

Research Paper

A concept mapping study of service user design of safer supply as an alternative to the illicit drug market



B. Pauly^{a,b,*}, J. McCall^{a,b}, F. Cameron^c, H. Stuart^c, H. Hobbs^d, G. Sullivan^{a,b}, C. Ranger^d, K. Urbanoski^{a,b}

^a University of Victoria, PO Box 1700 STN CSC, Victoria, BC, Canada, V8W 2Y2, Canada

^b Canadian Institute of Substance Use Research, 2300 McKenzie Ave., Victoria, BC, V8N 5M8, Canada

^c SOLID Outreach, 1056 North Park Street, Victoria, BC, Canada

^d Victoria SAFER Initiative, AVI Health & Community Services, 3rd Floor 713 Johnson Street, Victoria BC, V8W 1M8, Canada

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ABSTRACT

Background: Within North America and worldwide, drug-related overdoses have increased dramatically over the past decade. COVID-19 escalated the need for a safer supply of illicit substances to reduce overdoses with hopes of replacing substances obtained from the illicit drug market. Drug users should be at the centre of program and policy decisions related to the development and implementation of safer supply. Yet, there is little empirical research that conceptualizes effective safer supply from their perspectives.

Method: Within a community based participatory approach to research, we conducted a concept mapping study to foreground the perspectives of drug users and develop a conceptual model of effective safer supply. Our team was composed of researchers from a local drug user organization, a local harm reduction organization, and academic researchers. The focused prompt developed by the team was: “Safe supply would work well if...” Sixty-three drug users participated in three rounds of focus groups as part of the concept mapping process, involving brainstorming, sorting, rating and naming of themes.

Results: The concept mapping process resulted in six clusters of statements: 1) Right dose and right drugs for me; 2) Safe, positive and welcoming spaces; 3) Safer supply and other services are accessible to me; 4) I am treated with respect; 5) I can easily get my safer supply; and 6) Helps me function and improves my quality of life (as defined by me). The statements within each cluster describe key components central to an effective model of safer supply as defined by drug users.

Conclusion: The results of this study provide insights into key components of effective safer supply to inform planning and evaluation of future safer supply programs informed by drug user perspectives.

Drug overdoses are having a devastating impact worldwide with overdose deaths reaching unprecedented levels in North America and Europe (Imtiaz et al., 2021; European Monitoring Centre for Drugs and Drug Addiction, 2019; Cicarrone, 2021; World Health Organization, 2021). More than 29,000 Canadians died of an overdose between January, 2016 and December, 2021 (Public Health Agency of Canada, 2022). In the Canadian province of British Columbia (BC), a public health emergency was declared in 2016 in response to escalating rates with overdoses now the leading cause of unnatural death in the province (BC Ministry of Health, 2016; British Columbia Ministry of Mental Health and Addictions, 2018).

A main driver of the ongoing emergency in BC is the toxic, unpredictable, and unregulated drug supply (British Columbia Coroner's Service, 2022) and a shift to fentanyl and its analogues. Overdose risk is fur-

ther heightened by the presence of adulterants (e.g. etizolam, xylazine) (Liang et al., 2021; Tobias et al., 2020). Following a slight decline in overdose deaths in 2019, attributed to the implementation of harm reduction and addiction treatment interventions (Irvine et al., 2019), overdose deaths increased dramatically with the emergence of the COVID-19 pandemic and have not abated. In 2021, there was a record 2,265 drug toxicity deaths in the province, compared to 1774 in 2020 (BC Coroner's Service, 2022). Additional contributing factors include pandemic-related disruptions to substance use and harm reduction services, as well as the impacts of physical distancing and isolation (Linas et al., 2021; Palis et al., 2021).

In the context of a highly toxic and unpredictable drug supply, calls for the provision of a safer supply of substances to replace the illicit drug market from advocates, researchers and people who use drugs (PWUD)

* Corresponding author.

E-mail address: bpaul@uvic.ca (B. Pauly).

have intensified (BCCSU, 2019; Csete & Elliott, 2021; Tyndall, 2020; Ivsins et al., 2020; CAPUD, 2019; Bonn et al., 2020a; Paley, 2022). The Canadian Association of People who Use Drugs (CAPUD, 2019) defines safer supply as “a legal and regulated supply of drugs with mind/body altering properties that traditionally have been accessible only through the illicit drug market” (p.4). As such, safer supply programs should be developed in partnership with drug users (Bonn et al., 2020b; Bonn et al., 2020c; Csete and Elliott, 2021).

