

PRESCRIBED ALTERNATIVES PROGRAMS: EMERGING EVIDENCE



National Safer Supply
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Prescribed Safer Supply Programs: Emerging Evidence

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What are prescribed alternatives?

Prescribed alternatives (also referred to as prescribed safer supply) are a medicalized model of safe supply. Safe supply refers to regulated pharmaceutical drugs of known content, quantity, quality, and potency that provide the mind/body altering properties of drugs that are currently only available through illegal markets and not available through traditional opioid agonist therapies (CAPUD, 2019). Prescribed alternatives involve the routine clinical practice of off-label prescribing – in this case, the prescribing, dispensing, and administration of prescription medications as alternatives to the poisoned drug supply (British Columbia Office of the Provincial Health Officer, 2023).

“Pharmaceutical alternatives to the illegal drug supply are promising interventions to reduce mortality in people with opioid use disorder.” (Slaunwhite et al., 2024)

Objectives and scope of this document

This document is a brief summary of the current evidence about prescribed alternatives programs for lay audiences, political briefings, and the media. It draws on findings from peer-reviewed research articles and commentaries, as well as all program evaluation reports that have been published to date. For a more in-depth review of the evidence, please see ODPN's [Safer Opioid Supply: A Rapid Review of the Evidence](#).

Context

The appearance of fentanyl and harmful contaminants in the unregulated drug supply in recent years has made the illegal drug supply increasingly unpredictable and toxic (British Columbia Office of the Provincial Health Officer, 2023). As a result, there were 34,455 opioid toxicity related deaths in Canada between January 2016 and September 2022 (Special Advisory Committee, 2022). Fentanyl is overwhelmingly responsible for drug-related deaths in Canada, contributing to 89% of drug-related deaths in Ontario and 86% of drug-related deaths in BC in 2021 (British Columbia Coroners Service, 2023; Gomes, Murray *et al.*, 2022).

"...the fastest way to reduce deaths is to reduce dependence on the unregulated toxic drug supply for people who use drugs. This requires creating access to a quality-controlled, regulated supply of drugs for people at risk of dying." (British Columbia Coroners Service Death Review Panel, 2023)

Health Canada currently [funds 25 pilot programs](#) which use prescribed alternatives. The most common settings for prescribed alternatives are community health settings, such as community health centres and primary care clinics, and onsite pharmacies (Glegg *et al.*, 2022). There are also unfunded programs and individual health care providers who prescribe alternatives.

[Unsanctioned buyer's club models are being explored](#), and preliminary results are very promising (Drug User Liberation front, 2023; Kalicum *et al.*, 2024), showing reductions in overdoses, police interactions, hospitalizations, and experiences of violence. A study in Alberta and Saskatchewan found that a majority of respondents supported provincial government efforts to expand prescribed alternatives (Morris *et al.*, 2023).

Who can access prescribed alternatives?

Around 5% of adults around the world use illegal drugs, and nearly 90% of them are occasional or recreational users (Schlag, 2020). Anyone who uses substances procured from the illegal drug supply – either recreationally or routinely – needs access to a safer supply. At this time, safer supply is only accessible through medicalized programs (i.e., “prescribed alternatives”) due to the current legislative and regulatory context in Canada.

However, prescribed alternatives programs have very limited capacity. One program estimated 6000 people in their region would benefit from prescribed alternatives, but they are only able to serve 300 people (McMurchy & Palmer, 2022). Prescribed alternatives programs currently prioritise those who are at the highest risk of death from overdose (Young *et al.*, 2022), who are experiencing serious medical complications from their drug use (Gomes, Kolla, McCormack *et al.*, 2022; Haines, Tefoglou, & O'Byrne, 2022; McMurchy & Palmer, 2022; Selfridge *et al.*, 2020), and who are marginalized from health care services, including traditional opioid agonist therapies (ESCODI, 2022).

“[N]ot all people who use opioids are interested in treatment, nor is conventional treatment suitable for all people who use opioids” (Ivsins *et al.*, 2020a).

Prescribed alternatives programs are not accessible to those who use opioids recreationally (British Columbia Centre on Substance Use, 2024; British Columbia Office of the Provincial Health Officer, 2023). Typical prescribed alternatives program inclusion criteria include DSM V defined opioid use disorder and previous unsuccessful experience with methadone, buprenorphine or SROM, or disinterest in methadone, buprenorphine, or SROM (Hales *et al.*, 2020). Individual prescribed alternatives programs add criteria such as a history of overdose and high risk of overdose, complications related to injection drug use (infections, etc.), and social factors such as being unhoused¹ or precariously housed, being disengaged from health care and social services, or being involved in crime or sex work. Retention rates in prescribed alternatives programs are very high (Atkinson, 2023; McMurchy & Palmer, 2022; Kolla *et al.*, 2022; Haines, Tefoglou, & O'Byrne, 2022; ESCODI, 2022; Selfridge *et al.*, 2022).

¹ A 2024 study found that homelessness had a causal impact on drug- and alcohol-related mortality (Bradford & Lozano-Rojas, 2024)

What does the evidence show?

