British Columbia's Safer Inhalation Supply Program

Evaluation Report

Provincial Health Services Authority

BC Centre for Disease Control
Provincial Health Services Authority

Territorial Acknowledgement

This evaluation was conducted across the unceded and traditional territories of over 200 First Nations and Metis Charter communities, including those of the Coast Salish Peoples; the territories of xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səlilw̓ətaʔɬ (Tsleil-Waututh) Nations, on whose unceded lands the office of the BC Centre for Disease Control (BCCDC) is located.

As a direct result of colonial policies like residential schools, the 60's scoop, land theft, and prohibition, the toxic drug crisis continues to disproportionately impact Indigenous people. Public health itself, in its association with racist 'Indian' hospitals and a colonial top-down approach has also earned distrust from Indigenous peoples in BC and across Canada. As public health professionals we own our obligation to disrupt oppressive systems that inhibit health equity and to strive for ongoing improvement in our work in partnership with people with lived and living experience of substance use and systemic racism.

Acknowledgement

This evaluation was made possible by the people who offered their time and expertise, including people who smoke drugs, peer advisory members, harm reduction site staff, and regional harm reduction coordinators/leads.

Expert advisory and consultation was provided by PEEP, a BCCDC committee comprised of people with lived and living experience of substance use. Conclusions in this report do not necessarily reflect the opinions of all PEEP members.

Stewards of the quantitative data which inform this paper include: the BCCDC's Sexually Transmitted and Blood Borne Infections branch, the BC Coroner's Service, and the BCCDC Harm Reduction and Substance Use Services team. Access to data provided by the Data Stewards is subject to approval but can be requested for research projects through the Data Stewards or their designated service providers. All inferences, opinions, and conclusions drawn in this publication are those of the author(s), and do not reflect the opinions or policies of the Data Steward(s).

Funding

This project was funded using harm reduction supply program funding provided by the Ministry of Health and managed by the BCCDC. BCCDC designed, conducted, and reported on the evaluation independently of the funder.

Ethics approval

Both the Harm Reduction Client Survey and the qualitative component of this project were approved by the University of British Columbia Office of Behavioural Research Board (#H23-02685).

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Executive Summary

Background

BC is in its tenth year of a public health emergency due to preventable illicit drug toxicity deaths, with over 17,000 lives lost due to toxic unregulated drugs during this time (British Columbia Coroners Service, 2025). Since 2017 in BC, there has been an increasing trend toward smoking illicit substances, accompanied by a corresponding decrease in injection drug use (George et al., 2021).

Responding to this shift in substance use patterns, calls from people who use drugs and harm reduction programs, and in alignment with national best practice guidance, BCCDC has added a variety of safer inhalation supplies to its provincial harm reduction supply distribution program. Through this program, authorized harm reduction supply distribution sites across BC can order supplies directly from the BCCDC's centralized program, for distribution free of charge to people who use drugs to support reducing substance use related harms and supporting sexual health. Most recently, additional inhalation supplies including pipes and foils were added in October 2020 with targeted provincial funding. This program evaluation assesses outcomes of the centralized, provincial safer inhalation supply distribution program and provides recommendations for program improvements and efficiencies.

Specifically, this outcomes evaluation utilizes a mixed-methods approach to:

- Assess impacts of safer inhalation supplies on health risks and outcomes for people who smoke drugs (PWSD)
- Understand what improvements could be made to the BC safer inhalation supply distribution program
- Inform resources and educational initiatives that encourage safer inhalation practices among PWSD
- Assess for potential discrepancies between program need and operational funding

Methods

The evaluation draws on multiple quantitative data sources including the provincial Harm Reduction Client Survey, BC Coroners Service Data on unregulated drug deaths, and communicable disease case report forms submitted to the BC Provincial Health Officer. Additionally, we conducted qualitative interviews with PWSD (n=20), harm reduction supply distribution site staff (n=24) and the BCCDC supply program operations team (n=4) to assess experiences with safer inhalation supplies and their centralized, coordinated distribution across communities in BC.

Key findings

The provincial harm reduction supply program has increased access to safer inhalation supplies including glassware. There was a marked increase in the percentage of Harm Reduction Client Survey (HRCS) respondents who noted that they could always access a pipe when they needed one after implementation of the provincial safer inhalation supply distribution program from 16% in the 2019 HRCS to 56% in the 2022 HRCS, suggesting that the program has significantly increased access to glassware. Participants in the 2022 HRCS also reported replacing

their pipe very frequently (daily or more than once a day, or every 2-3 days) with the most common reason for replacement being breakage.

Participant preferences of safer inhalation supplies were influenced by various supply characteristics such as heat retention, collection of residue, breakage, and simplicity of use. While there are many ways to smoke substances depending on the substance used and individual needs and preferences, the most used safer inhalation supplies were bubble pipes (89.8%) and straight pipes (87.4%), followed by foils (83.8%). Interview respondents noted considering supply characteristics such as heat and resin retention properties when selecting supplies, as well as discretion and simplicity of use of different supplies. Bubble pipes were noted to be prone to breakage and to readily collect unusable resin, but simple to use. Straight stems, another very popular inhalation supply, were easier to clean, however for opioid use they needed to be used with a foil which could be more difficult in some weather conditions. Brass screens, distributed primarily to replace the brittle Brillo as a filter for glassware, were highly unpopular across respondents.

Inhalation is the most common mode of substance consumption and the risks and harms associated with inhalation may differ from injection. The widespread shift away from injection and toward smoking is happening across genders, ages, and geographies in BC. Participants noted several reasons for this shift, including the relative simplicity of smoking compared with injection, the replacement within the unregulated supply of heroin with the shorter-acting fentanyl, and a perception that inhalation is less risky than injection. While inhalation may reduce some risks related to substance use, our findings indicate that in the context of British Columbia's increasingly toxic and volatile illicit supply, other risks remain. As one staff commented in an interview; "*it's just dangerous in a different way." (Staff 11, Metropolitan).*

Overdose through cross-contamination of substances from inhalation supplies was a prominent health concern. Although access to safer inhalation supplies improved, a substantial increase in borrowing pipes occurred between 2021 (3.6% reported borrowing) and 2022 (24.4% reported borrowing). Sharing pipes was seen as a common social activity when using within a group, and an approach to caring for people who may not have their own pipe or who may be experiencing withdrawal. Borrowing pipes carries a risk of cross-contamination and overdose if the recipient does not use opioids but the lender does. This cross-contamination of pipes was noted across interview respondents as a central concern related to smoking substances. While borrowing also carries a risk of transmission of blood-borne infection, this concern was largely overshadowed by the more immediate concern of overdose given the toxicity of the supply. Burns from hot glassware or heat sources (e.g. lighters), as well as injuries from broken pipes were also identified as potential harms introduced with smoking substances.