During COVID, BC introduced Risk Mitigation Guidance (RMG) which provided clinical guidance for prescription of opioids (e.g. hydromorphone, slow release morphine), stimulants (e.g. dextroamphetamine; methylphenidate) and benzodiazepines (e.g. clonazepam, diazepam) within a harm reduction framework to reduce overdoses and prevent spread of COVID 19 for people who have active substance use and are dependent on the illicit drug market (BCCSU, 2020). In July, 2021, the BC Ministry of Mental Health and Addiction introduced prescribed safer supply guidance decoupled from COVID (British Columbia Ministry of Mental Health and Addictions, 2021). Further, in Canada, there has been a rapid scale up and increase in injectable opioid assisted treatment (iOAT), tablet injectable opioid assisted treatment (TiOAT) and safer supply programs (Glegg et al., 2022) but little attention has been paid to the important role of drug users in the development and evaluation of such programs.

It is well established that drug users should have a central role in the design, delivery, and evaluation of harm reduction services (Canadian HIV/AIDS Legal Network et al., 2008; Brown et al., 2019; Kennedy et al., 2019; National Harm Reduction Coalition, 2020; Ti et al., 2012). When drug users are involved in the development of services, it is more likely that services will be accessible and acceptable to them (Bassuk et al., 2016; Broadhead et al., 2002; ; Deering et al., 2011; Needle et al., 2005). In British Columbia, drug users are identified as central to developing overdose responses (BC Ministry of Mental Health and Addictions, 2017) to enhance the reach, appropriateness, and effectiveness of interventions (Bardwell et al., 2018; Greer et al., 2016; Pauly et al., 2020; Wallace et al., 2019). However, there is little available research on what constitutes an effective model of safer supply from the perspective of drug users. In order to address this knowledge gap, our primary research question examined what constitutes effective safer supply from a service user perspective.

Study context

The study took place in Victoria, BC (the provincial capital city, estimated population in 2021 of 390,000) to inform the development of the Victoria SAFER (Safer Alternative for Emergency Response) Initiative. Victoria is one of the top three townships in the province facing high rates of overdose deaths (BC Coroners Service, 2022). In response to COVID-19 and the escalating overdose emergency the Victoria SAFER Initiative (SAFER) was funded by Health Canada, joining a small handful of safer supply programs previously funded across the country (Ranger et al., 2021). The goal of SAFER is to provide safer pharmaceutical alternatives to the highly contaminated illicit drug supply, utilizing a harm reduction approach to provide access to prescription medications. SAFER is a program of AVI Health and Community Services (AVI) and involves a partnership with a local drug user organization (SOLID Outreach). AVI approached the academic researchers to assist with research and evaluation for the program who already have a long history of research collaboration with AVI And SOLID Outreach. The study was undertaken by the Victoria SAFER research team composed of members from SOLID Outreach (an organization by and for drug users), AVI and academic researchers from the Canadian Institute for Substance Use Research (CISUR). The study was conducted between September 2020 and January 2021 to conceptualize a service user- driven model of safer supply to inform program planning.

Method

We embedded concept mapping as a methodology within an overarching community based participatory research (CBPR) approach to ensure we were not simply collecting data from drug users. As Harris and Luongo (2021) observe just collecting data from drug users can be a form of epistemic violence which renders their voices unheard. Simon et al (2021) suggest a shift from community based participatory research to community-driven research with drug users. They identify a number of key principles including community-initiated research questions, full partnership for grassroots organizations, researchers trained in community based participatory research (CBPR), cash payments to directly-impacted participants, priority hiring for directly-impacted people in low threshold positions, low barrier accreditation and training for directly impacted people, and freely accessible published findings (Simon et al., 2021). Below we outline how many of these considerations were addressed as part of our approach to CBPR.

Consistent with CBPR and through a partnership with SOLID Outreach, drug users were full partners and involved in all phases of the study, from conception and design to data collection, analysis, and reporting (Minkler, 2005; Minkler, 2010; Israel et al., 2003). CBPR requires collaborative and equitable partnerships, often involving long term relationships and commitments to health equity. The research team (AVI, SOLID Outreach, and academic researchers), have existing relationships that span more than fifteen years. Further, SOLID Outreach and the academic researchers have previously conducted CBPR research including the use of concept mapping (Urbanoski et al., 2020; Pauly et al., 2015; McCall et al., 2017).

Drug users on the core research team were paid an hourly wage comparable to a graduate level student for an agreed-upon number of hours. An additional goal of CBPR is to promote co-learning and capacity building amongst all the partners where knowledge is used to inform action (Israel et al., 2003). Training in CBPR and concept mapping were provided to all community research members and was a two-way process, where the academic researchers shared their knowledge of methodology and the community researchers shared their contextual expertise and knowledge of how to conduct research within the community. The results of the study were used to inform and further develop SAFER. All study activities were approved by the Institutional Research Ethics Board at the University of Victoria (# 20-0384).

Concept mapping is a mixed methods approach to defining a concept that is not well defined or understood that actively engages community in the process of the research and can inform program planning and evaluation (Trochim & Kane, 2005; Trochim, 1989). There have been several studies utilizing concept mapping with drug users, including studies examining safety in primary care for people who use substances (Urbanoski et al., 2020), social dynamics and consequences of alcohol and substance use (Windsor, 2013) and attitudes towards cannabis among users and non-users (Alvarez-Roldan, Parra & Villanueva-Blasco, 2022). Data collection involves a series of focus groups with intervening analyses, beginning with brainstorming to first identify the scope of the concept under study and then to articulate its components and their inter-relationships. The end-products include visual maps of the concept, with accompanying narrative explanations and descriptive statistics.

