

CATIE STATEMENT

on safer supply

For nearly a decade, Canada has been experiencing a public health crisis of drug toxicity (overdose) deaths driven by the unregulated drug supply. Drugs available from the unregulated supply are highly potent, unpredictable and increasingly toxic, often containing novel and unknown substances. As a result, people who use unregulated drugs are at high risk of drug toxicity death and numerous other negative health outcomes. In response to this crisis, an approach called safer supply has emerged. Safer supply involves providing regulated, pharmaceutical-grade alternatives for people who are at high risk of drug toxicity and other harms. The contents and potency of safer supply medications are regulated, known and consistent, potentially reducing the risk of overdose for people who use drugs. Safer supply is a newer approach, grounded in harm reduction, that aims to reduce the risk of drug toxicity death, support the health of people who use drugs and complement the existing spectrum of substance use services.

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This CATIE statement aims to support service providers and policy-makers by providing evidence-informed recommendations related to the provision of safer supply in Canada.

KEY MESSAGE

The unregulated drug supply is causing an extraordinary public health crisis in Canada. The potency, unpredictability and toxicity of unregulated drugs are leading to significant harm to the lives and health of people who use drugs. Significant policy changes and a full spectrum of programs and services for people who use drugs, including a range of harm reduction and treatment options, are needed to address this crisis. Safer supply is a newer harm reduction approach that involves providing people who use drugs who are at high risk of drug toxicity death and associated harms with pharmaceutical-grade alternatives to unregulated drugs. Safer supply has the potential to complement the spectrum of substance use services.

Safer supply is currently delivered through a medical model that involves healthcare providers prescribing pharmaceutical medications to eligible clients as alternatives to the unregulated drug supply. Safer supply is only offered to people with a substance use disorder who currently use unregulated drugs. Owing to limited prescriber and program capacity, additional eligibility criteria may also be used, such as currently injecting opioids such as fentanyl; previously having attempted opioid agonist treatment (OAT); and experiencing health issues such as hepatitis C, HIV and/or serious bacterial infections.

The evidence base related to safer supply is rapidly evolving. To date, research suggests that safer supply is associated with a range of positive outcomes for people who use drugs. This includes evidence that safer supply can help reduce the risk of drug toxicity death for people who use drugs. It has also been found to improve health and social outcomes for people who use drugs, such as reduced use of unregulated drugs, improved overall health and well-being, reduced opioid-related hospital visits, increased access to primary care, increased access to treatment of infections such as hepatitis C and HIV, improved stability and control over drug use, reduced unsafe injecting practices and reduced involvement in criminal activities. Further research and program evaluations are needed to continue to increase our understanding of how safer supply impacts risk of drug toxicity death and other health and social outcomes, both for program participants and on a population level.

More research is also needed with regard to program implementation. Existing evidence indicates that a number of

factors influence the uptake and use of safer supply programs, such as the medications provided and whether they meet participants' needs, the program models themselves (e.g., integration with other services, offering comprehensive health and social services), the involvement of people who use drugs, and political and organizational support. Further research should identify program- and individual-level factors associated with the greatest improvements in health and social outcomes and explore how different program models and elements can best meet the diverse needs of people who use drugs.

RECOMMENDATIONS

The following recommendations were developed on the basis of a review of available evidence (e.g., peer-reviewed articles, program evaluations) about safer supply, up to March 2024. The evidence review was supported by a systematic search of peer-reviewed literature related to safer supply completed in July 2023. This was supplemented by weekly searches between July 2023 and March 2024 for new peer-reviewed publications related to safer supply and by searches of the relevant grey literature (e.g., evidence reviews, program evaluations), to ensure that newer evidence was considered for inclusion.

There are a range of stakeholders involved in the policies, programs and practices that shape safer supply in each province and territory. They include federal health and drug policy decision-makers, provincial public health and healthcare decision-makers; healthcare providers and their professional colleges and associations; and organizational leaders, program managers, frontline service providers and people who use drugs.

Below are recommendations for decision-makers at all levels and service providers in all provinces and territories to consider regarding the provision of safer supply in their regions.

1. Support safer supply to expand alongside, and integrate with, the existing spectrum of services for people who use drugs.

A full spectrum of programs and services is urgently needed to reduce harms and to help address the toxic drug crisis. This is because different options work better for different people in different contexts at different times. The spectrum of programs and services should include access to a wide array of evidence-based harm reduction (e.g., harm reduction supply distribution, naloxone distribution, supervised consumption services) and voluntary, evidence-based treatment approaches (e.g., opioid agonist treatment, injectable opioid agonist treatment, psychosocial treatments and inpatient and outpatient treatment).

The availability, access and scale of these programs and services needs to be addressed. Access to harm reduction and treatment services remains limited for many people who

use drugs in Canada. These approaches need to be urgently scaled up to have an impact on the toxic drug crisis. Continued exploration of new approaches is also needed to address the gaps and limitations in the existing spectrum of services.