Provision of safer inhalation supplies offered a way for harm reduction staff to build relationships and facilitate connections to care and services. As indicated in the interviews, safer inhalation supply distribution also provides an opportunity for people who smoke drugs to connect with other health and social supports, and to learn about approaches to safer inhalation and the unregulated supply. This is facilitated by staff approaches that come from a place of curiosity and forward engagement with people who smoke drugs as well as by supply distribution models that encourage staff engagement. Lower-barrier distribution models with limited interaction were also seen as beneficial in other ways, as they provided expedited and higher anonymity.

The BCCDC's Harm Reduction and Substance Use team sought to support access while balancing demand with the available budget. They do this through providing distribution guidance which balances evidence-based approaches to supply distribution with available budget, coupled with direct support to regions and sites to monitor distribution rates and remain within targets. Understanding changing community and regional needs, the team supports region and site-based discretion in distribution decisions as needed.

Recommendations

Findings from the safer inhalation supplies evaluation suggest areas to consider for making improvements to the provincial program:

- *Educational resources*: Additional educational resources and approaches may further reduce risks of smoking unregulated substances through enhancing awareness of harm reduction approaches.
- *Harm reduction supply distribution models*: Balancing access to supplies with engaged distribution models as well as enhanced communication between the centralized distribution program and sites may support the sustainability of the program and the health of people who smoke drugs.
- *Program operations: A*dapting some operational processes may enhance acceptability of the supplies and ease of ordering for sites.
- *Resourcing and budgeting*: Exploring opportunities to expand financial capacity within existing budget and through increased investment would enhance access to existing supplies and allow for distribution of additional supplies.
- *Broader supports for people who smoke drugs*: While this evaluation focussed on safer inhalation supplies, several other supports for people who smoke drugs were noted as health promoting opportunities.
- *Areas for future research:* Several areas for additional inquiry about reducing the harms of smoking unregulated substances could further enhance the program and the health of people who smoke drugs.

These recommendations include multiple stakeholders with the intent to improve overall program effectiveness and efficiency, and to ultimately reduce harm from the toxic drug supply and promote the well-being of PWSD.

Conclusion

Harm reduction supply distribution is a key component of the public health response to the toxic drug crisis and other drug-related harms in BC. Demand for safer inhalation supplies is increasing as more people choose to smoke rather than inject their substances. The results from the evaluation highlight the ongoing benefits and limitations of safer inhalation supplies while also identifying opportunities for improvement including access to supplies, support for staff providing education, and streamlining program operations.

Background

Harm reduction services

Communities of people who use illegal substances have always taken steps to care for one another and to reduce harms from substances and from the environment in which they are consumed; this is harm reduction. Within public health organizations, harm reduction is a set of programs and approaches to support people who use substances to minimize health complications of substance use without requiring a reduction in substance use. Syringe distribution programs were the first type of harm reduction programs to be formalized into public health and healthcare settings. Their objective was to reduce transmissible disease, specifically HIV, and they have been extremely effective at meeting this goal (Strike et. al., 2021).

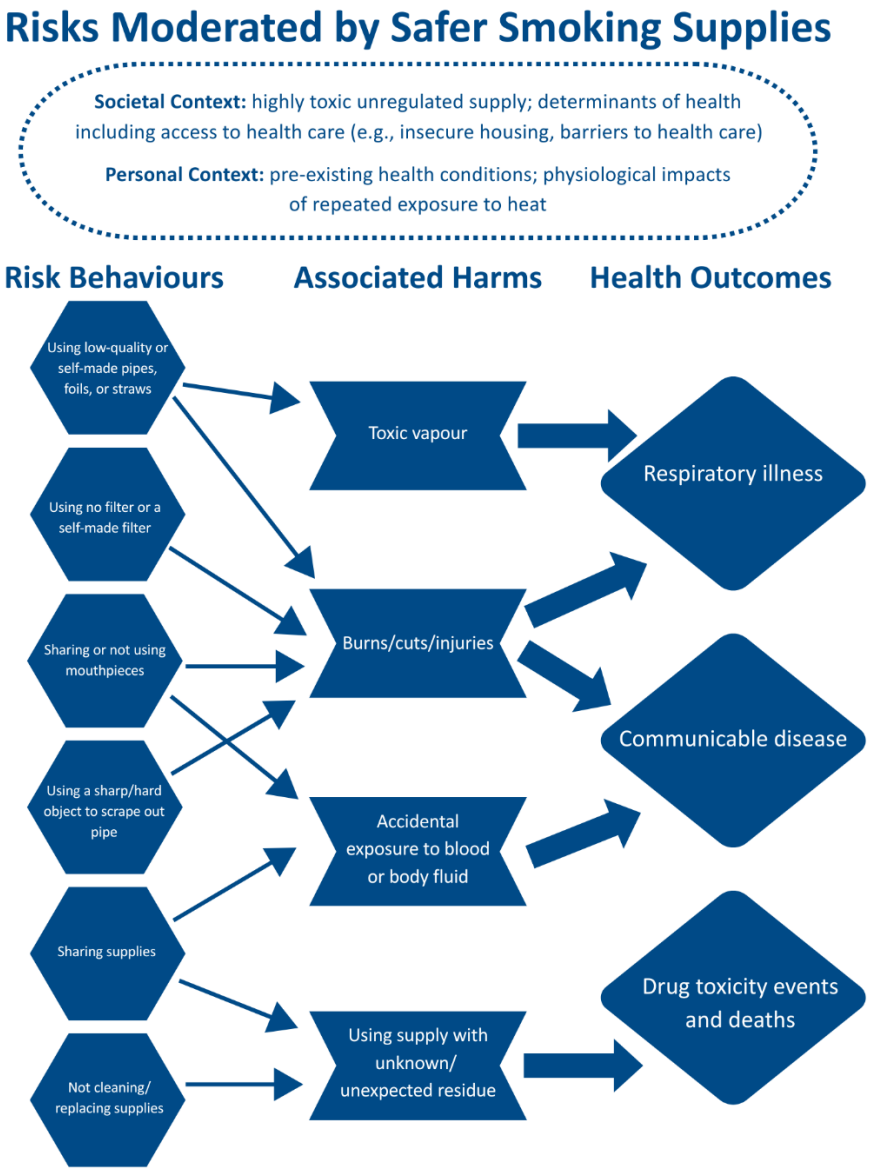
Since the initial establishment of syringe distribution programs, there have been significant changes to the harm reduction needs of people who use substances. Drug poisoning is now the most substantial health risk among people who use drugs and is the leading cause of death for people between the ages of 19-59 years old in BC (BC Centre for Disease Control, 2024). Public health harm reduction programs have responded to this change with distribution of naloxone for overdose reversal, education to encourage safer use practices, drug checking to increase knowledge of the unpredictable illegal drug supply, and other interventions.