Study participants were recruited from the SOLID Outreach membership list, which includes more than 2,000 people who use drugs as well as other non-profit agencies serving women, youth, and Indigenous people specifically. Trochim (1989) recommends between 10 and 20 people take part in concept mapping, but notes that conceptualization works best when it includes a wide variety of relevant people (Trochim, 1989). In total, 63 people who use drugs participated in three rounds of focus groups. During each round, focus groups were held in a variety of settings to promote accessibility, including at key service organizations, in sheltering hotels established during the COVID-19 pandemic, and in

encampments located in parks. Participants provided informed consent and received an honorarium to compensate them for their time and expertise (\$25 per hour). Focus groups were co-facilitated by a person with lived/living experience of substance use from SOLID Outreach and an academic researcher.

The first round of focus groups were dedicated to brainstorming what constitutes safer supply. The team identified a focus prompt to initiate the brainstorming: “*Safe supply would work well if ...*” Seven focus groups were held in which 35 participants, all of whom identified as using illicit substances, brainstormed answers to the focus prompt. Answers were recorded on flip-charts and the discussion was audio-recorded to allow for verification. This process generated 320 statements, which the research team subsequently reviewed and revised to capture a parsimonious set of unique ideas. Statements were examined by the team for duplication, and agreement was achieved by using a consensus model of decision making and ensuring all members had an opportunity to provide their views as well as resolve any conflicts. This yielded a set of 68 unique statements that comprehensively captured participants’ descriptions of key components of an effective model for safer supply.

The 68 statements were then sorted during a second round of focus groups. The second round included five focus groups with 25 participants ($n = 6$ who had participated in the brainstorming phase). Participants were given the 68 statements on index cards and were asked to sort them into like groups or piles (i.e., clusters of statements that belong together because they address conceptually similar ideas). They were instructed to create as many piles as they felt they needed to capture the distinct components of safer supply. The number of piles per participant ranged from 2-10, with the majority creating 4-6.

Data from the second round were entered into [Group Wisdom \(2022\)](#) for analysis. The dataset comprised a 68×68 matrix of values representing the count of times each statement was paired with each other. The matrix was analyzed using multi-dimensional scaling to produce a 2-dimensional point map of statements. Placement of each statement on the point map is determined by the statement pairings (i.e., those paired together frequently appear close together on the point map). We calculated the stress value, which offers a goodness of fit index between the point map configuration and the raw matrix. Values of the stress index vary from 0-1, with lower values indicating better fit. The stress value was 0.3377, which falls within the recommended range ($>.39$) ([Kane & Trochim, 2007](#); [Rosas & Kane, 2012](#)). Hierarchical cluster analysis was performed to identify clusters of statements, which are overlaid on the point map. We produced point maps with 6-12 clusters for review by the research team. The research team reviewed these maps as a group, reflecting on participants’ discussions in the focus groups and the meaning of statements comprising each cluster. We started with the 12-cluster solution and moved through the maps successively considering conceptual clarity as the clusters merged, to arrive at the smallest number of clusters needed to comprehensively convey the unique components of safer supply. The research team arrived at a consensus with the 6-cluster solution offering the best representation of findings.

In the final round of focus groups, participants reviewed the cluster map ([Fig. 1](#)) and lists of statements to assist with naming each cluster. This phase involved six focus groups, conducted with 27 participants ($n = 18$) who had participated in one or both of the previous rounds of focus groups. After reviewing the statement clusters, participants completed a questionnaire to provide their ratings of the feasibility and importance of each statement (not feasible/important, a little bit feasible/important, very feasible/important). These data were entered into [Group Wisdom \(2022\)](#) and used to generate a ladder map and a go-zone graph. The ladder map illustrates the concordance between ratings of feasibility and importance at the cluster level, while the go-zone graph shows the concordance of ratings at the statement level ([Trochim & Kane, 2005](#)). Together, these findings represent key conceptual components for implementation.

Results

Throughout the process of concept mapping, the participants provided in-depth perspectives on both positive and negative aspects of safer supply, yielding a model that captures the core components of what constitutes an effective program from the perspective of drug users. These core components (representing 6 statement clusters) are discussed in turn.

Cluster one: Right dose and right drugs for me

The seventeen statements in this cluster ([Table 1](#)) focus on the importance and availability of the right drugs in the right dose via the right route, and being able to access the right combination of drugs to effectively replace substances from the illicit market. Many participants spoke about their experiences with prescription options that did not actually supply the drugs needed to prevent use of the illicit drug market, and expressed that safer supply should be like “real dope”. Effective safer supply means having access to a safe and non-toxic supply that is decriminalized and legal. If drugs are prescribed, they should not be too difficult to get off and should not create dependencies. Many participants cited the challenges of getting off of methadone as an example of the kind of challenge they wished to avoid. At the same time, available substances need to be strong enough to eliminate use of street drugs. Drugs should also be available in forms that are safe and suitable for both injecting and/or smoking.

