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Harm Reduction Interventions to Prevent Overdose Deaths

Policy Insight

CADTH

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Key Messages

- Overdose deaths have been occurring at high rates in many parts of Canada. From January 2016 (when national surveillance began) to March 2019, an estimated 12,800 Canadians died of an opioid overdose.[1] In addition to opioid-related harms, stimulants such as methamphetamine have re-emerged in some regions and are also contributing to the current rise in overdose deaths.
- COVID-19 has resulted in a more compromised illicit drug supply, and those who use drugs have had limited access to formal and informal supports because of public health measures regarding physical distancing. As a result, overdose deaths have increased during the pandemic.
- Harm reduction approaches provide a mechanism to prevent overdose deaths and have additional health and public safety benefits. The current crisis has been exacerbated by COVID-19; therefore, it is an appropriate time to consider the entire continuum of harm reduction approaches available to reduce preventable overdose deaths.
- People with lived experience of drug use should be meaningfully included in policy discussions about harm reduction and overdose prevention interventions. This would enhance the person-centredness of programs and ensure they are reflective of the lived realities of those who use drugs.
- Although societal attitudes about drug use are changing, harm reduction interventions remain politically contentious. Countering stigma, being prepared to engage with community concerns, and clearly articulating that harm reduction services are intended to complement and not replace drug treatment are all important in enhancing public understanding of harm reduction.

Issue

Canada remains in the midst of an opioid crisis, and the re-emergence of stimulants such as methamphetamines has led to considerable harms related to drug use. Overdose deaths from both opioids and stimulants increased to record levels in 2020. The COVID-19 pandemic has contributed to the record number of overdose deaths in several ways, including changes to the illicit drug supply because of border closures and travel restrictions as well as public health measures that have unintentionally reduced access to direct service provision for people who use drugs.

The objectives of this briefing note are to describe:

- the ways in which the pandemic has exacerbated Canada's overdose crisis
- the continuum of harm reduction interventions that can help reduce overdose-related harms, with particular focus on interventions at the point of drug consumption (such as safe consumption sites)
- the challenges and opportunities associated with harm reduction interventions across the care continuum.

Background

COVID-19 Has Exacerbated Canada's Overdose Crisis

Overdose deaths have been occurring at high rates in many parts of Canada in recent years. From January 2016 (when national surveillance began) to March 2019, an estimated 12,800 Canadians died of an opioid overdose.[1]

From April 2020 to June 2020, nationwide opioid toxicity deaths reached the highest quarterly count since Canada-wide surveillance began in 2016.[1] Current projections by the Public Health Agency of Canada suggest that this upward trend may continue in the coming months.[1] Western Canada has been the most impacted region for both overdose deaths and toxicity-related hospitalizations on a per capita basis in 2020.[1]

The COVID-19 pandemic has been a contributing factor to the rise in overdose deaths for a variety of reasons. First, the drug supply has become more dangerous and variable. The main driver of changes to the illegal drug supply in Canada during the pandemic has been the disruption to the international drug trade resulting from border closures and travel restrictions. This has resulted in reports of increased drug adulteration, such as including stimulants, using more potent synthetics, or dilution, as well as price increases.[2]

Second, access to drug treatment, harm reduction, and other supportive care services have been limited during the pandemic. Direct services such as drug checking, shelters, community health centres, needle exchange programs, outreach services, and community treatment have been limited by staff shortages and capacity issues related to public health restrictions and physical distancing requirements.[2]

Third, there are indications that people who use drugs are more frequently using drugs alone (outdoors, in private residences, in single-occupancy rooms, and in hotels or motels), which means that no one else is available to intervene if an overdose occurs.[2] A November 2020 report produced in consultation with the Office of the Chief Coroner of Ontario found that the proportion of overall overdose deaths that occurred in public indoor spaces decreased from 3.1% pre-pandemic to 0.7% during the pandemic. At the same time, overdose deaths that occurred outdoors increased from 3.9% to 7.8% during the pandemic, and from 4.7% to 6.1% in hotels, motels, or inns. These data should be interpreted with caution because there may be a seasonal effect associated with outdoor overdoses and because the increase in deaths in hotels and motels may be a result of the use of these businesses as supportive housing or isolation centres during the pandemic.[3] The challenge of people using drugs alone amid reduced access to social supports and a compromised and potentially adulterated drug supply only adds to the risk.[2]