Safer supply is a promising addition to the spectrum of substance use services. Evidence suggests it can complement existing harm reduction and treatment approaches. For example, safer supply can reduce the risk of drug toxicity death during times that supervised consumption services are closed and while someone is waiting to access withdrawal management or inpatient treatment services. It can also support people to start and stay on opioid agonist treatment. Safer supply has been provided in a wide range of settings (e.g., community health centres, supervised consumption services, opioid agonist treatment services, housing and shelter settings), indicating that it is a flexible and adaptable approach that can be integrated with the existing spectrum of services. Integration in this way can allow for the provision of a range of programs, services and supports where people are already accessing services.

Currently, access to safer supply is limited. There are very few programs and prescribers across Canada, with particular scarcity in rural and remote regions. To ensure that eligible individuals can benefit from safer supply, barriers to access need to be addressed. There needs to be support — in the form of funding, planning, and integration with other services — from public health and healthcare systems at all levels.

2. Continue to develop, implement and evaluate a range of safer supply models and approaches to understand the elements of effective programs and best practices in implementation.

The development and implementation of safer supply in Canada has largely occurred within the emergency context of the COVID-19 pandemic, with limited resources available for system and program planning.

Safer supply has been implemented in a range of settings (e.g., integrated with primary care, harm reduction or treatment services), through various approaches (e.g., biometric dispensing, co-located with supervised consumption services, supervised and unsupervised dosing) and with various objectives (e.g., to enable people to stay in isolation during COVID-19 infection, to support engagement in healthcare, to reduce risk of drug toxicity death).

Existing programs have taken different approaches to a range of program elements, such as medication options and dispensing practices, the availability of comprehensive health

and social support services and the use of urine drug screens. On one hand, this suggests that safer supply is an adaptable approach. On the other, it makes it challenging to determine which program elements are most effective and who would benefit most from various program elements.

Further research is needed to better understand how various program approaches and elements can best address the diverse needs of people who use drugs, reduce the risk of drug toxicity death and other harms, and integrate with healthcare systems.

3. Expand the types of opioids available for participants in safer supply programs.

Safer supply has primarily focused on reducing the risk of drug toxicity death faced by people who use unregulated opioids. Immediate-release hydromorphone tablets (e.g., Dilaudid) are commonly prescribed as an alternative to unregulated opioids. Long-acting opioids (e.g., methadone, slow-release oral morphine) may also be prescribed alongside immediate-release hydromorphone tablets to help prevent withdrawal symptoms for longer periods of time. These medications are often provided because they are covered by public drug formularies. This means that they are available and their costs are covered by public insurance without requirements for special permission for access. These medications work for some people and should continue to be an option. However, the available evidence shows that hydromorphone tablets may not meet some participants' needs for various reasons (e.g., matching opioid tolerance to avoid withdrawal, providing desired effects, matching preferred route of consumption).

It is important to meet people's needs because doing so can support program retention and the use of safer supply as prescribed, which should reduce the risk of drug toxicity death. If people's needs are being met by the drugs that have been prescribed to them, it may also lower the risk that people will sell or share (i.e., divert) their medications.

While there is limited evidence on the most effective ways to expand the range of opioids provided as safer supply, options could include the following:

- **Expanding access to higher strength injectable formulations of opioids** such as diacetylmorphine and high-dose liquid hydromorphone. Federal regulations have made these drugs available for treatment of opioid use disorder, but they are not accessible because of a number of barriers (e.g., lack of domestic supply of diacetylmorphine, lack of public drug plan coverage for diacetylmorphine and high-dose liquid hydromorphone).

- **Implementing, evaluating and expanding smokable opioid options.** There has been a shift in preferred routes of consumption, with many people reporting a preference for smoking rather than injecting. Expanding the options and availability of smokable opioids (e.g., oxycodone, smokable diacetylmorphine) in safer supply programs may help to better meet people’s needs.
- **Implementing, evaluating and expanding access to fentanyl-based safer supply options.** Owing to the strength of fentanyl in the unregulated supply and some people’s high opioid tolerances, fentanyl-based options may help meet their needs.

Programs providing access to an expanded range of opioids should be evaluated to understand their impacts on health outcomes, program retention, effective program elements and other indicators.

Program-level policies and practices related to the provision of these additional opioid options should be developed in collaboration with a range of stakeholders, including people with living experience and current and potential program clients. Innovative policies and practices could be explored that balance the need for higher strength opioids (e.g., diacetylmorphine, fentanyl) and additional routes of consumption (e.g., smoking) with measures to mitigate potential harms such as overdose and diversion.

4. Develop, implement and evaluate approaches that focus on improving equity in the provision of safer supply.

In efforts to implement and understand the impact of safer supply, it is critical to consider the distinct needs of diverse communities. To this end, programs that focus on improving equity in the provision of safer supply need to be developed, implemented and evaluated. This work includes the following:

Developing, implementing and evaluating programs that provide safer supply in non-urban communities:

Drug toxicity deaths occur in communities across Canada, including rural and remote communities. However, the majority of safer supply programs and related research and evaluation have been focused on urban areas. Working with rural and remote communities to understand local contexts, barriers and opportunities can help tailor safer supply programs to the needs of people who use drugs in these communities. For example, virtual or telephone assessments and prescribing could be incorporated into programs, with dispensing by local community pharmacies.