The “right drugs” refers to having drug choices that suit the needs and goals of the individual, with potential options such as heroin, fentanyl, morphine, ketamine, methamphetamine, cocaine, original methadone formulations, and cannabis. Some participants highlighted the importance of substitutions for fentanyl to manage their symptoms and give them the ‘high’ they were looking for. One participant stated that they were looking for “Right drugs in the right dose to achieve the euphoric state.” Some cited that, hydromorphone, one of the RMG medications, did not provide the sense of euphoria that some participants sought and was an inadequate replacement for more potent fentanyl.

Cluster two: Safe, positive, and welcoming spaces

The twelve statements in this cluster ([Table 2](#)) reflect the importance that participants placed on non-stigmatizing spaces where they are treated with care and compassion. Participants wanted to access safer supply without fear of stigma, judgements, blame, or having to be labelled with a disorder in order to get help. They highlighted the need for a program that provided wrap-around care, not just drugs, where they felt welcomed and valued by people that they felt comfortable talking to. Peers or people with lived/living experience were identified as important team members and a key part of effective safer supply programs. Participants pointed to the importance of the availability of physical spaces for smoking and injecting, as well as sites being accessible 24/7 with access to optional mental health supports. Further, they wanted programs that were long term, stable options rather than short-term.

Cluster three: Safer supply and other services are accessible to me

The nine statements in this cluster ([Table 3](#)) emphasized the necessity of ease of access to a safer supply as a component of effectiveness. A number of participants talked about the challenges of obtaining the drugs they needed due to restricted clinic hours and locations, as well as problems getting the services they needed. As one participant put it, the program needs to be “...easy to access and I do not have to jump through hoops”. Some participants related significant challenges in accessing safer supply, including difficulty finding services, having to navigate police, limits on prescriptions, and being required to provide urine samples. Participants highlighted that effective safer supply shouldn’t be

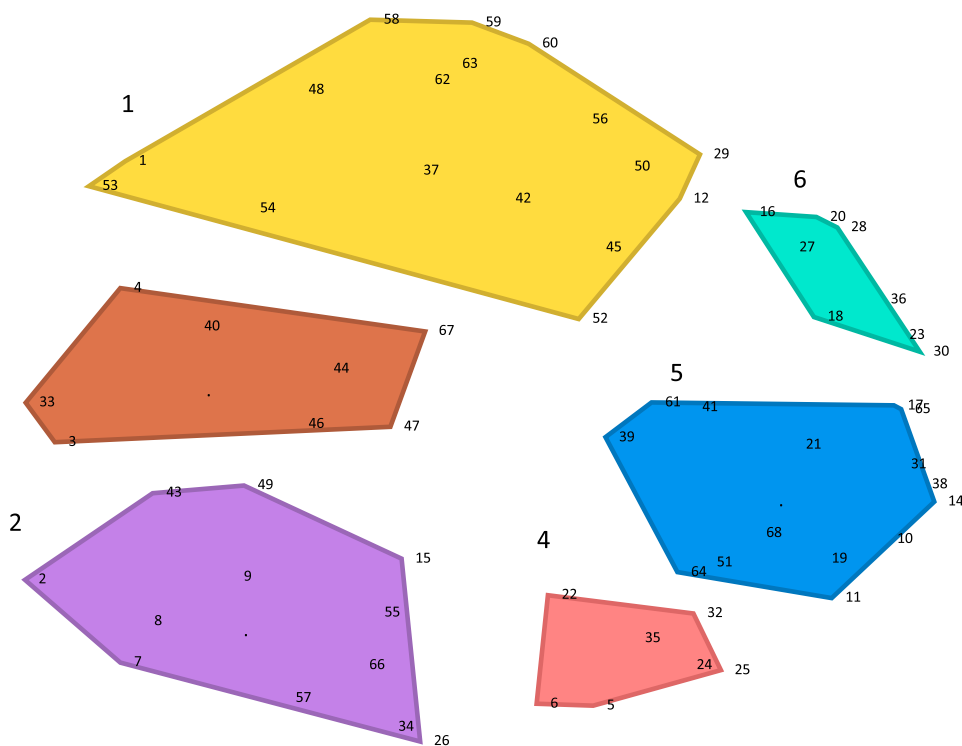


Fig. 1. Cluster Map 1. Right dose and right drugs for me. 2. Safe, positive and welcoming spaces. 3. Safe supply and other services are accessible to me. 4. I am treated with respect. 5. I can easily get my safe supply. 6. The program helps me function and improves my quality of life (as defined by me).

Table 1
Right drugs and right dose for me.