Prevention, Harm Reduction, and Treatment Are All Necessary to Prevent Harms

Resources to support prevention, harm reduction, treatment, and drug enforcement are all components of an effective public health approach to drug use. The "4 pillars" approach to drug use, which has been used successfully in major European cities such as Geneva, Zurich, and Frankfurt, and has been adopted by the City of Vancouver, stresses that all 4 components are necessary to reduce harms associated with drug use and enhance public safety.[4]

Investments in treatment resources are necessary to address addictions, especially given the considerable challenges individuals seeking drug treatment face finding timely access to services. However, harm reduction interventions also play a significant role in reducing harms related to drug use and are an effective tool in reducing overdose deaths.

Harm Reduction Approaches

Harm reduction approaches incorporate a spectrum of strategies that includes safer use, managed use, abstinence, meeting people who use drugs "where they're at," and addressing conditions of use along with use itself.[5] Meeting people who use drugs "where they're at" means not imposing a given worldview and connecting with them in a way that is meaningful to them. Foundational to established harm reduction approaches are a series of principles and beliefs about drug use and people who use drugs. These include that drug use is — for better or worse — part of our world, a complex and multi-faceted phenomenon, and that quality of individual and community lives and reducing the harms associated with drug use should be the criteria for measuring success in health policies and interventions rather than aiming for cessation of all drug use.[5]

Harm reduction approaches complement other addictions treatment services. Evidence shows that harm reduction approaches do not encourage or increase drug use but provide a means of reducing harms associated with drug use, such as overdose and blood-borne disease transmission.[5] Harm reduction services may increase access to support programs and health and social services and potentially facilitate access to treatment by reducing the stigma associated with drug use and bringing people into contact with health care practitioners with whom they may not otherwise interact.[5] Some examples of harm reduction services that complement existing treatment services are drug checking services, outreach and support programs, supervised consumption sites, take-home naloxone kits, and options for opioid substitution therapies such as methadone or suboxone. These programs are explored in more detail in the proceeding sections, with deeper exploration of interventions that are targeted at the time and place of drug consumption.[6]

Drug Checking Services

Point-of-care drug checking services are low-barrier services that allow clients to anonymously submit drug samples to be analyzed to determine if drugs have been adulterated. Typically, Canadian drug checking services in operation check for the presence of fentanyl or other adulterants but cannot check for potency at the point of care. The turnaround times associated with point-of-care services are usually 5 minutes or less, with options to send samples to a laboratory for more detailed analyses.[7]

Supervised Consumption Sites

Supervised consumption sites (SCS) provide "a safe, hygienic environment in which people can use drugs with sterile equipment under the supervision of trained staff or volunteers."[8] SCS largely serve marginalized people who use drugs and may also have substantial unmet social, physical, and mental health needs. SCS aim to reduce harms associated with drug use, including overdose and infectious disease transmission through the reuse of equipment. SCS may also contribute to safety and quality of life in local communities by reducing drug use in public spaces and the number of discarded needles and other consumption supplies.[8] A 2015 CADTH report found that although SCS did not reduce overall use of injection drugs, they did result in reductions in overdose-related mortality and morbidity, general drug-related harms,

individuals injecting drugs in public places, and the frequency of discarded needles found in public spaces. SCS were found to be cost-effective based on existing economic evidence.[9]

SCS have been the subject of polarized political debate in Canada. In 2011, the Supreme Court of Canada ruled that the federal government's refusal to grant a renewed *Controlled Drugs and Substances Act* exemption to Insite, a Vancouver SCS, violated Section 7 of the *Charter of Rights and Freedoms* which guarantees the rights to the life, liberty, and security of the person. Since then, the Government of Canada's regulatory approach to SCS has evolved considerably, from a regulatory process many felt was onerous to a more streamlined current approach.[8] Applications for an exemption to operate SCS are required to include information regarding the intended public health benefits of the site and information related to impacts on a variety of other factors, including the impact of the site on crime rates, the administrative structures in place to support the site, the resources available to support operation and maintenance of the site, and information on community support or opposition.[8]