Developing, implementing and evaluating programs that provide safer supply for Indigenous

people, Black people, people of colour, two-spirit, lesbian, gay, bisexual, trans and queer (2SLGBTQ+) people, youth, women and non-binary people:

Social and structural factors such as colonialism, racism and patriarchy intersect to increase the risk of drug toxicity death and reduce access to health and social services among certain communities and groups. Developing relationships, partnerships and programs to provide safer supply in culturally safe ways may help improve equity in access to safer supply and reduce harms related to substance use for marginalized groups.

Developing, implementing and evaluating programs that provide stimulant safer supply:

Stimulant use in Canada has increased in recent years and stimulants appear to be playing a significant role in the toxic drug crisis. People who use stimulants are vulnerable to drug toxicity death because of contamination of stimulants with opioids such as fentanyl and also because of combined or concurrent use of fentanyl with stimulants. Recognizing the diverse reasons that people use stimulants may help to inform programs that aim to meet the needs of people who use stimulants. Stimulant safer supply medications should include smokable options to match people’s preferred routes of consumption.

5. Implement and evaluate novel non-medical models of safer supply, including community-driven and public health approaches.

Existing models of safer supply have primarily been delivered through a medical model that combines harm reduction and healthcare. The medical model, which relies on individual prescribers and the healthcare system, may be insufficient to reduce harms on a population level. Novel non-medical approaches, including community-driven and public health approaches to the distribution of regulated drugs, could be sanctioned and supported to better explore their impacts and effectiveness.

6. Involve people who use drugs in all aspects of safer supply program development, implementation and evaluation.

The meaningful involvement of affected communities in decisions about policies, programs and services that aim to serve them is a core principle of effective public health and harm reduction. Research has identified the involvement of people who use drugs in safer supply as a key factor in supporting the implementation of safer supply programs. People who use drugs have been leaders in all aspects of safer supply, including conceptualizing the approach and advocating for its implementation. People who use drugs have been

involved in the development, implementation and evaluation of effective approaches to safer supply and have helped programs to gain community trust, to support people to access safer supply and to recognize and address program barriers. To be effective, safer supply must be centred on the needs and expertise of people who use drugs.

7. Investigate the prevalence, drivers and outcomes of diversion of safer supply to inform the development of appropriate responses.

Diversion refers to the selling, trading, sharing or giving away of prescription medications to other people. It is a known challenge with pharmaceutical medications, particularly those with psychoactive effects. For many years, there have been concerns about diversion of opioids prescribed for pain and for the treatment of opioid use disorder (e.g., methadone, buprenorphine). In recent years, diversion has also been raised as a concern related to safer supply.

Currently, there is very limited evidence related to diversion of safer supply, including its frequency and scale. There is also limited evidence about the community- and population-level effects of diversion of safer supply. Some research and anecdotal reports have suggested that selling or sharing pharmaceutical alternatives with people who use drugs who are unable to access safer supply may reduce their risk of drug toxicity death. However, if medications are sold to people who would not otherwise use unregulated drugs, this raises concerns about the development of opioid use disorder and risk of overdose. To date, there is no population-level evidence that diversion is leading to increased diagnoses of opioid use disorder or contributing to the risk of drug toxicity death.

Safer supply programs implement a range of policies and practices to identify potential cases of diversion and support healthcare providers to address this issue with their patients. Addressing and preventing diversion can involve providing support related to factors that can drive diversion (e.g., ensuring that medications meet participants’ needs, ensuring that participants’ basic needs are met).

To support the implementation of safer supply, research is needed to better understand diversion and to evaluate measures that prevent and address it. These measures should be developed with a range of stakeholders to ensure that they do not raise barriers to accessing safer supply.

8. Address social and structural factors that harm people who use drugs.

It is important to recognize and address the underlying structural factors and social inequities that lead to 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, stigma, colonialism, racism and gender inequities. These structural factors make it more likely for people who use drugs to experience harms such as drug toxicity, infections and other health issues. They also marginalize individuals and communities, resulting in social inequities that worsen health outcomes and increase vulnerability to substance use disorders. Some of these social inequities are related to factors such as trauma, poverty, incarceration, housing and food insecurity, and discrimination.

Decision-makers and public health officials at the federal, provincial and local levels need to address these underlying factors. Actions could include ending the prohibition and criminalization of drug use, which are root causes of many harms related to substance use, and investing in addressing the social determinants of health. Service providers working with people who use drugs should be provided with sufficient funding and resources to help individuals to address 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, cultural supports, pregnancy and parenting support); providing timely and appropriate referrals to other services (e.g., healthcare), including navigation support to improve linkage to care; and collaborating with other healthcare 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

Victoria SAFER Initiative

MySafe safer opioid supply program using biometric dispensing machines

Safer opioid supply (SOS) program

Opioids prescribed under risk mitigation guidance (RMG) associated with reduced risk of overdose death in B.C.