Right Drugs and Right Dose for me
12) If drugs are strong enough and doses high enough so I don't have to add street drugs to give it legs
29) Access to a combination of drugs (e.g. you need both up and down)
37) Don't want to be dependent or too hard to get off of
42) Provides a safe and non-toxic supply without the side effects
45) I can try different things to see what works
48) Cannabis was part of the program
50) Having more options and choices of drugs (such a heroin, fentanyl, morphine, ketamine, cocaine, and original methadone)
52) Drugs were decriminalized
53) Drugs were available in vending machines
54) Drugs were legal
56) If there was actual heroin (lasts longer, helps with PTSD and mental health)
58) It was something I could inject
59) If it was something I could smoke
60) Right drugs in the right dose to achieve the euphoric state
62) Fentanyl was available including fentanyl patches and powders
63) If it was the same as real dope
1) Reverse dilaudid and kadian prescription

Table 2
Safe, positive and welcoming spaces.

Safe, Positive and Welcoming Spaces
2) Tell media when something good happens
7) There is somewhere to go and someone to talk to and check on you
8) Program isn't short term
9) Doesn't make us addicts or used to control us
15) Not labelled or stigmatized as a drug user or labelled as with a disorder to get help
26) There was a team with peers on it
34) Mental health supports such as optional counselling
43) Sites available 24/7
49) There are separate places for smoking and injecting
55) I felt nurtured, not just given pills
57) People believe what you say
66) Program is welcoming without judgements, stigma or blame

Table 3
Safer supply and other services are accessible to me.

Safer Supply and Other Services are Accessible to Me
3) More than a seven day script
4) No shortage of drugs
13) Access to housing, survival supplies and services (e.g. showers, food, essentials)
33) Options that recreate the ritual
40) There was drug checking
44) No police
46) There is no urine testing
47) It were like a safe injection site
67) It was easy to access and I do not have to jump through hoops

Table 4
I am treated with respect.

I am Treated with Respect
5) There was respect and trust
6) There were people who communicate well and follow through
22) Having an earthquake emergency supply
24) Treated like I deserve care and feel safe
25) There are people who are relatable and who understand what you are going through
32) Knows me as an individual
35) Merges a lot of different services together

limited to a seven-day script or require urine testing and should include access to drug checking without police presence.

Additionally, participants spoke about the importance of having access to other services as part of accessing safer supply. Many participants found it difficult to access a variety of different services related to their housing, mental health, income, and primary care. Services like drug checking or access to housing and other supports should be available alongside safer supply programs. Their stated preference was for comprehensive programs that integrated these services.

Cluster four: I am treated with respect

The seven statements in this cluster (Table 4) made it clear that to be effective, participants expect to be treated with respect by people who understood their life circumstances and experiences. Important considerations included being cared for by people who communicated well, followed through, treated participants as individuals, and understood what they were going through. Importantly, they wanted to be trusted, and be seen as deserving of care. For example, being trusted to have extra safer supply on hand in case of a disaster such as an earthquake, fire or flood. As with cluster three, people spoke about the importance of merging many different services together to make access easier through one program where they were treated with respect and trusted.

Cluster five: I can easily get my safer supply

The fifteen statements in this cluster (Table 5) accentuated the importance of ongoing and continuous access to safer supply to enhance effectiveness. CAPUD (2019) make it clear that accessibility is imperative to sustain drug users' participation in a program. Multiple daily visits to a program are a hindrance and many program participants found the requirement to show up at a pharmacy on a daily basis to pick up their supply to be onerous. To be effective, participants wanted caring prescribers who understand dose and trust drug users to know what they need in order to provide a personalized prescription with carries (more than daily or weekly) along with the provision of medical care by doctors and/or nurses in a safe and therapeutic environment. Participants pointed to the ineffectiveness of safer supply when they are cut off for missed appointments or not picking up medications. Statements in this cluster also speak to the importance of giving access to drugs and care for a range of drug users, including both opioid and stimulant users. Effective access would include provision of a delivery service and incorporate outreach options. As with cluster four, participants were

looking for respect and understanding as well as a personalized service that focused on their needs as an individual.

Cluster six: Helps me function and improves my quality of life (as defined by me)

The eight statements in this cluster (Table 6) make it clear that effective programs achieve participant defined outcomes that help with functioning and improve their quality of life. For some, the goal was finding substances that help them to feel 'normal', or help manage chronic pain and/or symptoms of PTSD to improve daily living. Improvements in functioning and quality of life are achieved by providing alternatives that "get the monkey off your back." Participants spoke to the need to expand access beyond Suboxone or methadone, both of which require stringent monitoring. Extended carries were identified as being important for a better quality of life, as was having programs that do not require daily witnessing or pickups which impact quality of life daily.

Although the six clusters address different components of effective safer supply models, the overlap between them highlights the importance of integration of different components into a model to meet the specific needs of individuals and achieve participant goals of euphoria, safety, improved functioning, and better quality of life.