Initiators of prescribed alternatives programs in Canada have [drawn on the extensive literature](#) on international OAT studies, European Heroin Assisted Treatment (HAT) studies (e.g., Poulter *et al.*, 2024) and Canadian iOAT studies. There are many research and evaluation studies underway. **Peer-reviewed scientific studies and evaluations of prescribed alternatives programs show:**

- **Prescribed hydromorphone is not contributing to drug-related deaths:** Data from coroners in both BC and Ontario have found no link between prescribed hydromorphone and drug-related overdose deaths: “There is no indication that prescribed safe supply is contributing to illicit drug deaths” (British Columbia Coroners Service, 2023). In Ontario, despite the increasing use of immediate-release hydromorphone during the early pandemic period, both the percentage and overall number of hydromorphone-related deaths actually decreased (Gomes, Murray *et al.*, 2022), including in youth (Iacono *et al.*, 2023).
- **Reduced risk of death and/or overdose:** Both drug-related deaths and deaths from any cause among people receiving prescribed alternatives were rare (Young *et al.*, 2022; Gomes, Kolla, McCormack *et al.*, 2022) and they had fewer overdoses (Atkinson, 2023; Bardwell *et al.*, 2023; ESCODI, 2022; Haines, Tefoglou, & O’Byrne, 2022; Kalicum *et al.*, 2024; Lew *et al.*, 2022; McNeil *et al.*, 2022; Perri *et al.*, 2023a; Schmidt *et al.*, 2023; Selfridge *et al.*, 2020; (Slaunwhite *et al.*, 2024)).
- **Engagement and retention in programs and care:** People experienced increased access to health and social services, including primary care, COVID-19 quarantine, OAT, counselling, and housing support; and improved relationships with providers (Atkinson, 2023; Brothers *et al.*, 2022; Haines & O’Byrne, 2023; Haines, Tefoglu, & O’Byrne, 2023; Hong, Brar & Fairbairn, 2022; Kalicum 2023; Kolla *et al.*, 2022; McMurchy & Palmer, 2022; Perri *et al.*, 2023a; Schmidt *et al.*, 2023; Selfridge *et al.*, 2020; Selfridge *et al.*, 2022; Socias *et al.*, 2023).
- **Improvements in physical and mental health:** People experienced improved chronic and/or infectious disease management, medication adherence, pain management, sleep, nutrition, and energy level (Gomes, Kolla, McCormack *et al.*, 2022; Haines & O’Byrne, 2023; Haines, Tefoglou, & O’Byrne, 2022; Ivsins *et al.*, 2021; Klaire *et al.*, 2022; Kolla *et al.*, 2022; Kolla & Fajber, 2023; Ledlie *et al.*, 2024; McMurchy & Palmer, 2022; Perri *et al.*, 2023a; Selfridge *et al.*, 2020).
- **Fewer emergency department visits and hospitalizations:** People had significantly fewer Emergency Department visits and inpatient hospital admissions after entering the prescribed alternatives program compared to the year prior, with no change in these outcomes among a matched group unexposed to prescribed alternatives in the same time period (Gomes, Kolla, McCormack *et al.*, 2022).
- **Decrease in hospitalizations for infectious complications:** In the year after beginning a prescribed alternatives program, there was a significant decrease in hospitalizations for infectious complications among prescribed alternatives program clients;

hospitalizations dropped from 26 in the year before program entry to 13 in the year following entry to a prescribed alternatives program (Gomes, Kolla, McCormack *et al.*, 2022). There was no change in these outcomes among a matched group unexposed to prescribed alternatives in the same time period (Gomes, Kolla, McCormack *et al.*, 2022). Increasing infection rates overall among people who inject drugs since 2016 align with the shifts in the unregulated drug market towards nonprescription fentanyl (Gomes, Kitchen *et al.*, 2021). Many clients credited prescribed alternatives programs for reducing the frequency at which they injected, providing an alternative to injecting fentanyl, and allowing them to stop injecting by providing safer supply medications that are dosed properly and can be taken orally (Gagnon *et al.*, 2023).

- **Reduced use of drugs from the unregulated street supply** (thereby reducing overdose risk) and, in some cases, reducing drug use overall or ceasing the use of drugs by injection (Atkinson, 2023; Bardwell *et al.*, 2023; Haines, Tefoglu, & O'Byrne, 2023; Kalicum 2023; Kolla *et al.*, 2022; Kolla & Fajber, 2023; McNeil *et al.*, 2022; ESCODI, 2022; Haines, Tefoglou, & O'Byrne, 2022; Selfridge *et al.*, 2020; Ivsins *et al.*, 2020b).
- **Improved control over drug use:** The flexibility and autonomy of prescribed alternatives programs, coupled with certainty about dose strength, enabled participants to avoid withdrawal symptoms and manage pain (Bardwell *et al.*, 2023; Haines & O'Byrne, 2023; McNeil *et al.*, 2022; Ivsins *et al.*, 2020b, Selfridge *et al.*, 2020).
- **Improvements in social well-being and stability:** Participants noted economic improvements (Haines, Tefoglou, & O'Byrne, 2022; Ivsins *et al.*, 2020b; Perri *et al.*, 2023a; Selfridge *et al.*, 2020), reduced inequities stemming from the intersection of drug use and social inequality (Ivsins *et al.*, 2021), better control over time leading to engagement in employment, hobbies, and interests (Atkinson, 2023; Haines & O'Byrne, 2024; Haines, Tefoglou, & O'Byrne, 2022; McMurchy & Palmer, 2022), decreased involvement in and exposure to violence, criminal activities and legal issues (Haines & O'Byrne, 2023; Haines, Tefoglou, & O'Byrne, 2022; Ivsins *et al.*, 2020b; Kolla *et al.*, 2022; McMurchy & Palmer, 2022; Schmidt *et al.*, 2023), improved general social stability (ESCODI, 2022; Schmidt *et al.*, 2023), improved housing access (Atkinson, 2023; Haines, Tefoglou, & O'Byrne, 2022) and improved relationships with family members and friends (Kolla *et al.*, 2022; McMurchy & Palmer, 2022; Selfridge *et al.*, 2020).
- **Decline in health care costs:** Prescribed alternatives program participants had lower costs for healthcare not related to primary care or outpatient medications in the year after program initiation, with no corresponding change observed in a matched group of individuals who did not access the program (Gomes, Kolla, McCormack *et al.*, 2022).