Additionally, inhalation has replaced injection in terms of popularity of mode of consumption, bringing a different set of risks. Safer inhalation supply distribution programs are one intervention meant specifically to reduce harms among people who use drugs by inhalation (Strike et. al., 2021).

Harms associated with using substances by inhalation

Smoking unregulated substances using certain supplies - or with previously used supplies - can introduce risks of inhaling toxic vapours, burns and injuries, and using a smoking supply with residue from unknown or unexpected substances. These risks can also contribute to respiratory illness, transmission of blood borne diseases, and drug toxicity events or death. However, many potential harms are modifiable with use of safer inhalation supplies (Figure 1; Strike et al., 2021).

Figure 1. Risks Moderated by Safer Smoking Supplies

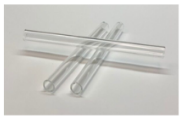


CATIE's Best Practice Recommendations for Canadian Harm Reduction Programs recommend distribution of safer inhalation supplies to reduce the harm from inhaling substances (Strike et al., 2021). CATIE recommends distribution of the following supplies: straight pipes (also known as stems), bubble pipes (also known as bowl pipes), foil, mouthpieces or vinyl tubing, screens, push sticks, straws. Pictures of these supplies and a description of how each is used are presented in Figure 2.

Figure 2. Inhalation supplies distributed to prevent or reduce risks

Straight Pipes (stems)

Typically used for smoking crack cocaine by packing it into the end of the pipe, or for inhaling smoke from opioids placed on a foil and heated from below (i.e. as a hooter). Provided to reduce injuries and exposures to toxins related to using self-made or low-quality glass pipes, and to reduce transmission of infections from sharing pipes.

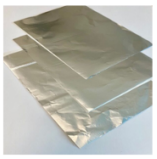


Bubble or Bowl Pipes

Typically used for smoking methamphetamine or opioids placed into the bowl part of the pipe and heated to their vaporization point. Provided to reduce injuries and exposures to toxins related to using self-made or low-quality glass pipes, and to reduce transmission of infections from sharing pipes.

Foils

Opioids or other substances are placed on top of the foil and heated from below, vapours are inhaled. Provided to reduce exposure to coatings (e.g. cooking or vegetable oils) from store-bought foils and to reduce risk of infection transmission from sharing foils.

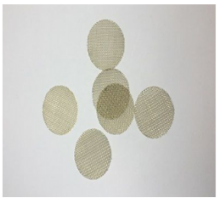


Straws

Typically used for snorting substances or for inhaling vapours from substances heated on a foil (i.e. as a hooter). Provided to reduce risk of infection transmission from sharing straws.

Brass Screens

Typically folded together into a ball to place into a straight or bubble pipe as a filter and hold substances in place. Provided to reduce burns, injuries, and exposures to toxins that can accompany the use of homemade filters (e.g.Brillo).



Vinyl Tubing (mouthpiece)

Typically placed on the end of a straight or bubble pipe that goes into the mouth. May also be used as a hooter for smoking off of foil. Provided to reduce burns or injuries to lips from hot or broken pipes, and to reduce infection transmission when changing mouthpieces if sharing pipes.

Wooden Push Sticks

Typically used for cleaning glassware, including scraping residue from the sides of the pipe. Provided to reduce breakage or chipping of glassware that can occur with use of other materials used for the same purpose.

While there is a body of literature informing these best practices, there are also limitations to current knowledge about the impacts of these programs. For example, as Strike et al. (2021) indicate, evidence informing safer inhalation supply distribution programs has historically and predominantly focused on crack cocaine; less is known about safer inhalation of crystal methamphetamine and opioids.

While other supplies, particularly hammer pipes, are requested by PWSD, at this time they are not included in the provincial distribution program. Some harm reduction supply distribution sites and/or regional health authorities purchase these supplies for distribution outside of this program as and when budgets allow.

Safer Inhalation Supplies and the BCCDC Harm Reduction Supply Distribution Program

History of the BCCDC Harm Reduction Supply Distribution Program

In 2003, the BC Centre for Disease Control (BCCDC) assumed responsibility for provincial distribution of syringes, condoms, and alcohol swabs. This supported individual health authorities and grassroots organizations that had previously been doing smaller-scale syringe distribution (Daowd and Buxton, 2021). Over time, additional harm reduction supplies (water vials, cookers, acidifiers) were added to this centralized model in response to the evidence of injury, infection and the risks of transmissible disease associated with the sharing of supplies (Strike et al., 2021) and in response to changing trends in drug use e.g. increasing number of PWUS injecting crack cocaine in the 1990s and early 2000s (Boyd et al., 2008; DeBeck et al., 2009; Malchy et al., 2011; Poulin et al., 1998).

In 2008, mouthpieces and push sticks were added to the provincial harm reduction supply list and, in 2011, brass screens were added. While some health authorities and harm reduction supply distribution sites began distributing them earlier, glassware (i.e. pipes) and foils were added to the BC Harm Reduction Supply Program in late 2020. In the years before this addition, there had been increasing calls to provide glassware and foils. These calls were driven by the trend toward smoking, rather than injecting, being increasingly common as a route of consumption in BC, and the need to reduce risk of transmission of blood-borne and other harms for people who smoke and would otherwise be underserved by harm reduction sites. The addition of glassware and foils to the provincial program aligns with national best practice to reduce inhalation related harms (Strike et. al., 2021) and occurred in the context of the COVID-19 pandemic and concerns about transmission of respiratory diseases; however, it was not intended primarily as an intervention to reduce respiratory disease transmission. Funding for glassware and foils was initially temporary but confirmed as ongoing in 2024.