Concept documents, evidence reviews and policy resources

Prescribed safer opioid supply: A scoping review of the evidence – International Journal of Drug Policy

Safe supply: Concept document – Canadian Association of People Who Use Drugs

Imagine Safe Supply: Summary of Findings – Canadian Drug Policy Coalition

Prescribed Alternatives Programs: Emerging Evidence – National Safer Supply Community of Practice

Framework for a Public Health Approach to Substance Use – Canadian Public Health Association

EVIDENCE REVIEW

Changes in the unregulated drug supply: increasing risk of drug toxicity death and other harms

Canada is experiencing a public health crisis of drug toxicity deaths. Over 42,494 people died because of opioid toxicity between January 2016 and September 2023.¹ The vast majority of these deaths were accidental and were caused by drugs purchased from the illegal, unregulated supply.¹

Canada's unregulated drug supply has changed significantly over the past decade, leading to increased risk of toxicity. Some of these changes include the following:

- Fentanyl has become the dominant opioid in most of Canada's unregulated drug supply.² Fentanyl is much more potent than heroin and has been involved in the majority of the drug toxicity deaths in Canada since 2016 (82% in 2023).¹
- There has been an increase in methamphetamine use and stimulant-related harms,^{3,4} including among people who use opioids.⁵⁻⁸ In 2023, stimulants were involved in 57% of reported opioid toxicity deaths.¹
- There has been an increase in the presence of new and unknown contaminants in the unregulated supply, most often combined with fentanyl.⁹⁻¹³ These include sedatives such as benzodiazepines and xylazine, which may be added to fentanyl for many reasons (e.g., to add bulk to fentanyl and reduce costs, to extend fentanyl's short duration of action).^{11,14} Sedatives are associated with multiple harms, including complicating overdose response, leading to sedative tolerance and withdrawal, and other harms (e.g., increased vulnerability to assault, xylazine-related wounds).^{10,15}

These changes in the unregulated drug supply are linked to prohibition, which creates incentives to produce and transport drugs that are smaller and more potent, while increasing profits.¹⁶ In contrast to drugs such as heroin and cocaine that are made from organic material, synthetic drugs such as fentanyl and methamphetamine can be made in labs anywhere in the world. This means that production is not restricted to certain climates or growing seasons, making it

more difficult for law enforcement to disrupt production and transportation.^{16,17} Prohibition also means that there are no regulatory agencies monitoring the quality and contents of drugs produced and distributed in the unregulated supply.¹⁸ As a result, unregulated synthetic drugs can be very volatile and unpredictable. Their contents and potency can change significantly between regions and from week to week, and they can even vary between pieces of the same drug sample.^{19,20} This variability in contents and potency increases the risk of death.²¹

Rationale and overview of safer supply approach

Harm reduction approaches such as naloxone distribution, supervised consumption services (SCS) and overdose prevention sites (OPS) and treatment approaches such as opioid agonist treatment (OAT) are effective and have been essential in reducing drug toxicity deaths. In fact, the combination of these approaches has been found to be responsible for saving thousands of lives.²² However, despite the implementation of these approaches in parts of Canada, drug toxicity deaths continue to rise.¹ Safer supply is an additional option that can complement and fill gaps in the existing range of harm reduction and treatment approaches, providing another tool to reduce drug toxicity deaths and support the health of people who use drugs.

Safer supply involves providing people who use drugs with regulated pharmaceutical alternatives to the unregulated drugs that they use. Safer supply is primarily a harm reduction intervention that aims to reduce the risk of drug toxicity death and, in many cases, to connect people who use drugs with health and social services. It builds on evidence from treatment approaches such as OAT and injectable opioid agonist treatment (iOAT) but is a distinct approach.

Currently, safer supply works within a medical model whereby physicians and/or nurse practitioners prescribe pharmaceutical drugs, which have known and consistent contents and potency, as an alternative to unregulated drugs of unknown contents and potency.²³ The majority of safer supply programs have so far focused on providing pharmaceutical-grade opioids as an alternative to fentanyl in the unregulated drug supply.

Immediate-release hydromorphone tablets (e.g., Dilaudid) are the drugs most commonly prescribed as safer supply.²⁴ These are usually dispensed daily as take-home doses from pharmacies or clinics for clients to consume when, where and how they choose. In addition, a long-acting opioid (e.g., methadone or morphine) may be prescribed to help prevent withdrawal symptoms for longer periods of time. These are most commonly consumed daily as an observed dose at a pharmacy or clinic.

Other opioids may be prescribed within certain programs. For example, pharmaceutical fentanyl-based options are available in some safer supply programs in British Columbia.²⁵ Fentanyl-based options include both short-acting (e.g., oral, injection) and long-acting (e.g., transdermal) options. Fentanyl-based options are usually consumed or administered as an observed dose.²⁶

Stimulants are less commonly prescribed as safer supply. Some healthcare providers and programs may prescribe immediate-release stimulant medications (e.g., methylphenidate immediate-release) and long-acting stimulants (e.g., long-acting methylphenidate, sustained-release dextroamphetamine) as alternatives to unregulated stimulants.²⁷ There is limited research to date about stimulant safer supply.^{27–29}

In addition to pharmaceutical alternatives, safer supply programs can also provide participants with health and social services. These can include a range of services and programs, such as case management; primary care; system navigation; peer support; harm reduction education; counselling and supports to address housing, income, treatment and basic needs; and cultural supports.²⁴ Access to these services can help support the overall health and well-being of people who use drugs and support program retention, and it may further reduce risk of drug toxicity death and other harms.