Overall, the emerging evidence supports prescribed alternatives as a critical option on the continuum of treatment and harm reduction services for people who have not been successful with traditional approaches to care and who are at high risk of drug poisoning.

Research involving health administrative data provides a measure of reassurance regarding the safety of prescribed alternatives programs: Gomes, Kolla *et al.* (2022) found a significant decline in health services utilization among clients on prescribed alternatives alongside no change in infection rates, opioid-related deaths, or all-cause mortality. Slaunwhite *et al.* (2024) found that people receiving prescribed alternatives had a 61% lower rate of death from any

cause the week after at least one day of opioid prescription, and a 55% lower rate of death from overdose compared to matched peers who did not receive a prescription. People who received four or more days of opioid prescription had a 91% lower rate of death from any cause, and 89% lower rate of death from overdose. Opioid prescription was not associated with acute care use, but people prescribed stimulants used less acute care the following week. The effect of stimulant prescriptions on the risk of death was unclear.

More research is needed, including longitudinal studies to monitor changes in access to and delivery of prescribed alternatives in the country, determine which models are most effective, and identify the impact of programs on the health, well-being and safety of individuals and communities.

Success factors for prescribed alternatives programs

- **Comprehensive ancillary services:** populations served by prescribed alternatives benefit from health and social supports delivered alongside their prescriptions (Gomes, Kolla, McCormack *et al.*, 2022; Haines, Tefoglou, & O'Byrne, 2022; Kolla & Fajber, 2023; Mansoor *et al.*, 2023; Perri *et al.*, 2023b; Selfridge *et al.*, 2020).

“Safer supply is just one part of more equitable access to health and wellbeing. Providing safer supply is a harm reduction entry-point to addressing other basic needs and priorities. Secure housing, livable income, access to health care, and a caring community to feel a part of, are all necessities.” (McMurphy & Palmer, 2022)

- **Program flexibility** (Bardwell *et al.*, 2023; Ivsins *et al.*, 2020b; Haines, Tefoglou, & O'Byrne, 2022; McMurphy & Palmer, 2022) and adaptability (Glegg *et al.*, 2022; McMurphy & Palmer, 2022)
- **Low-barrier, client-centred design** (Ivsins *et al.*, 2020b; McMurphy & Palmer, 2022; Pauly *et al.*, 2022; Perri *et al.*, 2023b; Ranger *et al.*, 2021)
- **Ability to provide pharmaceuticals that meet people’s needs** (dose, formulation, type) (Giang *et al.*, 2023; Kalicum 2023; Pauly *et al.*, 2022; Ranger *et al.*, 2021; Selfridge *et al.*, 2022)
- **Community-centred approach**, foregrounding the leadership and engagement of people who use drugs (British Columbia Office of the Provincial Health Officer, 2023; Haines & O'Byrne, 2023; Kolla, Tarannum, Fajber *et al.*, 2024; Ranger *et al.*, 2021; Scow *et al.*, 2023) and considering the perspectives of professional stakeholders (Foreman-Mackey *et al.*, 2022; Kolla, Tarannum, Fajber *et al.*, 2024).

“The overarching approach to providing safer supply services should be grounded in the community and centred on input from people with lived experience in program co-design, planning and implementation” (McMurphy & Palmer, 2022)

Program challenges

Prescribed alternatives programs and models do have challenges. Current models are time-consuming for participants, require extensive staffing, and cannot provide prescribed alternative medications of the kind (e.g. smokable formulations or stimulants) and strength that people prefer or require (British Columbia Office of the Provincial Health Officer, 2023; Foreman-Mackey *et al.*, 2022; Giang *et al.*, 2023; Haines & O'Byrne, 2023; Kalicum 2023; Karamouzian *et al.*, 2023; Kolla *et al.*, 2022; Kolla & Fajber, 2023; Ledlie *et al.*, 2024; Mansoor *et al.*, 2023; McMurchy & Palmer, 2022; Perri *et al.*, 2023a). Current regulations and policies are limiting and conventional addiction medicine has not generally been supportive (British Columbia Office of the Provincial Health Officer, 2023; Foreman-Mackey *et al.*, 2022; Kalicum 2023; Kolla *et al.*, 2022; Mansoor *et al.*, 2023; McMurchy & Palmer, 2022). Sustainability of program funding is an important and increasing concern (British Columbia Office of the Provincial Health Officer, 2023; Perri *et al.*, 2023a).