Overdose prevention sites, a similar service also regulated by the Government of Canada, are set up on a temporary basis and do not require support services or much of the upfront community consultation work required to obtain an SCS exemption. Overdose prevention sites are meant to address immediate needs within a community and not necessarily to become permanent SCS.[8]

As of December 2020, there were 38 SCS operating under a ministerial exemption in 5 provinces: British Columbia, Alberta, Ontario, Quebec, and Saskatchewan.[10]

Take-Home Naloxone

Naloxone is an opioid antagonist medication used to counter the effects of opioid overdose. All Canadian jurisdictions have take-home naloxone programs that allow people who use drugs, their friends and family, and/or concerned community members to access a take-home kit. These programs also offer training to families and friends on how to effectively use naloxone in case of an overdose. Distribution models vary for these kits between jurisdictions.[11] Naloxone is only effective in cases where opioids are present; it will not reverse a stimulant overdose.[12]

Opioid Substitution Therapies

Opioid substitution therapies involve the use of drugs such as methadone or buprenorphine/naloxone that block opioid withdrawal symptoms in individuals who are attempting to stop or reduce opioid dependency.[13] Opioid substitution therapy is a component of the harm reduction and opioid treatment continuum and is available in a variety of forms across Canada.[14] The focus of this briefing note is on harm reduction approaches at the point of drug consumption; therefore, opioid substitution therapies will not be explored in depth in this brief. However, existing evidence-based resources on opioid substitution therapies include:

- Programs for the Treatment of Opioid Addiction in Canada (CADTH Environmental Scan)[15]
- Injectable Opioid Agonist Treatment for Patients with Opioid Dependence: A Review of Clinical and Cost-Effectiveness (CADTH Rapid Response)[16]
- Exploring Expanded Response Options to Opioid Harms: Case Studies from Four Canadian Clinics (Canadian Centre on Substance Use and Addiction)[6]

Safe Supply

Safe supply is an approach that involves the prescription of pharmaceutical-grade opioids and stimulants, such as slow-release oral morphine, hydromorphone, or injectable diacetylmorphine (pharmaceutical heroin), to those at high risk of overdose.[17,18] Unlike opioid substitution therapy, therapies provided through safe supply provide a comparable mind/body "high" as street drugs and do not aim only to alleviate withdrawal symptoms. A safe supply approach recognizes that opioid substitution therapy does not work for everyone, and that some individuals at high risk of overdose may not yet be willing to seek treatment or are unable to access appropriate treatment.[17]

There are a limited number of safe supply programs in Canada, including programs in Toronto, Ottawa, London, and Vancouver.[17,19] In the autumn of 2020, British Columbia expanded a provincial "safer supply" program under the terms of a Public Health Order, issued in response to the pandemic, to allow registered nurses and registered psychiatric nurses, in addition to physicians, to prescribe prescription drugs as a substitute for illicit drugs.[20] Generally, formal safe supply programs allow "carries," a limited supply of prescribed medication that an individual can take home, although some programs encourage supervised use. Some argue that the act of prescribing therapies that provide the same high as illicit drugs and allowing carries fundamentally changes the opioid landscape, creating de facto decriminalization for some people who use drugs with access to safe supply programs. They argue that broader discussions about drug policy reform, including decriminalization, are needed and that it cannot be up to individual clinicians to "prescribe (their) way out of this crisis."[21]

In August 2020, federal Minister of Health Patty Hadju wrote to her provincial and territorial ministerial counterparts as well as regulatory colleges encouraging them to do all they could to "help provide people who use drugs with a full spectrum of options for accessing medication…including support for programs that provide greater access to a safer, pharmaceutical-grade alternative to the toxic street supply."[22]