Evidence related to safer supply

Evidence related to the effectiveness of safer supply is rapidly developing. This review includes peer-reviewed quantitative and qualitative research, program evaluation data, and analyses of administrative and healthcare data.

Effect of safer supply on risk of drug toxicity death

Available evidence indicates that safer supply reduces risk of drug toxicity death. This evidence comes from a variety of studies examining different approaches to safer supply, presented below.

In March 2020, guidelines to support healthcare providers to prescribe safer supply were released in British Columbia. Population-level administrative data were analyzed to examine the effects of prescriptions received under these guidelines on people's risk of death and hospital visits from overdose and all causes.²⁹ Data included information from public health insurance plans, community pharmacies, hospitals, corrections and coroners' records. The study population was residents of British Columbia whose records showed they had been prescribed OAT or had a probable diagnosis of opioid use disorder or stimulant use disorder. Data were analyzed in weekly intervals. Participant records were followed from March 27, 2020, or the first week that records indicated an opioid or

stimulant use disorder, until August 31, 2021. A comparison group was created by individually matching participants' records with those of people with similar characteristics who did not receive safer supply. A total of 5,356 people received opioid safer supply, 1,061 received stimulant safer supply and 535 received both. This study found that people who received one or more days of opioid safer supply were 61% less likely to die from all causes and 55% less likely to die from overdose in the week following provision of safer supply. When opioid safer supply was provided on four or more days, the risk of death was reduced by 91% from all causes and by 89% from overdose in the following week. Receiving one or more days of stimulant safer supply was associated with a lower risk of death from all causes and from overdose in the following week, but these results were not statistically significant. Similar results were found for people who received stimulant safer supply on four or more days.

In May 2021, a safer supply and managed alcohol program was started in an isolation hotel to facilitate quarantine from COVID-19 during an outbreak in the shelter system in Halifax, Nova Scotia.³⁰ Prescribed medications were dispensed to participants daily. Medications included pharmaceutical opioids, stimulants, benzodiazepines, alcohol, tobacco and cannabis. This program was examined through a retrospective case series, which reviewed the medical records of the 77 people admitted to the isolation hotel. Twenty-seven participants received hydromorphone tablets, 12 of whom also received OAT. Thirty-one participants received stimulants. Six participants received benzodiazepines. The study found that there were no overdoses over 1059 person-days of observation.

Between January and March 2021, a shelter in Hamilton, Ontario, implemented an OAT program, a safer supply program and an OPS during a COVID-19 outbreak.³¹ Participants in the safer supply program were encouraged to consume their medications in the OPS, which was intended only for the consumption of safer supply medications. A case study was conducted comparing the rate of non-fatal overdoses during the 26 days that the interventions operated to the rate during the four weeks before the interventions were implemented. Five individuals were prescribed hydromorphone and a long-acting opioid as safer supply. In the four weeks before the interventions were implemented, the rate of non-fatal overdose was 0.93 per 100 nights of shelter bed occupancy. During the 26 days the interventions operated, the rate of non-fatal overdoses was reduced significantly to 0.17 per 100 nights of shelter bed occupancy. There were no fatal overdoses during either time period.

A safer supply program was started in London, Ontario, in 2016. It was offered to people who were experiencing multiple serious health issues related to injecting drugs and were believed to be at high risk of death. The medications of the 82 participants were dispensed daily from a pharmacy. Long-acting opioids were consumed on site and hydromorphone tablets were dispensed for participants to consume as needed. Participants also received primary care. Healthcare records of program participants were analyzed between January 1, 2016, and March 31, 2019, to understand their patterns of healthcare use before and after accessing the program.³² Participants' healthcare outcomes were analyzed in 30-day periods for the five years before they entered the program and for the year after they entered the program. These outcomes were compared with those from a matched group of people who lived in the same area and who had similar demographic and health characteristics, but did not receive safer supply. There were no fatal overdoses in the year after program entry among the 82 program participants, compared with fewer than five opioid-related deaths among the 303 matched controls. The rate of opioid-related emergency department visits (e.g., for opioid toxicity) decreased significantly for participants, from 10 in the year before entering the program to fewer than five in the year after. In the matched group, there was no significant change in the rate of opioid-related emergency department visits.

A number of program evaluations have found that participants in safer supply programs reported experiencing fewer overdoses.