Diversion (the sharing, exchanging, and selling of prescribed alternatives) is reflective of unmet individual and community needs (British Columbia Office of the Provincial Health Officer, 2023). It is not unique to prescribed alternatives medications (British Columbia Office of the Provincial Health Officer, 2023; Haines & O'Byrne, 2023). It can be understood as a harm reduction practice rooted in mutual aid that saves lives (Socias *et al.*, 2021) and improves quality of life. It has social and structural contexts and motivators: barriers to prescribed alternatives programs often necessitate diversion practices. Programs address diversion through providing comprehensive care, urine drug screens, patient contracts, and observed doses. For more information, please see [Reframing Diversion for Health Care Providers: Frequently Asked Questions](#) (NSSCoP, 2022).

According to coroners reports in Ontario and BC, there is no evidence that hydromorphone is contributing to drug related deaths (British Columbia Coroners Service, 2023; Gomes, Murray *et al.*, 2022). One study (Nguyen *et al.*, 2024²) correlated the initiation of prescribed alternatives with an increase in opioid-poisoning-related hospitalizations in British Columbia, but this study confused correlation with causation: it did not consider the increasing toxicity of the underlying unregulated drug supply (British Columbia Office of the Provincial Health Officer, 2023) over the time period of the study and inappropriately compared B.C. to Manitoba and Saskatchewan, where the unregulated drug supply was quite different.

Next steps for prescribed alternatives include developing and exploring other models, including nonmedical models (Kalicum *et al.*, 2024; Neilsen, Stowe, & Ritter, 2024; Palayew *et al.*, 2024) and supports for individual prescribers, and moving towards decriminalization and regulation (Macevicius *et al.*, 2023).

² View the comments on Nguyen *et al.* for additional critiques

What clients have said about prescribed alternatives

Quotes from prescribed alternatives program evaluations:

- "Once I was a client of this program, I knew I was safe." (Haines, Tefoglou & O'Byrne, 2022)
- "I haven't had an overdose since I've been on the program. I had a couple shortly before where I had to be defibrillated." (Atkinson, 2023)
- "It's been a miracle...it's made me love life. It's given me a reason to get out of bed. It's changed my whole perspective on life." (Haines, Tefoglou & O'Byrne, 2022)
- "I'm not in the hospital so much getting my abscesses drained, because I'm actually swallowing my medication. I find it more effective." (Atkinson, 2023)
- "It makes me actually happy to be part of it, because it gave me the opportunity to feel like I have a family." (Haines, Tefoglou & O'Byrne, 2022)
- "I don't use street drugs anymore. I never thought it was possible." (McMurphy & Palmer, 2022)
- The best part is the freedom. It just gives me a lot of freedom, more freedom than I had before, more options than I had before. That's a beautiful thing. And the support that comes around with it." (Atkinson, 2023)
- "There are people that are on this program that started off in tents and now they've actually got themselves to a position where they're renting an apartment. That doesn't happen without safer supply." (Haines, Tefoglou & O'Byrne, 2022)
- "It's done nothing but been good for me. I've got my family, I've been housed for [the] first time in 10 years, I'm volunteering at [organization]. I'm doing things that I just, didn't care about, had no motivation to before." (Kolla *et al.*, 2022)
- "I got a job, got stable housing, stopped using, connected with kids again, I'm in school." (Atkinson, 2023)
- "It's not yet perfect, but it saved my life" (McMurphy & Palmer, 2022)
- "I've seen how my life drastically changed. And I have a job, I have an apartment, I have bills I pay for, I have a car. I have real-life responsibilities that I never had before. And all this is because the program I'm in'." (Schmidt *et al.*, 2023)

For further information

National Safer Supply Community of Practice resources

- [Reframing Diversion for Health Care Providers: Frequently Asked Questions](#) (2022)
- [Safer Supply for Health Care Providers: Frequently Asked Questions](#) (2022)
- [Safer Supply: A Review of the Literature](#) (2022)

- [Safer Supply, Opioid Agonist Treatment & Harm Reduction: National Advocacy Toolkit](#) (2022)

Reports

- London InterCommunity Health Centre's [Safer Opioid Supply Program Evaluation: A comparison of SOS client outcomes from 2022 and 2023](#) (Kolla & Fajber, 2023)
- [Safer Opioid Supply: A Rapid Review of the Evidence](#) (ODPRN, 2023)
- [Parkdale Queen West Community Health Centre Safer Opioid Supply 2023 Evaluation Report](#) (Atkinson, 2023)
- [Safer Supply Ottawa Evaluation - Fall 2022 Report](#) (Haines, Tefoglou, & O'Byrne, 2022)
- [Assessment of the Implementation of Safer Supply Pilot Projects - Full Report](#) (McMurphy & Palmer, 2022)
- [London InterCommunity Health Centre's Safer Opioid Supply Program Evaluation - Full Report](#) (Kolla *et al.*, 2022)
- [Cool Aid Community Health Centre Report on Risk Mitigation Guidance Prescriptions: Providing "Safer Supply" in CAMICO Sheltering Sites, Outreach and Primary Care Practice](#) (Selfridge *et al.*, 2020)

Protocols and Guiding Documents

- [Safer Opioid Supply Programs \(SOS\): A Harm Reduction Informed Guiding Document for Primary Care Teams-April 2020 update](#) (Hales *et al.*, 2020).
- [Safer Opioid Supply Program Protocols. Parkdale Queen West Community Health Centre](#) (Waraksa *et al.*, 2022)
- [Victoria SAFER Initiative: Safer Supply Protocols](#) (AVI Health and Community Services, 2022)

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<https://doi.org/10.1503/cmaj.221550> > Semi-structured interviews with 46 MySafe program participants.