Public Opinion and Stigma About Harm Reduction Interventions

Public support for harm reduction interventions for people who use drugs has grown during the opioid crisis and as these interventions have entered more widespread use across Canada[23]; however, polarized opinions persist about harm reduction interventions targeted at people who use drugs. The notion that harm reduction approaches encourage drug use and discourage individuals who use drugs from seeking treatment is still held by many elected officials and citizens. Public support for safe consumption sites, for example, varies across Canada. A 2017 public opinion poll showed that public approval ratings for the opening of a theoretical safe consumption site were lowest in Prairie cities.[24] Even among members of the public who support safe consumption sites in theory, public opinion surveys suggest that this support dwindles if a theoretical site would be located in their own neighbourhood.[25]

Many Canadian experts in the field of addictions and drug policy advocate for decriminalization of drugs at the federal level.[26] Although once considered a political impossibility, decriminalization of simple drug possession has entered mainstream policy

discussions in Canada in recent years. In 2019, the House of Commons Standing Committee on Health's report on the Impacts of Methamphetamine Abuse in Canada recommended that the Government of Canada:

- "undertake an evaluation of Portugal's approach to the decriminalization of simple possession of illicit substances and examine how it could be positively applied to Canada"
- "work with provinces, territories, municipalities and Indigenous communities and law enforcement agencies to decriminalize the simple possession of small quantities of illicit substances."[26]

In December 2020, Vancouver City Council voted unanimously to request an exemption under the Criminal Code of Canada. If granted, this would decriminalize the possession of small amounts of street drugs for personal use within the city limits.[27]

The main arguments for drug decriminalization are that it may reduce the stigma associated with drug use, reduce the black-market drug trade, and allow drug use to be treated as a health issue rather than a criminal justice issue.[26]

Challenges and Opportunities

Harm reduction interventions are supported by evidence and may be even more necessary amid the new challenges in illicit drug supply and access to services and supports created by the pandemic. Given the record rates of overdose deaths in 2020, there is an urgent need to act to prevent these avoidable deaths. Public understanding of and support for harm reduction interventions have increased in recent years, as evidenced by the increased availability of services such as safe consumption sites in urban Canada. Still, negative public opinion and attitudes toward drug use and people who use drugs influence the political acceptability and feasibility of these measures. Overcoming misconceptions about harm reduction and ideological opposition to understanding drug use as a public health issue remain substantial challenges in addressing the overdose crisis.

Another challenge is that harm reduction interventions related to opioid use may not be as effective because of a contaminated drug supply and rising rates of stimulant use. Although Canadian jurisdictions have invested heavily in access to naloxone in response to the opioid crisis, naloxone is only effective in cases where opioids are present and will not reverse a stimulant overdose.[12] Similarly, although drug checking services and safe consumption sites can make drug consumption safer, they do not fully address the safety of the overall drug supply and the possibility that people who use drugs may take risks to avoid withdrawal symptoms. Safe supply programs to date have focused on opioid substitutes and, as such, cannot provide substitutes for those who are dependent on stimulants.

One challenge identified with the expansion of safer supply initiatives in British Columbia is a reluctance on the part of health professionals, particularly physicians, to prescribe opioids for safe supply purposes due to a lack of understanding of the intended goals of safe supply and fears of disciplinary action or liability. In a case reported in the media, a physician expressed concern that they would be at fault if a patient injected a drug meant to be taken orally and developed an embolism due to air in the syringe.[28] Encouraging regulatory colleges to develop

clear guidelines for practitioners, particularly those who do not specialize in addictions medicine, could help alleviate some of these concerns.[22]

Conceptualizing harm reduction interventions within a continuum of care for people who use drugs that includes treatment may be 1 way to overcome stigma and misconception. Although the ethos of harm reduction services is that drug use is — for better or worse — a part of our world and that people who use drugs should be "met where they're at," it is also true that harm reduction interventions may enhance access to the health care system and potentially drug treatment. It should also be recognized that harm reduction encompasses a broad range of interventions that also includes modalities such as opioid substitution therapy, which is an option for people who are ready to stop using opioids.