Rating the data: Ladder map, go-zone graph and mean ratings

Ladder map

The ladder map (Fig. 2) shows the relationship between importance and feasibility for each item as well as the relationship between all items on these two dimensions. The nearly horizontal lines show that there was agreement between importance and feasibility for all of the clusters. All items rated over 3 on importance and feasibility.

Go-zone graph

The go-zone graph (Fig. 3) indicates the importance and feasibility of the final 68 statements. The graph indicates the statements that are both highly important and highly feasible. The quadrants are constructed using the average x (feasibility) and y (importance) values. The quadrant on the upper right shows all the statements that are above average in both importance and feasibility (Trochim & Kane, 2005).

Mean ratings

On the four point scale, mean ratings of statement importance ranged from 2.30 to 3.76 for importance and 2.26 to 3.47 for feasibility. The

Table 5
I can easily get my safer supply.

I can Easily Get My Safer Supply
10) Gives priority and care to both stimulant and opioid users
11) There was an incentive
14) Prescribers who understand dope
17) Consistent and stable medication delivery, options to hotels, housing, and parks
19) Caring doctors
21) There were more sites and locations you could go
31) I do not get cut off or my dose is not dropped for missing days
38) I was trusted with a prescription
39) More than a daily of weekly supply (e.g. drug carries)
41) I had more information about safe supply
51) Peers who have experience with drugs and are like me
61) It was provided in a therapeutic environment
64) Personalized and individualized supply (listens to patient's needs)
65) Programs comes to me with outreach or mobile options
68) Access to doctors and nurses who can prescribe and provide medical care.

Table 6
Helps me function and improves my quality of life.

Helps me Function and Improves my Quality of Life (as defined by me)
16) Should help stimulant users (something for crack and meth)
18) No daily witnessing and daily pick ups are onsite where you live
20) There was something for chronic pain
23) Alternatives to get that monkey off your back and improve your life
27) Other options besides suboxone (suboxone is not enough and people get sick if using)
28) Drugs that get you to normal or help you function
30) There are other treatment options or next steps
36) I do not have to pay for it.

top five ratings for importance were all over 3.69, with the highest three being 3.76. These statements were all in clusters ‘Safe, positive and welcoming spaces’, ‘I can easily get my safe supply’ and ‘Helps me function and improves my quality of life.’ The top five ratings for feasibility were all over 3.375, with the highest two being 3.69. These statements were: ‘I had more information about safe supply’; ‘Treated like I deserve care and feel safe’; ‘Access to doctors and nurses who can prescribe and provide medical care’; ‘Program is welcoming without judgements, stigma, or blame’; and ‘There are people who are relatable that understand what you are going through’. There were no statements rated below 2.00, the midpoint for importance and feasibility, and all the cluster statements rated close to 3.00.

Strengths and limitations

A strength of this study is the methodology, in which drug users were involved as partners throughout the research process to enhance development of the focused prompt, recruitment, data analysis, and interpretation. The use of participatory concept mapping facilitated perspectives from a broad range of drug users through brainstorming to sorting, rating, and naming of the clusters to informing the findings. Thus, determining the important components that are critical for effective safer supply programs rooted in the perspectives of drug users.

This study was conducted in an urban setting in BC where Risk Mitigation Guidance (RMG) (BCCSU, 20220), a form of safer supply introduced during COVID 19, was already being implemented, at least in part. As a result, participants had a range of experiences with RMG as well as with other substitution therapies, and therefore expertise and knowledge of the topic. Being in an urban centre has the limitation of not drawing out or naming specific considerations for rural and remote areas where the context and access to services is different. As well, while we deliberately included youth, women, and those who identified as Indigenous in this study, we did not specifically identify considerations related to gender, sex or ethnicity. Individuals who identify as non-binary and diversity in sexual orientation were not well represented in the sample. These particular population considerations are critical in future re-

search to ensure development of programs that ensure safety for a wide range of drug users.

Making sense of the data

This study produced a structured conceptualization of the key components of a model of effective safer supply. It was clear that the concept of safer supply was of exceptional importance for participants and they expressed enthusiasm about participating in the project. The clusters represent key components that need to be considered when designing safer supply programs, from ensuring that services are welcoming and free of stigma to facilitating access to appropriate substitutions for the illicit drug market and other services that help achieve participant identified goals of euphoria, pain management, functionality, and quality of life. The concept mapping study was a collaborative process involving drug users as partners in the research from conceptualization through to the interpretation of findings.

The desire for welcoming, non-stigmatizing and respectful services was a predominant theme in clusters two and four. This is unsurprising given the degree and severity of stigma that drug users confront on a daily basis within society more broadly and when accessing health-care in particular (Butters & Erickson, 2003; Crockett & Gifford, 2004; Chan et al., 2019; INPUD, 2014; Lloyd, 2010; Room, 2005). To avoid the harmful effects of stigma and stigmatizing processes, people who use drugs may avoid or delay seeking care. Structural stigma is often deeply embedded in health care systems in the form of “societal-level conditions, cultural norms, and institutional policies that constrain the opportunities, resources, and well-being” of those who are stigmatized (Hatzenbeuhler & Link, 2014, p. 2). Safety in health care environments for PWUD must address power imbalances, institutional discrimination, and inequitable positioning (Pauly et al., 2015) with healthcare providers able to reflect on their own privilege and relationship to criminalization.