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242-249. <https://doi.org/10.1377/hlthaff.2023.00951> ➤ Estimates from the analysis of state landlord-tenant policies influencing evictions.

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<https://dependanceitinerance.ca/wp-content/uploads/2022/11/Safer-Supply...> ➤ Survey of 20 prescribers and 16 pharmacists in Québec.

Foreman-Mackey, A., Pauly, B., Ivsins, A., Urbanoski, K., Mansoor, M., & Bardwell, G. (2022). Moving towards a continuum of safer supply options for people who use drugs: A qualitative study exploring national perspectives on safer supply among professional stakeholders in Canada. *Substance Abuse Treatment, Prevention, and Policy* (17): Article 66. <https://doi.org/10.1186/s13011-022-00494-y> ➤ 17 qualitative interviews.

Gagnon, M., Rudzinski, K., Guta, A., Schmidt, R.A., Kryszajtys, D.T., Kolla, G., & Strike, C. (2023). Impact of safer supply programs on injection practices: client and provider experiences in Ontario, Canada. *Harm Reduction Journal* 20, Article 81. <https://doi.org/10.1186/s12954-023-00817-7>

Giang, K., Charlesworth, R., Thulien, M., Mulholland, A., Barker, B., Brar, R., Pauly, B., & Fast, D. (2023). Risk mitigation guidance and safer supply prescribing among young people who use drugs in the context of COVID-19 and overdose emergencies. *International Journal of Drug Policy* 115, Article 104023. <https://doi.org/10.1016/j.drugpo.2023.104023> ➤ Interviews with 30 young people who use drugs and 10 addiction medicine physicians

Glegg, S., McCrae, K., Kolla, G., Touesnard, N., Turnbull, J., Brothers, T.D., Brar, R., Sutherland, C., Le Foll, B., Sereda, A., Goyer, M.-È., Rai, N., Bernstein, S., & Fairbairn, N. (2022). “COVID just kind of opened a can of whoop-ass”: The rapid growth of safer supply prescribing during the pandemic documented through an environmental scan of addiction and harm reduction services in Canada. *International Journal of Drug Policy* 106, Article 103742. <https://doi.org/10.1016/j.drugpo.2022.103742> ➤ Mixed methods national environmental scan at two time points.

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Gomes, T., Kolla, G., McCormack, D., Sereda, A., Kitchen, S., & Antoniou, T. (2022). Clinical outcomes and health care costs among people entering a safer opioid supply program in Ontario. *Canadian Medical Association Journal*, 194(36), e1233-e1242. <https://doi.org/10.1503/cmaj.220892> ➤ Interrupted time series analysis with 82 exposed individuals demographically and clinically matched to 303 unexposed individuals.

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toxicity during the COVID-19 pandemic in Ontario. Toronto, ON: Ontario Drug Policy Research Network; 2022. <https://odprn.ca/research/publications/opioid-related-deaths-and-health...>

Haines, M., & O'Byrne, P. (2023). Safer opioid supply: qualitative program evaluation. *Harm Reduction Journal*, 20(53). <https://doi.org/10.1186/s12954-023-00776-z> ➤ Semi-structured interviews and surveys with 30 participants.

Haines, M., & O'Byrne, P. (2024). Context of Substance Use: Harm Reduction and Safer Supply. *Journal of Drug Issues*. <https://doi.org/10.1177/00220426241231499> ➤ Semi-structured interviews examining the context of drug use.

Haines, M., Tefoglu, A., & O'Byrne, P. (2022). *Safer Supply Ottawa Evaluation: Fall 2022 Report*. Ottawa, Canada. <https://safersupplyottawa.com/research/> ➤ Chart review for all safer supply program participants (n=425) plus a qualitative study including interviews (n=30) and surveys

Haines, M., Tefoglu, A., & O'Byrne, P. (2023). *Safer Supply Ottawa Evaluation: Spring 2023 Report*. Ottawa, Canada. <https://safersupplyottawa.com/research/> ➤ Chart review for all safer supply program participants (n=460) and stimulant safer supply participants (n=28)

Hales, J., Kolla, G., Man, T., O'Reilly, E., Rai, N., & Sereda, A. (2020) *Safer Opioid Supply Programs (SOS): A Harm Reduction Informed Guiding Document for Primary Care Teams-April 2020 update*. Canada. <https://bit.ly/3dR3b8m>

Health Canada. (2019). *Toolkit for Substance Use and Addictions Program Applicants: Stream 2 - Increasing Access to Pharmaceutical-Grade Medications*. Government of Canada. <https://drive.google.com/file/d/1gOxsb6LNVmrEyeU3CBwr7XPYSPHG9S8L/view>

Health Canada. (2022). *Interactive map: Canada's response to the opioid overdose crisis*. Health Canada. <https://health.canada.ca/en/health-canada/services/drugs-medication/opi...>

Hong, R.H., Brar, R., & Fairbairn, N. (2022). Supporting Self-isolation for COVID-19 With “Risk Mitigation” Prescribing and Housing Supports for People Who Use Drugs: A Case Report. *Journal of Addiction Medicine* 16(5), 592-594. <https://doi.org/10.1097/ADM.0000000000000954> ➤ Case study.