Including people with lived experience of drug use is key to program and policy design and represents an opportunity to create person-centred interventions. The document *Peerology,* developed by the Canadian AIDS Society by and for people who use drugs, provides a road map for engaging those with lived experience in policy, program design, or research efforts.[29] Additionally, there are local and national groups, such as the Canadian Association of People who Use Drugs (CAPUD), who can act as resources.[30]

Overcoming the existing stigma associated with drug use is key to making these services sustainable and entrenched in the continuum of care for people who use drugs. To that end, those seeking to establish new harm reduction initiatives or to "scale up" existing harm reduction initiatives should be prepared to address concerns, myths, and misconceptions; engage elected officials and citizens critically and openly; and articulate the continuum of services available to people who use drugs, including treatment and rehabilitation.

References

1. Government of Canada Public Health Infobase. Opioid and Stimulant-Related Harms in Canada, December 2020. 2020: https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants/. Accessed January 12, 2021.
2. Canadian Centre on Substance Use and Addiction. Impacts of the COVID-19 Pandemic on People Who Use Substances: What We Heard. 2020.
3. Ontario Drug Policy Research Network. Preliminary Patterns in Circumstances Surrounding Opioid-Related Deaths in Ontario during the COVID-19 Pandemic. 2020: https://www.publichealthontario.ca/-/media/documents/o/2020/opioid-mortality-covid-surveillance-report.pdf?la=en. Accessed January 12, 2021.
4. City of Vancouver. Four Pillars Drug Strategy. n.d.: https://vancouver.ca/people-programs/four-pillars-drug-strategy.aspx. Accessed January 26, 2021.
5. HealthLinkBC. Understanding Harm Reduction: Substance Use. 2020: https://www.healthlinkbc.ca/healthlinkbc-files/substance-use-harm-reduction. Accessed January 12, 2021.
6. Canadian Centre on Substance Use and Addiction. Exploring Expanded Response Options to Opioid Harms: Case Studies from Four Canadian Clinics. 2020: https://www.ccsa.ca/exploring-expanded-response-options-opioid-harms-case-studies-four-canadian-clinics.
7. Centre on Drug Policy Evaluation. Comparing Models of Drug Checking Services in Canada. 2018: https://cdpe.org/wp-content/uploads/2020/04/Comparing-Models-of-DCS-in-Canada_CDPE.pdf. Accessed January 12, 2021.
8. HIV Legal Network. Overdue for a Change: Scaling Up Supervised Consumption Services in Canada. 2019: https://www.hivlegalnetwork.ca/site/overdue-for-a-change-full-report/?lang=en. Accessed December 4, 2020.
9. CADTH. Needle Exchange Programs in a Community Setting: A Review of the Clinical and Cost-Effectiveness. 2015: https://cadth.ca/sites/default/files/pdf/htis/2017/RC0705%20Needle%20Exchange%20in%20Community%20Final.pdf. Accessed January 12, 2021.
10. Health Canada. Supervised consumption sites: Status of applications. 2021: https://www.canada.ca/en/health-canada/services/substance-use/supervised-consumption-sites/status-application.html#wb-auto-4. Accessed January 12, 2021.
11. CRISM. Environmental Scan: Naloxone Access and Distribution in Canada. 2019: https://crism.ca/wp-content/uploads/2019/06/CRISM_Enviro-Scan_Final-Draft_June18.pdf. Accessed January 26, 2021.
12. Alberta Health Services. Community-Based Naloxone: Frequently Asked Questions for Clients. n.d.: https://www.albertahealthservices.ca/assets/healthinfo/mh/hi-amh-cbn-program-frequently-asked-questions-clients.pdf. Accessed January 26, 2021.
13. Centre for Addictions Research of BC. Patients Helping Patients Understand Opioid Substitution Treatment. 2017: https://www.heretohelp.bc.ca/sites/default/files/patients-helping-patients-understand-opioid-substitution-treatment-2017.pdf. Accessed January 12, 2021.