As documented in previous research, drug users do not perceive that they are treated with respect by service providers and many consider the care they receive as being suboptimal (Beynonet al., 2009; McLaughlin et al., 2000). A welcoming environment is communicated

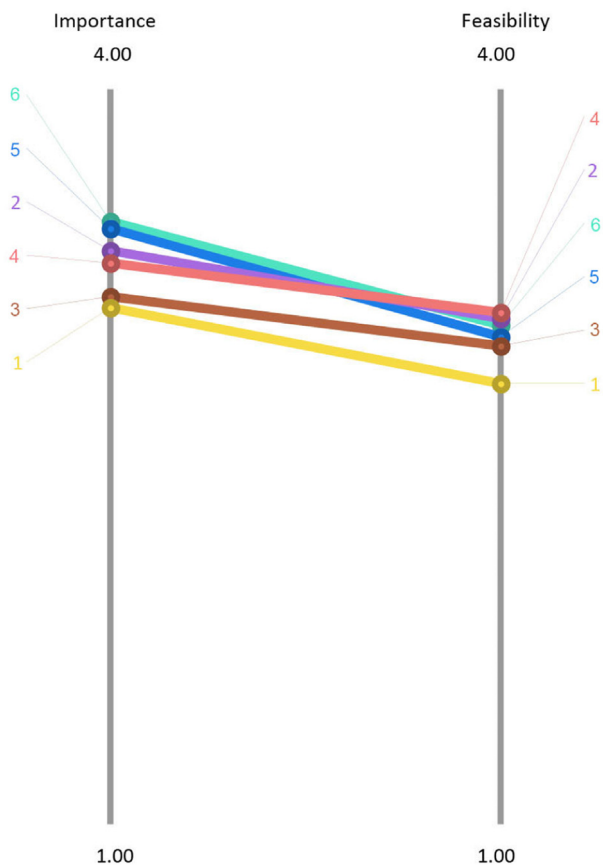


Fig. 2. Ladder Mapo.

through both verbal (Healthline, 2018) and non-verbal cues; as evidenced by many of the statements in several clusters. As such, the stance of the providers is critical to safer supply participants feeling respected, welcomed, and not labelled or stigmatized in order to get care. Participants identified peers and people they can relate to as critical to effective programs. Glegg et al. (2022) observes that more attention should be paid to this aspect of safer supply programs. A point with which we heartily concur.

A critical component of effective safer supply was identified as finding the right drug and the right dose for individuals to obtain an individualized or personalized supply that can be consumed via an appropriate route (e.g injecting or smoking) to achieve desired outcomes. Participants in this study cited outcomes of euphoria, pain management, improved functioning and quality of life as important goals of safer supply. These findings, like that of Ivsins et al. (2021), highlight that participants are seeking more than withdrawal as an outcome of safer supply. For opioid use, the current RMG guidance offers oral hydromorphone and slow release morphine and dextroamphetamine and methylphenidate for stimulant substitution, several of which are short-acting. Some researchers have found that individuals may prefer shorter acting agents because they offer analgesic benefit, improve function, heighten quality of life, and may be associated with fewer adverse effects (Argoff & Silvershein, 2009).

In this study, participants highlight the need for a range of options and substances that are more like ‘real dope’ to replace the illicit drug market. During brainstorming and as reflected in the composite statements, participants clearly identified the need for a wide range of options including heroin, fentanyl, cocaine, methamphetamine, and ketamine as well as the availability of drugs that can be injected and/or smoked to find the right options and combinations for individuals. The premise of safer supply is that providing a safe and regulated substance will replace the use of illicit drugs which carry a high risk of overdose and other drug-related harms. As CAPUD (2019) points out, safer supply has to ‘undercut’ the drug market in order to be successful. If safer supply doses are too low or not an adequate replacement, PWUD will continue to use a street supply (MacNeil et al., 2022).

Medications for opioid use disorder (MOUD), such as methadone, buprenorphine, and slow-release morphine, are not considered safer supply (CAPUD, 2019) as they do not provide the same effects. However, participants highlighted that original formulations of methadone would be preferable to what is currently available, highlighting that preferences are often based on availability. During concept mapping, participants highlighted the importance of achieving a state of euphoria as an important outcome of drug use, not solely the prevention and management of withdrawal symptoms as is often the goal of addiction medicine. Others have identified the importance of pleasure as important to the design and implementation of safer supply programs to better align with experiences of people who use drugs (Smith, 2020; MacNeil et al., 2022).