Supply program operations

Harm reduction supply distribution sites, with support from their regional health authorities, may be registered to order supplies from BCCDC's centralized and provincial harm reduction supply distribution program. These registered 'primary' sites submit supply order requisitions to the BCCDC which coordinates the shipping of supplies directly to them from a central distributor. The BCCDC reviews and processes orders on a weekly basis, and orders can be shipped as frequently as weekly, though sites order on an as-needed basis. Harm reduction supply distribution sites do not incur costs for ordering through this program.

Many of the primary sites support 'satellite' sites, directly providing them with harm reduction supplies for distribution. Satellite sites do not order directly through the BCCDC. This distribution pathway is intended to reduce the administrative burden on smaller sites and outreach workers and encourage low barrier service and supply delivery.

All harm reduction supply distribution sites (primary and satellite) are encouraged to follow distribution guidelines provided by the BCCDC (See Appendix II for BCCDC supply distribution guide). These guidelines are based on best practice recommendations that outline evidence informed distribution, education and disposal practices. National best practices do not recommend supply limits; however, constrained funding necessitates that supply amounts be managed.

Inhalation Supply Program Budget

Since the program began, the demand for safer inhalation supplies has exceeded the funding that is available. Consequently, the program has to limit the purchase and distribution of supplies to align with the program budget. This has created tension between providing low-barrier access to safer inhalation supplies, in line with public health best practices (Strike et. al., 2021) and mitigating excess costs. The BCCDC Harm Reduction and Substance Use Services team works with regional health authorities and primary harm reduction supply distribution sites to ensure that order volumes align with what is financially feasible. At times, this has meant that the volumes requested by sites are adjusted down. Sites are encouraged to limit the amount of glassware provided to each person per day, while at the same time assessing an individual's needs and utilizing discretion in distribution practices.

The funding available also determines what supplies can be offered through the program. Hammer pipes are frequently requested by PWSD, particularly for smoking opioids; however, they approximately 1.06 times more expensive than bubble pipes and 6.3 times more expensive than the thinner straight pipes and are not currently included in the provincial program. As more is understood about the potential health impacts and relative sturdiness of hammer pipes compared to bubble pipes, they may be considered for inclusion in future.

Preliminary Evaluation

In 2021, the BCCDC Harm Reduction Supply Program conducted a preliminary evaluation of the impact of adding glassware and foils to the provincial program. This evaluation relied on data about volumes of supplies shipped, survey data, and interviews with harm reduction site staff. Initial findings indicated demand for the supplies exceeding budget, a positive reception among harm reduction sites, and increased access to safer inhalation supplies. The scope of this preliminary evaluation did not include assessing health outcomes associated with the supplies. Due to time constraints, involvement of PWUS in the design of the study was limited and interviews were not conducted with PWUS. This preliminary evaluation supported decisions to extend funding for the safer inhalation supplies program.

Evaluation Methodology

To build on and better understand the results of the preliminary evaluation, health outcomes of the supply distribution program, and to inform recommendations for continuation and improvements to the safer inhalation supply distribution program, BCCDC's Harm Reduction and Substance Use Services team embarked on a major evaluation.

The key evaluation objectives were to:

- Assess the impacts of safer inhalation supplies on health risks and outcomes for PWSD
- Inform accessibility and other improvements to safer inhalation supply distribution program
- Inform resources and educational initiatives that encourage safer inhalation practices among PWSD
- Assess for potential discrepancies between program need and operational funding

To support these objectives, this evaluation was designed as a mixed-methods approach and used existing administrative data alongside data collected as part of this evaluation. Both the Harm Reduction Client Survey and the qualitative component of this project were approved by the University of British Columbia Office of Behavioural Research Board (#H23-02685).

Methods

Quantitative Methods

The quantitative findings in this report draw from three main sources:

1. The Harm Reduction Client Survey, an annual provincial survey of people who use drugs and access harm reduction sites across BC;
2. BC Coroners Services data on unregulated drug toxicity deaths; and,
3. BC HIV and hepatitis C (HCV) case report forms

The Harm Reduction Client Survey (HRCS) is an annual provincial survey of people who use drugs and access harm reduction sites across BC. The survey is led by the BCCDC and leverages an existing network of harm reduction supply sites to survey approximately 500 individuals each year[1]. To participate, survey respondents must be 19 years of age or older and have used an illicit or unregulated substance, opioid agonist therapy, or prescribed alternatives in the past six months. Participants receive a $20 honorarium for participation. The survey is completed in paper format at harm reduction sites across BC. Findings are used to inform supply program improvements and address emergent research questions. For this evaluation, we have analyzed relevant HRCS data related to smoking as a mode of consumption, as well as access and barriers to safer inhalation supplies.

[1] For more information on the Harm Reduction Client Survey visit: https://www.bccdc.ca/health-professionals/data-reports/harm-reduction-client-survey

When appropriate (i.e. the same question was asked across survey years and sociodemographic characteristics of the sample were similar), we pooled 2022 and 2023 HRCS results to assess a larger sample (Mayen et al., 2024).

Data from the BC Coroners Service was used to report on unregulated drug toxicity events by mode of consumption. Mode of consumption is determined based on death scene investigation. Coroners report on use by inhalation, injection, and other methods based on substance use supplies found at the scene and other information obtained in their investigations. Data from the BC Coroners Service was accessed via the Provincial Overdose Cohort, a population-level cohort of people who have experienced fatal or non-fatal drug poisoning in BC. We specifically analyzed differences in sociodemographic characteristics by mode of consumption among those who experienced fatal overdose between January 1 2015- December 31 2021.

HIV and hepatitis C (HCV) are reportable conditions under the *BC Public Health Act*[2]. Information on health status and risk factors is self reported by individuals on case report forms. We assessed history of substance use and mode of consumption information provided by individuals at the time of their diagnosis.