Iacono A, Kolla G, Yang J, Leece P, Moumita T, Wu F, Cheng C, Campbell T, Antoniou T, Juurlink D, Sheikh H, Emblem J, Kurdyak P, Bertrand J, Shearer D, Singh S, Gomes T, on behalf of the Ontario Drug Policy Research Network, Office of the Chief Coroner for Ontario and Ontario Agency for Health Protection and Promotion (Public Health Ontario). (2023). *Opioid toxicity and access to treatment among adolescents and young adults in Ontario*. Toronto, ON: Ontario Drug Policy Research Network. <https://odprn.ca/research/publications/opioids-among-adolescents-and-young-adults/> ➤ Report using administrative data from multiple sources.

Ivsins, A., Boyd, J., Beletsky, L., & McNeil, R. (2020a). Tackling the overdose crisis: The role of safe supply. *International Journal of Drug Policy* 80, Article 102769. <https://doi.org/10.1016/j.drugpo.2020.102769>

Ivsins, A., Boyd, J., Mayer, S., Collins, A., Sutherland, C., Kerr, T., & McNeil, R. (2020b). Barriers and facilitators to a novel low-barrier hydromorphone distribution program in Vancouver, Canada: a qualitative study. *Drug and Alcohol Dependence* 216: Article 108202. <https://doi.org/10.1016/j.drugalcdep.2020.108202> > 42 qualitative interviews plus 100 hours of ethnographic observations.

Ivsins, A., Boyd, J., Mayer, S., Collins, A., Sutherland, C., Kerr, T., & McNeil, R. (2021). "It's Helped Me a Lot, Just Like to Stay Alive": A Qualitative Analysis of Outcomes of a Novel Hydromorphone Tablet Distribution Program in Vancouver, Canada. *Journal of Urban Health*, 98, 59-69. <https://doi.org/10.1007/s11524-020-00489-9> > 42 qualitative interviews plus 100 hours of ethnographic observations.

Kalicum, J. (2023). "We need all the help we can get": A Qualitative Examination of Service Provider Perspectives on the Barriers and Facilitators to the Implementation of The Emergency Risk Mitigation Guidelines [Master's thesis, University of Victoria]. https://dspace.library.uvic.ca/bitstream/handle/1828/15052/Kalicum_Jere... > 24 qualitative interviews.

Kalicum, J., Nyx, E., Kennedy, M.C., & Kerr, T. (2024). The impact of an unsanctioned compassion club on non-fatal overdose. *International Journal of Drug Policy*: Article 104330. <https://doi.org/10.1016/j.drugpo.2024.104330> > Surveys at 3-month intervals with 47 compassion club members.

Karamouzian, M. *et al.* (2023). Challenges of implementing safer supply programs in Canada during the COVID-19 pandemic: A qualitative analysis. *International Journal of Drug Policy* 120: Article 104157. <https://doi.org/10.1016/j.drugpo.2023.104157> > Examined progress reports from 11 safer supply programs.

Kasper, K. J., Manoharan, I., Hallam, B., Coleman, C. E., Koivu, S. L., & Weir, M. A. (2019). A controlled-release oral opioid supports *S. aureus* survival in injection drug preparation equipment and may increase bacteremia and endocarditis risk. *PLoS ONE* 14(8): e0219777. <https://doi.org/10.1371/journal.pone.0219777> > Examined used injection drug preparation equipment (n=87).

Klaire, S., Sutherland, C., Kerr, T., & Kennedy, M. C. (2022). A low-barrier, flexible safe supply program to prevent deaths from overdose. *Canadian Medical Association Journal*, 194(19), e674-e676. <https://doi.org/10.1503/cmaj.211515> > Case study.

Kolla, G., & Fajber, K. (2023). *Safer Opioid Supply Program Evaluation: A comparison of SOS client outcomes from 2022 and 2023*. London: London Intercommunity Health Center. > Analyzes client outcomes using self-reported client data

Kolla, G., Long, C., Perri, M., Bowra, A., & Penn, R. (2022). *Safer Opioid Supply Program: Summary Report*. London, Ontario: London InterCommunity Health Centre. https://www.nss-aps.ca/sites/default/files/resources/2022_LIHC_SOS_Prog... > Findings from a mixed-methods evaluation examining the scale up of the safer supply program at LIHC from 112 to 248 clients.

Kolla, G., Tarannum, C.N., Fajber, K. *et al.* (2024). Substance use care innovations during COVID-19: barriers and facilitators to the provision of safer supply at a Toronto COVID-19 isolation and recovery site. *Harm Reduction Journal* 21: Article 17. <https://doi.org/10.1186/s12954-024-00935-w> > In-depth, semi-structured interviews (n=50).

Ledlie, S., Garg, R., Cheng, C., Kolla, G., Antoniou, T., Bouck, Z., & Gomes, T. (2024). Prescribed safer opioid supply: A scoping review of the evidence. *International Journal of Drug Policy* 125: Article 104339. <https://doi.org/10.1016/j.drugpo.2024.104339> > Scoping review which included 17 peer-reviewed and 7 grey literature publications.