14. CAMH. Opioid Agonist Therapy. n.d.: https://www.camh.ca/-/media/files/oat-info-for-clients.pdf. Accessed January 12, 2021.
15. Wells C, Dolcine B, Frey N. Programs for the Treatment of Opioid Addiction: An Environmental Scan. CADTH; 2019: https://cadth.ca/sites/default/files/es/es0335-programs-for-treatment-opioid-addiction-in-Canada.pdf. Accessed January 12, 2021.
16. Banerjee S, Wright M-D. Injectable Opioid Agonist Treatment for Patients with Opioid Dependence: A Review of Clinical and Cost-Effectiveness. CADTH; 2020: https://cadth.ca/injectable-opioid-agonist-treatment-patients-opioid-dependence-review-clinical-and-cost. Accessed January 26, 2021.
17. Ontario HIV Treatment Network. Possible benefits of providing safe supply of substances to people who use drugs during public health emergencies such as the COVID-19 pandemic. 2020: https://www.ohtn.on.ca/rapid-response-possible-benefits-of-providing-safe-supply-of-substances-to-people-who-use-drugs-during-public-health-emergencies-such-as-the-covid-19-pandemic/. Accessed January 12, 2021.
18. Wells C, Jones S. Sustained Release Oral Morphine, Injectable Hydromorphone, and Prescription Diacetylmorphine for Opioid Use Disorder: Clinical and Cost-Effectiveness, and Guidelines. CADTH Rapid Response; 2017: https://www.cadth.ca/sites/default/files/pdf/htis/2017/RB1083%20-%20Opioid%20Substitution%20Treatment%20Final.pdf. Accessed January 12, 2021.
19. Tyndall M. A safer drug supply: a pragmatic and ethical response to the overdose crisis. *Canadian Medical Association Journal.* 2020;192(34):E986-E987.
20. Government of British Columbia. New public health order to help slow B.C.'s overdose crisis. 2020: https://news.gov.bc.ca/releases/2020MMHA0051-001754. Accessed January 26, 2021.
21. Izenberg D, Marwaha S. Safe supply: The debate around prescribing opioids to people who use drugs. 2019: https://healthydebate.ca/2019/08/topic/safe-supply.
22. Government of Canada. Letter from the Minister of Health regarding treatment and safer supply. 2020: Letter from the Minister of Health regarding treatment and safer supply. Accessed January 26, 2021.
23. Ontario HIV Treatment Network. Public perception of harm reduction interventions. 2012: https://www.ohtn.on.ca/rapid-response-63-public-perception-of-harm-reduction-interventions/. Accessed January 26, 2021.
24. Duggan K. Poll shows where Canadian cities stand on supervised injection sites. 2017: https://ipolitics.ca/2017/01/18/where-canadian-cities-stand-on-supervised-injection-sites-poll/. Accessed January 12, 2021.
25. Environics Research. Safe Injection Site Debate Stirs Tensions Between Toronto Progressiveness And NIMBYism. n.d.: https://environicsresearch.com/insights/safe-injection-site-debate-stirs-tensions-toronto-progressiveness-nimbyism/. Accessed January 12, 2021.

26. House of Commons Standing Committee on Health. Report of the Standing Committee on Health: Impacts of Methamphetamine Abuse in Canada. 2019: https://www.ourcommons.ca/Content/Committee/421/HESA/Reports/RP10533589/hesarp26/hesarp26-e.pdf. Accessed January 13, 2021.
27. Winter J. Vancouver plan to decriminalize street drugs sets up battle with Ottawa. 2020: https://www.theguardian.com/world/2020/dec/03/vancouver-plan-decriminalize-street-drugs-canada. Accessed January 12, 2021.
28. Wyton M. BC's Safer Supply Program Is Too Slow to Start and Not Working, Users Say. 2021: https://thetyee.ca/News/2021/01/21/BC-Safer-Supply-Program-Too-Slow-Not-Working/. Accessed January 26, 2021.
29. Canadian AIDS Society. Peerology: A Guide By and For People Who Use Drugs on How to Get Involved. 2015: https://www.cdnaids.ca/wp-content/uploads/Peerology-Final-PDF-with-Image.pdf. Accessed January 26, 2021.
30. Canadian Association of People Who Use Drugs (CAPUD). 2021: https://www.capud.ca/. Accessed January 26, 2021.