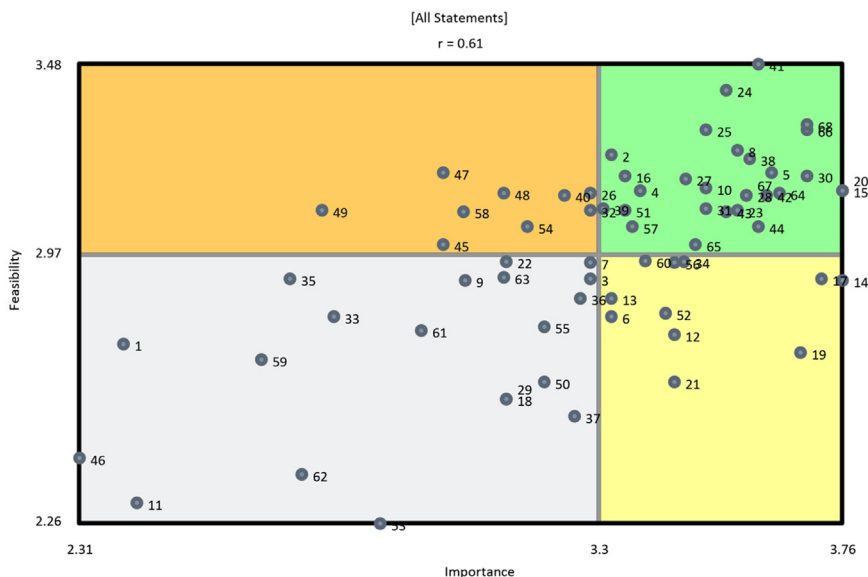


Fig. 3. Go Zone Map.

Providence Health Care, located in Vancouver BC, currently offers a heroin replacement program at Crosstown Clinic offering an acceptable alternative to the street supply. This program supplies users with injectable hydromorphone and diacetylmorphine (heroin); both are equally effective or superior to alternatives such as methadone and produce similar clinical effects (Brands et al., 2004; Oviedo-Joekes et al., 2009; Oviedo-Joekes et al., 2016). Participants in the Crosstown program have curtailed their use of street drugs and many have reported improvements in their lives, including finding employment, pursuing education, and reconnecting with their families (McCall et al., 2019). Although this program is considered treatment, it can also be considered safer supply given that it is providing known safe doses of heroin and hydromorphone adding to findings of earlier research (Haasen et al., 2007; March et al., 2006; van den Brink et al., 2003)

Ongoing accessibility to safer supply was a key component identified by participants as leading to an effective safer supply program. Timely access to services is not a trivial matter for drug users (Friedmann et al., 2003). Friedmann et al. suggest that 25 to 50% of patients will drop off the treatment list if they do not get immediate entry to a program, and the longer they wait the higher the attrition rate. In addition, participants in our study wanted more than medicalized substitution programs; they wanted decriminalization and legalization of substances. Decriminalization and legalization have long been advocated for by drug user organizations, as well as the need for a safe and regulated supply without medical requirements such as daily pick ups and urine drug screens.

Participants highlighted that easy access to services and wrap around care including mental health supports, housing, and extended treatment options should be part of effective programs. As one participant said, they were looking for alternatives to “get that monkey off your back”. Further, it is clear that participants want access to basic determinants of health such as housing, primary care services, mental health care, and access to employment and education opportunities to address ongoing issues of poverty.

The six clusters in our study clearly identify key elements of effective safer supply programs. These clusters and their related statements were used to inform development of SAFER in collaboration with a local drug user organization. As such, the program specifically incorporated many aspects of this research in its development, including expanding the range of substances where possible, embracing a harm reduction approach, providing wrap around services, and offering enhanced delivery options (Ranger et al., 2021). These components constitute a beginning model for development of safer supply services in other jurisdictions in collaboration with local service users to ensure cultural and geographic appropriateness as well as incorporation of sex and gender considerations.

Conclusion

This study illuminates key components necessary for successful development and implementation of effective safer supply programs from the perspectives of people who use drugs. The findings elucidate a number of problems with current substitution programs that drug users felt would hamper the effectiveness of new and novel safer supply initiatives. The six clusters provide a model of key components of safer supply and the statements provide guidance that is central to developing an effective safer supply program as defined by people who use drugs. This conceptualization of the components of effective safer supply addresses many issues that have long hampered access to and retention in substitution programs. Effective safer supply programs provide access to a range of substances. Effective programs also allow individuals to find the combination of substances that work for them in safe and welcoming spaces, with peers included as program staff, and with all staff having the ability to develop respectful and trusting relationships. Also, important to effectiveness is that the program integrates other services and supports that address physical and mental health as well as the social determinants of health. The results of this study have been

instrumental in the ongoing development of SAFER and offer important recommendations for developing and evaluating future models of safer supply.

1. The terms drug users and people who use drugs are recommended by our drug user organization co-authors and the national body of drug user organizations.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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We recognize that this research was conducted on the traditional territories of the ɫəkwəŋən peoples, specifically the Songhees, Esquimalt and W̱SÁNEĆ people whose historical relationships continue with the land today.

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