Qualitative Methods

The qualitative component of this report summarizes data collected through individual interviews and focus groups with people who smoke drugs (n=20), harm reduction site staff (n=24), and the BCCCDC operations team (n=4). Site staff were recruited through the BCCDC network of harm reduction supply distribution sites and through collaboration with regional harm reduction coordinators/leads. To be eligible to participate, staff had to be at least 19 years old and to have been involved in the ordering and/or distribution of safer inhalation supplies at a harm reduction site in BC for at least three months. PWSD were recruited in collaboration with the Professionals for Ethical Engagement of Peers (PEEP) (Daowd et al., 2024), a BCCDC peer advisory group, who identified potential participants through their networks and shared the project information, consent form and contact information. To be eligible to participate, PWSD had to be at least 19 years old and identify as someone who had smoked illegal substances in the last six months. Additionally, purposive sampling was used to ensure representation from all five BC Health Authority Regions, metropolitan and remote and rural locations, and a variety of ages and ethnic backgrounds. One focus group was held with BCCDC staff who were identified as playing a key role in the coordination of the harm reduction supply program. The consent form was provided to all participants in advance and reviewed at the time of the interview/focus group. All participants provided verbal consent.

Qualitative data collection took place between September 2024 and June 2025. Interviews lasted up to one hour for PWSD, and up to 90 minutes for group interviews. They were recorded and transcribed verbatim. Participating PWSD were compensated $25. Staff were not compensated as they engaged in interviews during work hours. Evaluation team members followed steps of thematic analysis (Braun & Clarke, 2006) to develop codes and identify themes through an iterative process of reviewing transcripts and discussing as a team. Concepts and themes were continually refined throughout the writing process. We used the Community Health Service Area

[2] BC Public Health Act: https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/00_08028_01

Urban-Rural Classifications (British Columbia Ministry of Health, 2023) when attributing quotes to participating PWSD and staff to protect participant anonymity while also distinguishing between participants who were speaking to their experience in a metropolitan/urban versus remote/rural contexts.

Peer Engagement

Professionals for the Ethical Engagement of Peers (PEEP) is a BCCDC advisory group of people with lived and/or living experience of substance use who provide expert knowledge and advice to BCCDC Harm Reduction and Substance Use Services (HRSUS). PEEP provided input during the design of the evaluation, revised interview guides, recruited interview participants, and consulted on the interpretation of the findings and framing of the recommendations. Through this partnership, we strove to ensure that research was aligned with community needs and would promote the well-being of people who use substances.

Quantitative Data Findings

This section presents quantitative findings from the Harm Reduction Client Survey, BC Coroners Service analysis, and analysis of HIV and HCV case report forms. Where relevant, linkages are made to qualitative findings with similar themes.

HRCS: Inhalation is the most common mode of consumption

Inhalation is the most common route of consumption reported by survey respondents at harm reduction sites in BC through the BCCDC Harm Reduction Client Survey (HRCS).

The vast majority of survey respondents smoke drugs, and many are smoking and injecting concurrently. In 2024, 91% of respondents reported smoking drugs other than cannabis or tobacco. Among 2023 HRCS respondents, nearly half (44%) of respondents reported using substances both via inhalation and injection.

Inhalation increasing over time appears to be linked at least in part to preference (as opposed to, for example, availability of supplies for alternate routes of consumption). In 2018 less than half (48%) of HRCS respondents preferred smoking. In 2019 and 2021, 62% and 64%, respectively, preferred to smoke their drugs (See Table 1).

Table 1. Mode of consumption preferences among HRCS respondents (2018, 2019, and 2021 HRCS).

	2018 HRCS, N=486	2019 HRCS, N=621	2021 HRCS, N=537
Prefer to smoke	232 (48%)	384 (61.8%)	344 (64.1%)
Prefer to inject	150 (31%)	174 (28%)	73 (13.6%)

*Column percentages are provided.
**Preferences for other modes of consumption (i.e., snorting, swallowing, other) were reported, not summarized here.

In addition to reported use of substances by inhalation increasing overall among HRCS respondents, there was a substantial increase in the percentage of respondents reporting inhalation of fentanyl specifically (Table 2). This percentage rose from 71.6% in 2019 to 93.8% in 2022 and was at 90.0% in 2023, representing a 22%/18% increase, from 2019 levels. Less change was seen in reported inhalation of crack cocaine and methamphetamine. There was

a reduction in reported benzodiazepine use by inhalation, but few participants report intentional benzodiazepine use and therefore results should be interpreted with caution. Other opioids could not be reported by route of consumption due to small cell sizes.

Table 2. Number of people who reported smoking as a mode of consumption, by substance participants self-reported using in the last 3 days (2019, 2022 and 2023 HRCS).

Substance used in the last 3 days*	2019	2022	2023
Fentanyl/heroin	249 (71.6%)	241 (93.8%)	216 (90.0%)
Crack cocaine	127 (90.1%)	92 (90.2%)	113 (90.4%)
Crystal meth/methamphetamine	354 (79.6%)	246 (89.5%)	215 (85.3%)
Benzos	66 (94.3%)	44 (74.6%)	89 (78.8%)
Other psychedelics	6 (21.4%)	11 (44.0%)	13 (52.0%)

*Among everyone who used that specific substance in the last 3 days. The total N for each row and column will be different and is not shown here.

Data from the 2023 HRCS were examined for demographic differences between the overall sample of respondents and people who had smoked in the past 6 months; none were identified.

HRCS: People who smoke drugs are increasingly experiencing overdose

We explored the relationship between self-reported use of substances by inhalation and reported opioid and stimulant overdose events using the 2021, 2022 and 2023 HRCS. In 2021, among people reporting substance use by inhalation within the past six months, approximately one quarter (27%) had experienced a recent opioid overdose; this percentage rose to almost half (49%) in 2023 (Table 3). The proportion experiencing a stimulant overdose (also referred to as an overamp) was lower but also increased across survey years: from 12% in 2021 to 20% in 2023 (Table 4).

For both opioid and stimulant overdoses, a higher proportion of people who reported having inhaled substances in the past 6-months had experienced one or more overdoses, compared to the group that reported use in the past 6 months exclusively by other routes (injecting, swallowing, insufflation) (Tables 3 and 4). These results should be interpreted with caution because the small number of people not using by inhalation necessitated combining exclusive injection with other routes of administration. Information about route of use for the specific overdose events was not available.

Table 3. Number of people who report experiencing an opioid overdose in the last 6 months, among people who self-reported smoking and not smoking unregulated substances in the last 6 months (2021, 2022 and 2023 HRCS).

	Experienced an opioid overdose in the last 6 months		
	2021	2022	2023
People who report smoking in the last 6 months	112 (27.1%)	123 (28.7%)	183 (49.3%)

	Experienced an opioid overdose in the last 6 months		
	2021	2022	2023
People who don't report smoking in the last 6 months (i.e. exclusively inject, snort, swallow, other)	13 (16.9%)	13 (22.4%)	12 (32.4%)

*The total N for each row and column will be different and is not shown here.