- The safer supply program in London, Ontario, has been evaluated through client surveys and interviews three times. Between April and October 2021, fewer program participants ($n = 59$) reported an overdose in the past six months (23%) and one month (11%), compared with people who were just starting the program ($n = 19$; 59% and 33%, respectively).³³ In an updated 2022 survey, no program participants who completed surveys ($n = 75$) reported experiencing an overdose in the past month.³⁴ In 2023, 10% of participants who completed surveys ($n = 95$) reported experiencing an overdose in the past month.³⁴
- A safer supply program in Toronto, Ontario, was evaluated in 2022 using surveys and interviews with program participants. Self-reported rates of overdose were compared between people entering the program ($n = 10$) and people who had been part of the program for at least six months ($n = 27$). Half of the people entering the program reported experiencing an overdose in the past three months, compared with only 15% of the participants who had been in the program for at least six months.³⁵
- A safer supply program evaluation in Ottawa, Ontario, conducted interviews and surveys with participants in safer supply programs in 2022. Among 30 participants who completed both an interview and a survey, 93% reported experiencing an overdose before starting the program and 20% reported experiencing an overdose since starting the program.³⁶
- A safer supply program in Kitchener-Waterloo, Ontario, conducted interviews and surveys with program participants between July 2021 and December 2022.³⁷ Surveys were conducted with 148 people at program entry and with 58 people after they had been in the program for six months. At program entry, 60% reported experiencing an overdose in the past six months, compared with 13% after they had been in the program for six months.
- An unsanctioned compassion club in Vancouver, British Columbia, was evaluated between August 2022 and October 2023.³⁸ The compassion club gave eligible members (i.e., people over 19 years of age who currently used unregulated cocaine, methamphetamine or fentanyl and were members of local groups of people who use drugs) the ability to purchase illegal drugs (i.e., heroin, cocaine, methamphetamine) that had been tested to ensure quality and lack of contaminants. The evaluation followed 47 participants for a median of 12.2 months and conducted surveys at baseline and at three-month intervals. In adjusted analyses, the study found that being actively enrolled in the compassion club was associated with reductions in non-fatal overdose compared with periods where participants were not enrolled.

Effect of safer supply on health outcomes

Available evidence suggests that receiving safer supply is associated with improved health outcomes for program participants. Qualitative research and program evaluations have found that program participants report multiple improvements to health outcomes since starting safer supply. These self-reported health improvements have included improved overall health and well-being,^{24,39} improved nutrition,³⁹ improved sleep,³⁹ reduced stress,^{35,39,40} improved pain management,^{35,39} improved access to primary care³³ and improved access to treatment and prevention for health conditions such as HIV and hepatitis C.^{24,27,33,41}

Administrative healthcare data have been analyzed to explore the impacts of safer supply on hospitalizations and emergency department visits.

In an analysis of healthcare records of 82 participants in a safer supply program in London, Ontario (described above), the

monthly rate of emergency department visits (14 fewer visits per 100 people) and hospital admissions (five fewer admissions per 100 people) decreased significantly in the year after entering the program.³² There were no significant changes to rates of admission to hospital for serious infections (related to injecting drugs) after entering the program.³² There were no significant changes to any of these outcomes in a matched comparison group.³²

In a study examining population-level data related to British Columbia's safer supply prescribing guidelines (described above), 5,356 people who received opioid safer supply, 1,061 people who received stimulant safer supply and 535 people who received both were identified.²⁹ The study found that receiving opioid safer supply was not associated with significant changes in the risk of hospital visits for all causes or for overdose in the following week.²⁹ Receiving stimulant safer supply was associated with a significantly reduced risk of hospital visits for all causes in the following week but did not significantly change the risk of hospital visits for overdose.²⁹

Effect of safer supply on other individual and social outcomes

Qualitative research and program evaluations have found that safer supply supports a range of positive individual and social outcomes.

Participants of safer supply programs report reduced use of unregulated drugs.^{39,40,42}

- In a 2021 survey ($n = 59$) as part of an evaluation of a safer supply program in London, Ontario, 63% of participants who had been in the program for at least four weeks reported reduced use of unregulated fentanyl and 9% reported no longer using unregulated fentanyl.³³ In subsequent evaluations of the same program, participants consistently reported reduced use of unregulated fentanyl. In 2022, 49% reported ($n = 75$) reducing and 25% reported stopping their use of unregulated fentanyl. In 2023, these figures ($n = 95$) were 53% and 11%, respectively.³⁴
- In a survey ($n = 27$) of participants in a safer supply program in Toronto, Ontario, 52% reported having stopped using unregulated fentanyl and 26% reported having reduced their fentanyl use since starting the program.³⁵
- A survey of participants ($n = 58$) of a safer supply program in Kitchener-Waterloo, Ontario, found that 82% of participants reported a reduction in their use of unregulated fentanyl after six months in the program.³⁷
- A program evaluation of a safer stimulant program in Ottawa, Ontario, found that participants' median reported cocaine use and crystal meth use were reduced from intake

(1 gram per day for cocaine; 0.15 grams per day for crystal meth) to 0 grams per day for both drugs (interquartile range 0–0.1 grams for cocaine and 0–0 grams for crystal meth) at the time of the chart review.²⁷

Participants of safer supply programs report improvements in safer injecting practices that can prevent infections. These changes include decreased injection frequency, switching from injecting unregulated fentanyl to injecting pharmaceutical opioids, reduced injecting in unsafe environments, reduced rushed injections, and switching from injecting safer supply to consuming it orally.^{39,43}