Lew, B., Bodkin, C., Lennox, R., O'Shea, T., Wiwcharuk, G. & Turner, S. (2022). The impact of an integrated safer use space and safer supply program on non-fatal overdose among emergency shelter residents during a COVID-19 outbreak: a case study. *Harm Reduction Journal* 19, Article 29. <https://doi.org/10.1186/s12954-022-00614-8> > Case study

Macevicius, C., Gudiño Pérez, D., Norton, A., Kolla, G., Beck-McGreevy, P., Selfridge, M., Kalicum, J., Hutchison, A., Urbanoski, K., Barker, B., Slaunwhite, A., Nosyk, B., & Pauly, B. (2023). Just have this come from their prescription pad: the medicalization of safer supply from the perspectives of health planners in BC, Canada. *Drugs: Education, Prevention and Policy*. <https://doi.org/10.1080/09687637.2023.2283383>

Mansoor, M., Foreman-Mackey, A., Ivsins, A., & Bardwell, G. (2023). Community partner perspectives on the implementation of a novel safer supply program in Canada: a qualitative study of the MySafe Project. *Harm Reduction Journal* (20): Article 61. <https://doi.org/10.1186/s12954-023-00789-8> > 17 qualitative interviews.

McMurphy, D., & Palmer, R. W. H. (2022). *Assessment of the Implementation of Safer Supply Pilot Projects*. Ottawa, Ontario: Dale McMurphy Consulting. https://www.nss-aps.ca/sites/default/files/resources/2022-03-safer_supp... > Qualitative assessment of 10 time-limited safer supply pilot projects in British Columbia, Ontario, and New Brunswick.

McNeil, R., Fleming, T., Mayer, S., Barker, A., Mansoor, M., Betsos, A., Austin, T., Parusel, S., Ivsins, A., & Boyd, J. (2022). Implementation of Safe Supply Alternatives During Intersecting COVID-19 and Overdose Health Emergencies in British Columbia, Canada, 2021. *American Journal of Public Health* 112, s151-s158. <https://doi.org/10.2105/AJPH.2021.306692> > 40 qualitative interviews.

Morris, H., Bwala, H., Wesley, J., & Hyshka, E. (2023). Public support for safer supply programs: analysis of a cross-sectional survey of Canadians in two provinces. *Canadian Journal of Public Health* 114: 484-492. <https://doi.org/10.17269/s41997-022-00736-3> ➤ Cross-sectional survey which concluded that a majority of Canadians in Saskatchewan and Alberta supported provincial government efforts to expand safer supply.

National Safer Supply Community of Practice. (2022). *Reframing Diversion for Health Care Providers: Frequently Asked Questions*. Canada. <https://www.nss-aps.ca/reframing-diversion-prescribers>

Neilsen, S., Stowe, M.J., & Ritter, A. (2024). In pursuit of safer supply: An emerging evidence base for medical and nonmedical models. *International Journal of Drug Policy* 126: Article 104365. <https://doi.org/10.1016/j.drugpo.2024.104365>

Nguyen, H.V., Mital, S., Bugden, S., & McGinty, E.E. (2024). British Columbia's Safer Opioid Supply Policy and Opioid Outcomes. *JAMA Internal Medicine*. <https://doi.org/10.1001/jamainternmed.2023.7570>

Ontario Drug Policy Research Network. (2023). *Safer opioid supply: A rapid review of the evidence*. Toronto, ON: Ontario Drug Policy Research Network. <https://odprn.ca/wp-content/uploads/2023/07/Safer-Opioid-Supply-Rapid-Review.pdf>

Palayew, A., Banta-Green, C.J., Lamont, M., Damper, D., Moreno, C., Goodreau, S.J., & Glick, S.N. (2024). Acceptability and anticipated effectiveness of a safe supply of opioids, among people who inject opioids in King County, WA. *International Journal of Drug Policy* 127: Article 104389. <https://doi.org/10.1016/j.drugpo.2024.104389> ➤ Explored the acceptability of various safer supply models with 453 participants.

Pauly, B., McCall, J., Cameron, F., Stuart, H., Hobbs, H., Sullivan, G., Ranger, C., & Urbanoski, K. (2022). A concept mapping study of service user design of safer supply as an alternative to the illicit drug market. *International Journal of Drug Policy* 110: Article 103849. <https://doi.org/10.1016/j.drugpo.2022.103849> ➤ Concept mapping study (63 participants) using the prompt "Safe supply would work well if...".

Perri, M., Fajber, K., Guta, A., Strike, C., & Kolla, G. (2023a). *Outcomes from the Safer Supply Program in Kitchener-Waterloo. Report 1*. Canada. <https://www.nss-aps.ca/sites/default/files/resources/2023-KWSaferSupply...>

Perri, M., Fajber, K., Guta, A., Strike, C., & Kolla, G. (2023b). *The Kitchener-Waterloo Safer Supply Program: A Collaborative Model of Care. Report 2*. Canada. <https://www.nss-aps.ca/sites/default/files/resources/2023-KWSaferSupply...>

Poulter, H.L., Moore, H.J., Ahmed, D., Riley, F., Walker, T., & Harris, M. (2024). Co-located Heroin Assisted Treatment within primary care: A preliminary analysis of the implications for healthcare access, cost, and treatment delivery in the UK. *International Journal of Drug Policy*

126: Article 104367. <https://doi.org/10.1016/j.drugpo.2024.104367> ➤ Analysis of anonymised health records for healthcare costs.

Ranger, C., Hobbs, H., Cameron, F., Stuart, H., McCall, J. Sullivan, G., Urbanoski, K., Slaunwhite, A., & Pauly, B. (2021). *Co/Lab Practice Brief: Implementing the Victoria SAFER Initiative*. Victoria, British Columbia: Canadian Institute for Substance Use Research.