Table 4. Number of people who report experiencing a stimulant overdose (overamp) in the last 6 months, among people who self-reported smoking and not smoking unregulated substances in the last 6 months (2021, 2022 and 2023 HRCS.

	Experienced a stimulant overdose (overamp) in the last 6 months		
	2021	2022	2023
People who report smoking in the last 6 months	48 (11.6%)	63 (14.7%)	75 (20.2%)
People who don't report smoking in the last 6 months (i.e. exclusively inject, snort, swallow, other)	2 (2.6%)	8 (13.8%)	6 (16.2%)

* The total N for each row and column will be different and is not shown here.

HRCS: Harm reduction supply and service use among people who inhale drugs

Reported uses of types of inhalation supplies

In addition to providing information about trends in inhalation use over time, the 2022 and 2023 HRCS included questions specifically about use of safer inhalation supplies.

Table 5 shows which supplies respondents reported using in the previous six months, among respondents who reported using substances by inhalation in the previous six months. Bubble pipes (used by 81.4% of respondents) and straight pipes (79.0% of respondents) were the inhalation supplies most commonly reported used, while only 62.0% of respondents reported using foils. Brass screens (31.4%) and straws (29.4%) were the least commonly reported inhalation supplies. There were minor differences in self-reported supply use by demographics (age, geography, and gender). Most notably, Vancouver Coastal Health respondents had lower reported use of bubble pipes and foils compared to the other regions. Women had higher reported use of straight pipes and foils compared to men, while men had higher reported use of bubble pipes. Multivariate analysis was not conducted, so these results may be due to third factors (e.g., availability of hammer pipes by geography, or difference substances used between men and women).

Table 5. Safer inhalation supplies use among people who reported smoking in the last 6 months (2022 and 2023 HRCS).

Category*	N	Straight pipes n (%)	Bubble pipes n (%)	Foil n (%)	Push sticks n (%)	Vinyl tubing n (%)	Brass screens n (%)	Straws n (%)
Total	800	632 (79%)	651 (81.4%)	496 (62.0%)	391 (48.9%)	407 (50.9%)	251 (31.4%)	235 (29.4%)
Age								
19-29 years	100	75 (75.0%)	87 (87.0%)	72.0% (72.0%)	46 (46.0%)	55 (55.0%)	26 (26.0%)	26 (26.0%)
30-39 years	245	215 (87.8%)	214 (87.3%)	179 (73.1%)	132 (53.9%)	135 (55.1%)	86 (35.1%)	82 (33.5%)
40-49 years	228	176 (77.2%)	188 (82.5%)	148 (64.9%)	108 (47.4%)	120 (52.6%)	66 (28.9%)	70 (30.7%)
50 or older	205	149 (72.7%)	149 (72.7%)	88 (42.9%)	95 (46.3%)	87 (42.4%)	64 (31.2%)	51 (24.9%)
Health Authority								
Fraser Health	149	121 (81.2%)	132 (88.6%)	102 (68.5%)	72 (48.3%)	83 (55.7%)	46 (30.9%)	66 (44.3%)
Interior Health	180	134 (74.4%)	152 (84.4%)	105 (58.3%)	74 (41.1%)	69 (38.3%)	48 (26.7%)	56 (31.1%)
Island Health	177	143 (80.8%)	142 (80.2%)	115 (65.0%)	94 (53.1%)	109 (61.6%)	54 (30.5%)	41 (23.2%)
Northern Health	187	150 (80.2%)	150 (80.2%)	117 (62.6%)	94 (50.3%)	88 (47.1%)	64 (33.2%)	43 (23.0%)
Vancouver Coastal Health	107	84 (78.5%)	75 (70.1%)	57 (53.3%)	57 (53.3%)	58 (54.2%)	41 (38.3%)	29 (27.1%)
Gender**								
Man	482	365 (75.7%)	406 (84.2%)	288 (59.8%)	226 (46.9%)	233 (48.3%)	154 (32.0%)	128 (26.6%)
Woman	271	230 (84.9%)	207 (76.4%)	175 (64.6%)	144 (53.1%)	148 (54.6%)	79 (29.2%)	91 (33.6%)

**Respondents were able to select multiple inhalation supplies.
*Non-binary/gender expansive not shown due to small cell count.

Most commonly, people used more than one type of inhalation supply (Table 6). Approximately three-quarters of respondents used some combination of bubble pipes, straight pipes, foils, and/or straws. Very few people used straws only (data not shown due to cell sizes <5). There were no major differences between 2022 and 2023.

Table 6. Exclusive use of bubble pipes, straight pipes, or foils, among people who smoked in the last 6 months (2022 and 2023 HRCS).

Supply used in the last 6 months	Smoked substances in the last 6 months	
	2022 N=429	2023 N=371
Used bubble pipes only	55 (12.8%)	30 (8.1%)
Used straight pipes only	42 (9.8%)	35 (9.4%)
Used foils only	6 (1.4%)	0 (0%)
Used more than one of the following: bubble pipes, straight pipes, foils, straws	313 (73.0%)	289 (78%)