Participants of safer supply programs report increased stability, control over drug use (e.g., avoiding cycles of withdrawal, craving and high frequency use, less time spent trying to access drugs, reduced overall drug use in some cases) and autonomy (e.g., using drug when and how they want to, being able to leave town and visit family without fear of withdrawal; being able to re-engage with school or work).^{33,35,36,40,42,44,45}

Participants of safer supply programs report improved relationships with healthcare providers and increased trust in the healthcare system.^{24,36} They also report improved relationships with family, including regaining access to and reconnecting with their children in some cases.^{24,45}

Participants of safer supply programs report improved economic stability (e.g., more money available for essentials, such as food and clothing).³⁹ They also report reduced engagement in criminalized activities.^{24,33,35,36,39,42} For some people, including women and youth, safer supply allows them to avoid, reduce or end their engagement in survival sex work.^{34,35,44}

Access to safer supply

Access to safer supply in Canada is limited and inconsistent across the country.⁴⁶ At a policy and system level, access has been shaped by a number of factors, including federal laws, the COVID-19 pandemic, provincial policies and/or prescribing guidance, and limited guidance from professional regulatory colleges, among other factors.⁴⁷ Prescribers have reported that a number of factors, including lack of resources to support implementation (e.g., funding for necessary staff, training) and lack of guidance from their regulatory colleges, have also limited implementation.⁴⁷

British Columbia is the only province to issue policies and prescribing guidance to support healthcare providers to prescribe safer supply.^{48,49} This was done in response to the COVID-19 pandemic. However, even in British Columbia, access to safer supply is limited. Only 4,331 people accessed opioid safer supply and 256 people accessed stimulant safer

supply in September 2023.⁵⁰ This is in a province with an estimated 115,000 people with opioid use disorder and an estimated 225,000 people at risk of death or harm due to the unregulated drug supply.^{50,51} In most other provinces and territories, it is possible for healthcare providers to prescribe safer supply but it is unclear how commonly this is done.

Access appears to be especially challenging for people who face additional systemic barriers to the healthcare system (e.g., Indigenous people, Black people, 2SLGBTQ+ people) and people who live in rural and remote communities.⁵¹⁻⁵³

Diversion

Diversion refers to the selling, trading, sharing or giving away of prescription medications to other people.⁵⁴ It is a known challenge with pharmaceutical medications, particularly those with psychoactive effects. Diversion has been raised as a concern related to safer supply,⁵⁵ and some programs have encountered it.²⁴

There is limited evidence related to diversion of safer supply. One study (described above) of a safer supply program in a COVID-19 isolation hotel reported on concerns of diversion recorded in participants' medical charts. Among 27 people who received hydromorphone as safer supply, diversion concerns were documented three times in medical records over the 1059 person-days that the program operated.³⁰

To date, there is no evidence of widespread diversion of safer supply. Participants in safer supply programs who diverted their medications report that they have only shared or sold medication with other people who already use drugs.³⁶ There have been no population-level indications that safer supply medications are driving drug toxicity deaths or increases in substance use disorder. Analyses of drug toxicity deaths in British Columbia (between March 2020 and May 2021) and Ontario (between March 2020 and December 2020) show that hydromorphone was very rarely involved in drug toxicity deaths.^{56,57} In British Columbia, hydromorphone has been detected without fentanyl in less than 2% of deaths.^{56,58} In British Columbia, new diagnoses of substance use disorder have not increased since safer supply was implemented.⁵⁹

Participants in safer supply programs who reported selling or sharing drugs provided various reasons for doing this:^{36,38,44,53,60}

- They wanted to provide people who could not access safer supply with regulated substances to address their needs (e.g., withdrawal, pain) and reduce their risk of drug toxicity death.

- They wanted to meet their financial needs (e.g., to buy unregulated drugs that met their needs, to buy food and clothing) and avoid participating in criminal activities or survival sex work to meet those needs.
- Their safer supply drugs and/or their prescribed doses did not meet their needs (e.g., inadequate to prevent withdrawal, manage pain, produce euphoria).

Further research is needed to understand how different aspects of safer supply (e.g., medication options, access, supports to address basic needs) influence the prevalence and impacts of diversion.

Evidence about implementation of safer supply

Within the medical model, there are a range of approaches to safer supply. It has been adapted to a range of settings (e.g., primary care, community health centres, shelters, SCS/OPS), by a range of organizations and providers and with a variety of goals (e.g., reduce drug toxicity deaths, support engagement in primary care, reduce community COVID-19 transmission).^{24,30,32,46,49} Some healthcare providers have been prescribing safer supply since as early as 2016, but most programs have started relatively recently, since 2020, when COVID-19 public health measures began.^{46,61} This context has had a strong influence on the implementation of safer supply.⁶¹ The following sections review available evidence related to barriers and facilitators to the implementation of safer supply programs. Further research is needed in this area to inform implementation of safer supply moving forward.