Schlag, A. K. (2020). Percentages of problem drug use and their implications for policy making: A review of the literature. *Drug Science, Policy and Law* 2020;6. <https://doi.org/10.1177/2050324520904540> ➤ Literature review.

Schmidt, R.A., Kaminski, N., Kryszajtys, D.T., Rudzinski, K., Perri, M., Guta, A., Benoit, A.C., Bayoumi, A.M., Challacombe, L., Hales, J., Kenny, K., Kolla, G., O'Reilly, E., Sereda, A., Rai, N., & Strike, C. (2023). 'I don't chase drugs as much anymore, and I'm not dead': Client reported outcomes associated with safer opioid supply programs in Ontario, Canada. *Drug and Alcohol Review* 42(7): 1825-1837. <https://doi.org/10.1111/dar.13745> ➤ Interviews with 52 clients from four Ontario safer opioid supply programs

Scow, M., McDougall, J., Slaunwhite, A., & Palis, H. (2023). Peer-led safer supply and opioid agonist treatment medication distribution: a case study from rural British Columbia. *Harm Reduction Journal* 20: Article 156. <https://doi.org/10.1186/s12954-023-00883-x>. ➤ Case study highlighting the importance and value of peer-led work and need for further investments in peer-led programs.

Selfridge, M., Heaslip, A., Nguyen, A., Card, K., & Fraser, C. (2020). *Cool Aid Community Health Centre Report on Risk Mitigation Guidance Prescriptions: Providing "Safer Supply" in CAMICO Sheltering Sites, Outreach and Primary Care Practice*. Victoria, British Columbia: Cool Aid Community Health Centre. https://coolaid.org/wp-content/uploads/2021/03/CACHC_RMG_March-August20... ➤ Chart review (n=313)

Selfridge, M., Card, K., Kandler, T., Flanagan, E., Lerhe, E., Heaslip, A., Nguyen, A., Moher, M., Pauly, B., Urbanoski, K., & Fraser, C. (2022). Factors associated with 60-day adherence to "safer supply" opioids prescribed under British Columbia's interim clinical guidance for health care providers to support people who use drugs during COVID-19 and the ongoing overdose emergency. *International Journal of Drug Policy* 105, Article 103709. <https://doi.org/10.1016/j.drugpo.2022.103709> ➤ Chart review (n=286).

Silverman, M., Slater, J., Jandoc, R., Koivu, S., Garg, A. X., & Weir M. A. (2020). Hydromorphone and the risk of infective endocarditis among people who inject drugs: a population-based, retrospective cohort study. *The Lancet Infectious Diseases* 20(4): 487-497. [https://doi.org/10.1016/S1473-3099\(19\)30705-4](https://doi.org/10.1016/S1473-3099(19)30705-4) ➤ Retrospective cohort study (n=60 529) using linked health administrative databases.

Slaunwhite, A., Min, J.E., Palis, H., Urbanoski, K., Pauly, B., Barker, B., Crabtree, A., Bach, P., Krebs, E., Dale, L., Meilleur, L., & Nosyk, B. (2024). Effect of Risk Mitigation Guidance opioid

and stimulant dispensations on mortality and acute care visits during dual public health emergencies: retrospective cohort study. *British Medical Journal* 2024(384): e076336. <https://doi.org/10.1136/bmj-2023-076336> > Retrospective cohort study using population-level administrative data.

Socias, M.E., Choi, J.C., Fairbairn, N., Johnson, C., Wilson, D., Debeck, K., Brar, R., & Hayashi, K. (2023). Impacts of the COVID-19 pandemic on enrollment in medications for opioid use disorder (MOUD) in Vancouver, Canada: An interrupted time series analysis, *International Journal of Drug Policy* 118: Article 104075. <https://doi.org/10.1016/j.drugpo.2023.104075>. > Interrupted time series analysis using data from three cohorts of people (n=760).

Socias, M.E., Grant, C., Hayashi, K., Geoff Bardwell, B., Mary Clare Kennedy, M.C., Milloy, M.-J., & Kerr, T. (2021). The use of diverted pharmaceutical opioids is associated with reduced risk of fentanyl exposure among people using unregulated drugs in Vancouver, Canada. *Drug and Alcohol Dependence* 228: Article 109109. <https://doi.org/10.1016/j.drugalcdep.2021.109109>. > Data from two prospective community-recruited cohorts (n=1150).

Special Advisory Committee on the Epidemic of Opioid Overdoses. (2022). *Opioid- and stimulant-related harms in Canada*. Ottawa: Public Health Agency of Canada. <https://health-infobase.canada.ca/substance-related-harms/opioids-stimu...> (accessed 2023 April 20).

Young, S., Kolla, G., McCormack, D., Campbell, T., Leece, P., Strike, C., Srivastava, A., Antoniou, T., Bayoumi, A. M., Gomes, T. (2022). Characterizing safer supply prescribing of immediate release hydromorphone for individuals with opioid use disorder across Ontario, Canada. *International Journal of Drug Policy* 102, Article 103601. <https://doi.org/10.1016/j.drugpo.2022.103601> > Using provincial health data, examined 534 initiations of safer supply (447 distinct individuals) from 155 prescribers

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This evidence brief was developed by the National Safer Supply Community of Practice (NSS-CoP). Please visit <https://www.nss-aps.ca/> to learn more.

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