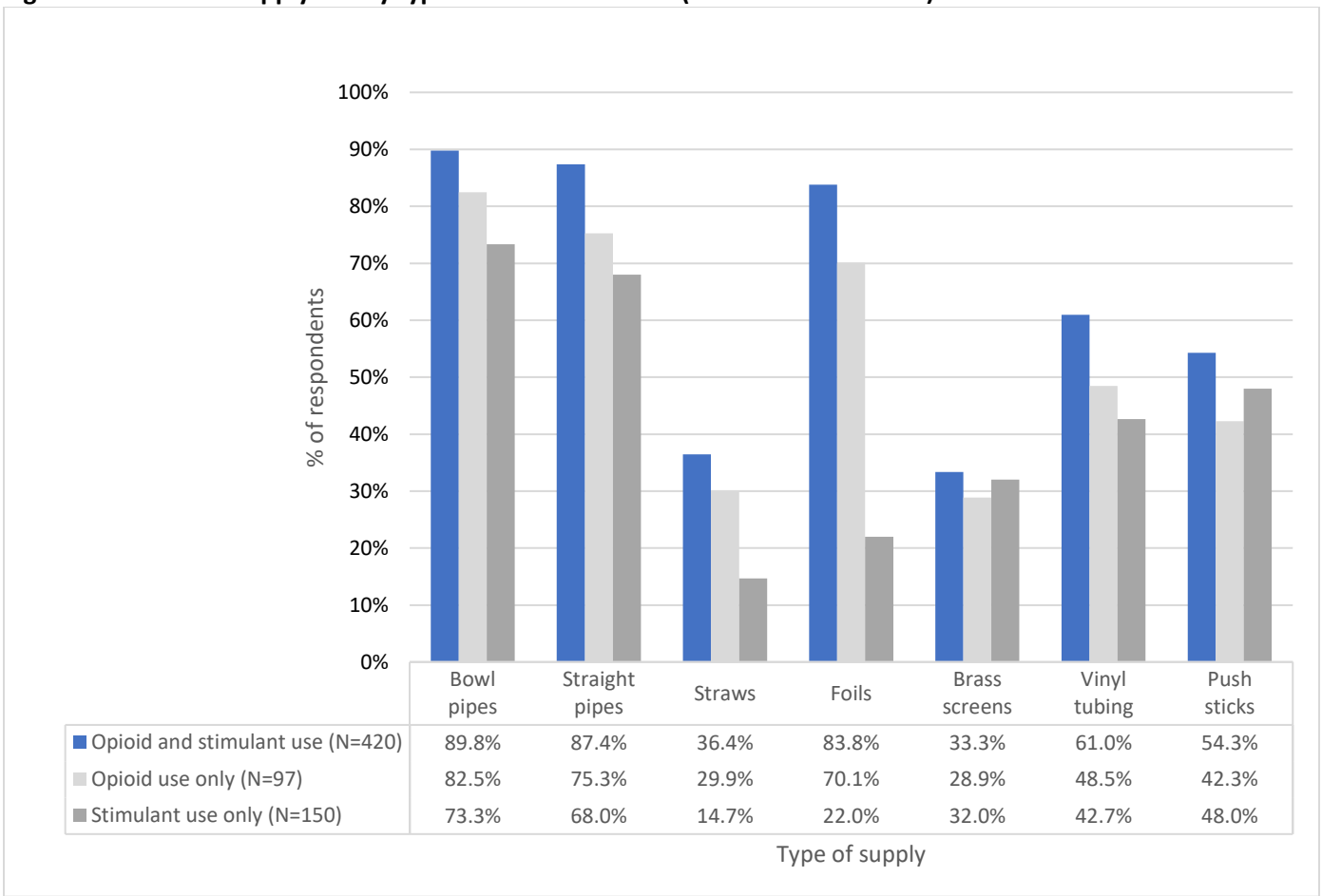
Use of inhalation supplies by substance used

There were some differences in supplies used based on whether respondents used opioids only, stimulants only, or both (use was defined as reported use within the previous 3 days; the sample was restricted to those who reported smoking in the previous six months).

Bubble pipes were commonly used regardless of whether people reported opioid use (82.5% used bubble pipes), stimulant use (73.3%), or both (89.8%) (Figure 3). Straight pipe use was also common across all three groups. In contrast, foils were infrequently used by people who only used stimulants (22.0% reported foil use), but frequently used by people who used opioids, whether opioids alone (70.1% used foils) or in conjunction with stimulant use (83.8% used foils). Straws showed a similar pattern, though were less commonly used in general, suggesting they are being used with foils as hooters or for snorting. Brass screens were infrequently used by any of the three groups (28.9% opioid only; 32.0% stimulant only; and 33.3% opioids and stimulants).

In 2023, a question was added about hammer pipes. Though hammer pipes are not supplied through the provincial program, a small number of sites were piloting the supply. Among people reporting past six-month inhalation use and opioid use only, 29.3% (n=12) had used hammer pipes; 9.6% (n=7) among people reporting only stimulant use; and 34.7% (n=70) among people who reported both opioid and stimulant use.

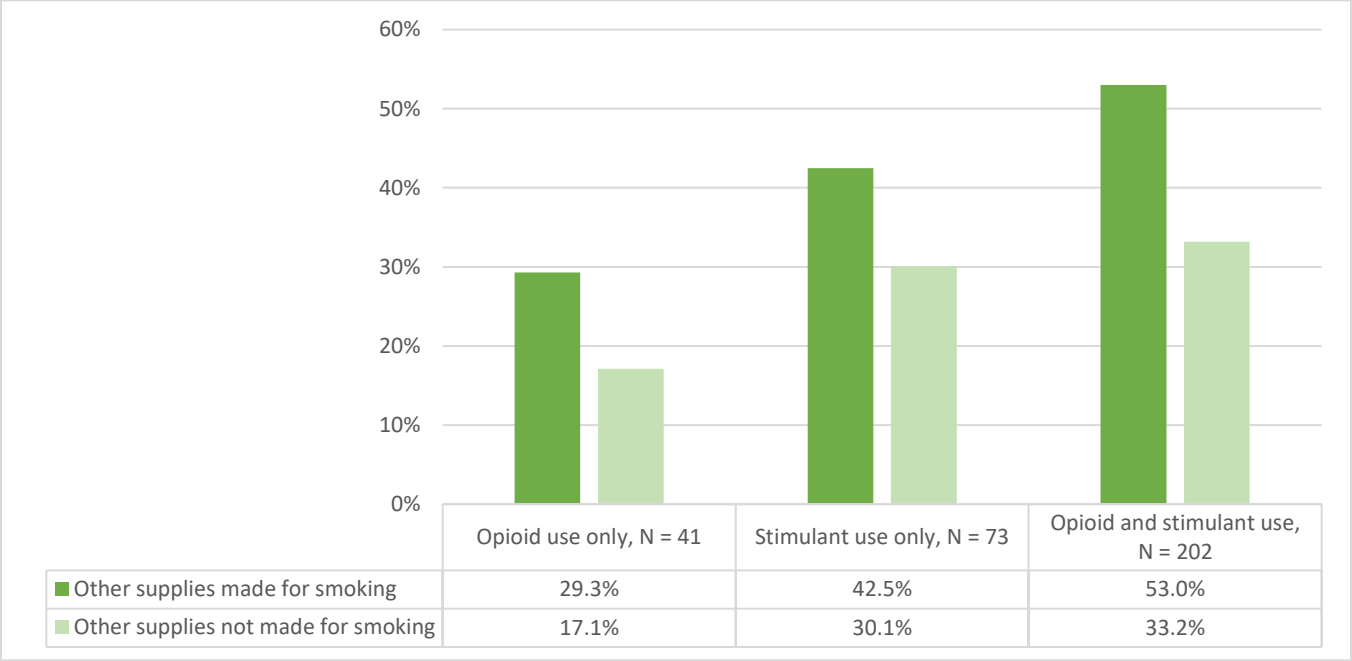
Figure 3. Inhalation supply use by type of substances used (2022 and 2023 HRCS).