Retention

There is varying evidence related to retention of participants receiving safer supply. Evaluations of safer supply pilot programs that received federal funding, which often enabled programs to provide comprehensive health and social supports, report high retention with rates of approximately 80% to 90% over varying time periods, often a year or longer.^{24,33-35,37} In evidence from population-level analyses, retention is less clear. In Ontario between 2018 and 2020, when safer supply would have been prescribed without funding for comprehensive health and social supports, the median time to safer supply discontinuation was 309 days, which is comparable to rates of retention on OAT.⁶² In British Columbia, population-level research about safer supply indicates that most people (80%) who received safer supply had access for more than one week between March 2020 and August 2021 but that these prescriptions often stopped and started, meaning that retention on safer supply was not necessarily continuous.²⁹

Few studies so far have examined and compared factors associated with retention in safer supply. Available evidence indicates that retention can be supported by:

- dedicating resources to outreach and maintaining contact with participants²⁴
- prescribing a higher maximum dose of safer supply and providing OAT and mental health medications alongside safer supply^{62,63}

Program models and elements that meet people's needs

People who use drugs have diverse preferences and needs, making it challenging for any single program or approach to effectively serve everyone. There is currently limited evidence related to best practices in implementation of safer supply and effective elements of safer supply programs. Factors such as integration and co-location with existing harm reduction and treatment services, access to comprehensive health and social supports, and flexibility in a range of program policies and practices should be considered and explored in future implementation research.

Approaches to safer supply have included integration within primary care, health and social services (e.g., community health centres, housing), standalone harm reduction services (e.g., SCS/OPS, OAT) and specialty care services (e.g., care related to HIV, care related to mental health, Indigenous-specific cultural services).²⁴ Further research and evaluation are needed to understand best practices in the implementation of diverse approaches to safer supply.

Some safer supply programs have received pilot funding to support participants through comprehensive health and social supports, including case management, primary care, outreach, peer support, housing, income, legal issues and referrals to other services.²⁴ In these programs, access to these services and supports has been identified as a key element of supporting participants' health and well-being.²⁴ However, not all people who are at risk of drug toxicity want or need comprehensive health and social supports, and some may prefer to access lower barrier services or to receive healthcare separately from safer supply.²⁴ Further research and evaluation can help to better understand how varying approaches to safer supply can help expand the spectrum of substance use services.

Flexibility has been identified in program evaluations and qualitative research as an important element of safer supply.^{24,64,65} This includes flexibility regarding:

- the ability for participants to choose how to consume, when to consume (e.g., by having take-home doses)^{36,66} and when to access their drugs (e.g., hours of pharmacy operation, accessing from biometric dispensing machines)⁴⁰
- the ability to miss doses without punishment, stigmatization or a significant reduction in dose⁴⁰
- the ability for medication protocols to be adjusted to meet individuals' needs (e.g., deciding on doses collaboratively, discussing preferred dispensing locations, timing and practices)^{24,26,40}

Some healthcare providers have noted that the flexibility of current safer supply programs is limited by the medical model within which they operate.⁶⁵ They have pointed to the need for greater diversity of safer supply models to ensure that they can adapt to people's diverse needs.⁶⁵

Involvement of people who use drugs

The involvement of affected communities in the development, implementation and evaluation of policies, programs and services aimed to serve them is a core principle of public health and harm reduction.⁶⁷⁻⁶⁹ This principle is often embodied by the slogan "nothing about us without us."⁶⁸ People who use drugs have been instrumental in conceptualizing and advocating for safer supply.⁷⁰ Involving people who use drugs has helped programs to adapt to community needs, to reach potential program participants, to build relationships with them and to increase trust with the community.^{24,71} Ensuring that people who use drugs are centred within the development, implementation and evaluation of safer supply is critical to ensuring that programs meet people's needs.²⁴

Drugs that meet people's needs

While many participants of safer supply programs report their use of unregulated drugs has decreased, people may still access fentanyl from the unregulated supply.^{24,36,42} A key reason why people report continuing to access unregulated fentanyl is that the doses of safer supply are inadequate to meet their needs (e.g., to provide the effects people seek from drug use and/or to relieve withdrawal symptoms because of their high opioid tolerance).^{24,42,44} This means that participants remain at risk of drug toxicity death and other harms if they continue to access the unregulated market.

Addressing the gap between people's needs and what drugs are available is critical to making safer supply more effective,

appropriate and responsive.⁶¹ Factors to consider in efforts to address this gap include the following:

- People's needs related to potency must be met. Hydromorphone tablets, often combined with long-acting opioids, are not always strong enough for people with high opioid tolerance to avoid withdrawal symptoms or to experience the effects they desire from drugs.²⁴
- People's needs in terms of the type of drug (e.g., pharmaceutical-grade fentanyl, heroin, cocaine or methamphetamine) must be met.^{64,72}
- People's preferences in terms of the route of consumption must be met. This includes providing safer supply that can be smoked. Smoking is now the preferred route of consumption and the most common route of consumption leading to drug toxicity death in some regions.^{24,26,65,73,74}
- Benzodiazepines and other sedatives have been added to the unregulated drug supply (often fentanyl) and can produce tolerance.¹² Providing benzodiazepines as safer supply and as a means to reduce withdrawal symptoms has been identified as an important option to consider when appropriate.⁷²

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