;110(2):210–5.

40. Islam S, Piggott DA, Moriggia A et al. Reducing injection intensity is associated with decreased risk for invasive

bacterial infection among high-frequency injection drug users. *Harm Reduction Journal*. 2019 Jun 17;16(1):38.

41. Tyndall MW, Currie S, Spittal P et al. Intensive injection cocaine use as the primary risk factor in the Vancouver HIV-1 epidemic. *AIDS*. 2003;17(6):887–93.

42. Aaron S, McMahon JM, Milano D et al. Intranasal transmission of hepatitis C virus: virological and clinical evidence. *Clinical Infectious Diseases*. 2008 Oct 1;47(7): 931–4.

43. Angelakis E, Azhar EI, Bibi F et al. Paper money and coins as potential vectors of transmissible disease. *Future Microbiology*. 2014 Feb;9(2):249–61.

44. Jacka B, Larney S, Degenhardt L 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. *American Journal of Public Health*. 2020;110(1):45–50.

45. Scheim A, Bardwell G, Rachlis B et al. Syringe sharing among people who inject drugs in London, Canada. *Canadian Journal of Public Health*. 2018 Apr;109(2): 174–82.

46. Ciccarone D, Bourgois P. Explaining the geographical variation of HIV among injection drug users in the United States. *Substance Use and Misuse*. 2003;38(14):2049–63.

47. Ciccarone D, Bourgois P. Injecting drugs in tight spaces: HIV, cocaine and collinearity in the Downtown Eastside, Vancouver, Canada. *International Journal of Drug Policy*. 2016;33:36–43.

48. Lambdin BH, Bluthenthal RN, Zibbell JE et al. Associations between perceived illicit fentanyl use and infectious disease risks among people who inject drugs. *International Journal of Drug Policy*. 2019 Dec 1;74:299–304.

49. Public Health Agency of Canada. *Summary of Key Findings from I-Track Phase 3 (2010–2012)*. Ottawa (ON): Public Health Agency of Canada; 2014 Oct.

50. BC Centre for Disease Control. 2021 BC Harm Reduction Client Survey. 2022. Available from: http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Statistics%20and%20Reports/Overdose/2021%20-%20BC_Overall_HR%20Survey%20%28Apr%2020%29.pdf [accessed 2023 Feb 27].

51. George R, Steinberg A, Buxton J. *BC Harm Reduction Client Survey: Background and Significant Findings throughout the Years*. Vancouver: BC Centre for Disease Control; 2021. Available from: http://www.bccdc.ca/Health-Professionals-Site/Documents/Harm-Reduction-Reports/Harm%20Reduction%20Client%20Survey%20Findings_May%202021.pdf [accessed 2023 Mar 2].

52. Public Health Agency of Canada. *I-Track: Enhanced Surveillance of HIV, Hepatitis C and Associated Risk Behaviours Among People Who Inject Drugs in Canada: Phase 2 Report*. Ottawa (ON): Public Health Agency of Canada; 2013.

53. Parent S, Papamihali K, Graham B et al. Examining prevalence and correlates of smoking opioids in British Columbia: opioids are more often smoked than injected. *Substance Abuse Treatment, Prevention, and Policy*. 2021; 16(1):79.

54. The Canadian Network on Hepatitis C Blueprint Writing Committee and Working Groups. *Blueprint to Inform Hepatitis C Elimination Efforts in Canada*. Montreal (QC): Canadian Network on Hepatitis C; 2019. Available from: https://www.canhepc.ca/sites/default/files/media/documents/blueprint_hcv_2019_05.pdf

55. Institut national de santé publique du Québec. Matériel d'injection et d'inhalation pour prévenir la transmission du VIH et des hépatites B et C chez les personnes qui utilisent des drogues par injection au Québec : avril 2015 à mars 2016. Quebec City (QC): Institut national de santé publique du Québec; 2017;1–6. Available from: https://www.inspq.qc.ca/sites/default/files/publications/2332_materiel_injection_inhalation_transmission_vih_hepatites_b_c.pdf

56. Lee J, Buxton J. *BC Harm Reduction Strategies and Services Committee. Policy Indicators Report. Data to December 31, 2016*. Vancouver: BC Centre for Disease Control; 2017. Available from: http://www.bccdc.ca/resource-gallery/Documents/2017 HRSS Indicators Report final.pdf

57. Kirkland S, Ploem C, Dikaios K. *Program Evaluation for Mainline Needle Exchange: Contributing to a Harm Reduction Landscape in Nova Scotia*. Halifax (NS): Atlantic Interdisciplinary Research Network; 2016. Available from: https://www.airn.ca/uploads/8/6/1/4/86141358/mainline_evaluation_report_final_2027.pdf

58. Brothers T, Mosseler K, Kirkland S et al. Unequal access to opioid agonist treatment and sterile injecting equipment among hospitalized patients with injection drug use associated infective endocarditis. *PLoS ONE*. 2022;17(1):e0263156.

59. United Nations Office on Drugs and Crime. *A Handbook for Starting and Managing Needle and Syringe Programmes in Prisons and Other Closed Settings*. Vienna: United Nations Office on Drugs and Crime; 2014. Available from: https://www.unodc.org/documents/hiv-aids/2017/ADV_PNSP_REV_FEB2015with_cover1.pdf

60. Ka Hon Chu S, De Shalit A, Thomas R et al. *Points of Perspective: Research Report on the Federal Prison Needle Exchange Program in Canada*. Toronto (ON): HIV Legal Network and Toronto Metropolitan University; 2022. Available from: https://www.hivlegalnetwork.ca/site/points-of-perspective-research-report-on-the-federal-prison-needle-exchange-program-in-canada/?lang=en

www.catie.ca

/CATIEinfo

DISCLAIMER

CATIE strengthens Canada's response to HIV and hepatitis C by bridging research and practice. We connect healthcare and community-based service providers with the latest science, and promote good practices for prevention and treatment programs.

CATIE endeavours to provide up-to-date and accurate information at the time of publication, but it should not be considered medical advice. Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner. CATIE resources may contain descriptions or depictions of sex, sexuality or drug use, with the goal of promoting public health. Any opinions expressed herein may not reflect the policies or opinions of CATIE or any partners or funders.

Production of this document has been made possible through a financial contribution from Health Canada's Substance Use and Addictions Program..

PERMISSION TO REPRODUCE