Use of other supplies for inhalation

Participants in the 2023 HRCS were also asked if they smoked with any other supplies that were not listed above, distinguishing between other supplies made for smoking and supplies not made for smoking (i.e., a lightbulb would be an example of a supply used for smoking but not made for smoking). Use of other supplies, whether made for smoking or not made for smoking, was more common among people who reported stimulant use, either alone or in conjunction with opioid use (Figure 4). Use of other supplies made for smoking was more common than use of supplies not made for smoking.

Figure 4. Use of supplies not intended for inhalation by type of substance used (HRCS 2023)



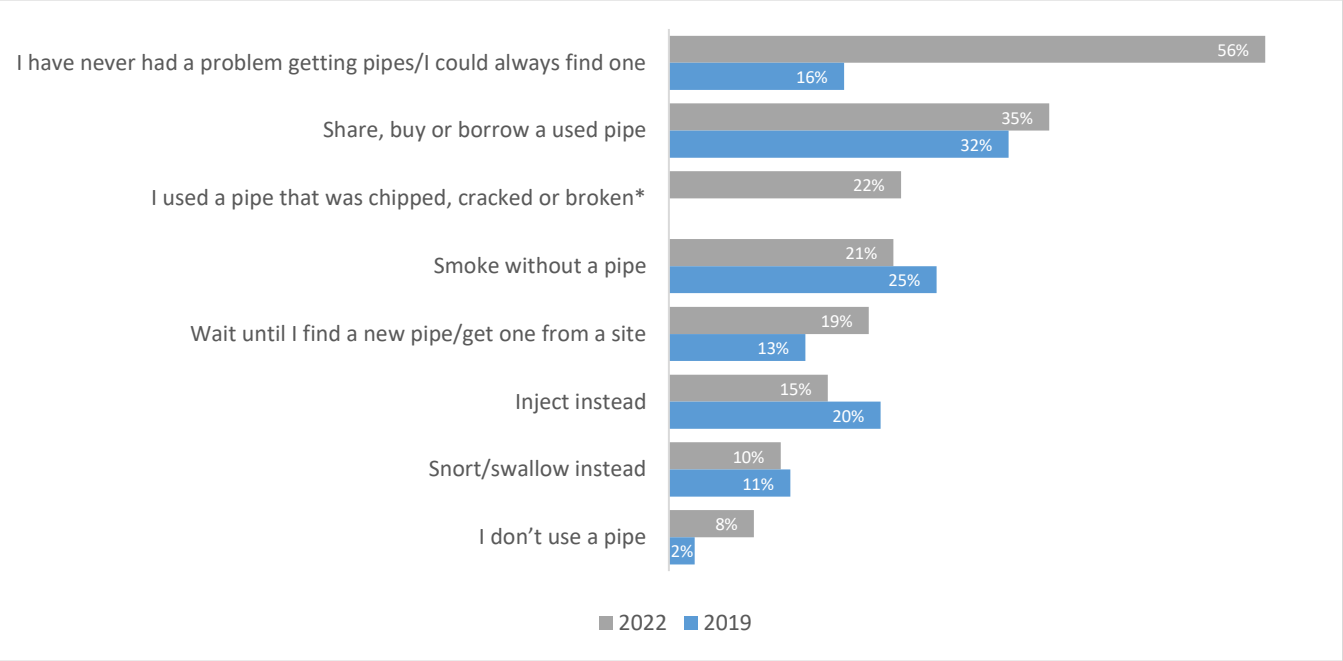
	Opioid use only, N = 41	Stimulant use only, N = 73	Opioid and stimulant use, N = 202
Other supplies made for smoking	29.3%	42.5%	53.0%
Other supplies not made for smoking	17.1%	30.1%	33.2%

Actions when unable to obtain unused supplies

Respondents who reported any glass pipe use in the previous six months as part of the 2019 and 2022 HRCS cycles were asked what they would do if they were unable to get an unused pipe. A striking difference between 2019 and 2022 was the substantial increase in people who reported they could always obtain an unused a pipe: from 16.3% in 2019 to 55.5% in 2022 (Figure 5). Notably, glassware (i.e., pipes) was introduced to the provincial supply distribution program in October 2020 and likely accounts for much of this rapid increase in access.

The most common action if a person was unable to obtain an unused pipe was to share with someone else or borrow or buy a pipe (31.6% in 2019 and 35.4% in 2022). Some participants reported they would inject drugs if unable to obtain a pipe (19.7% in 2019 and 14.8% in 2022). Others would snort or swallow their drugs instead (11.3%/10.4%). Some reported they would wait to use drugs until they were able to get a new pipe (12.7%/18.6%). Less than a quarter would smoke without using a pipe (e.g. with foil) (24.9%/20.9%). In 2019, a question was added about use of chipped, cracked, or broken pipes; 21.6% of respondents said they would use a pipe of this type if unable to obtain an unused one.

Figure 5. Reported actions if unable to get an unused pipe, of all participants who reported using a glass pipe in the last 6 months to smoke any drug (2019 and 2022 HRCS).



*Note that in the 2019 HRCS, there was no response option for "I used a pipe that was chipped, cracked or broken."

Source of inhalation supplies

In addition to access via harm reduction sites, people who use substances can purchase glassware in certain stores and online (outside of the BCCDC publicly funded distribution program). Harm reduction sites have the benefit of being able to provide education and connect people to services. In 2021 and 2022, the HRCS included questions on the source of pipes. In 2021, when supplies were more limited, the survey question distinguished between pipes received at no cost and pipes that were purchased at a harm reduction site (at some locations, pipes were sold at cost when sufficient no cost supplies were not available).

Between the 2021 and 2022 survey rounds, all routes of access increased (Table 7) – i.e. among participants reporting any recent use of a glass pipe, a higher proportion reported accessing pipes through each of the potential sources of glassware. As the denominator was people who use a glass pipe, this does not represent an increase in the prevalence of smoking (though that may have also occurred). However, it may show an increase in the intensity/frequency of smoking among people who smoke or a decrease in the length of time glassware is kept before needing replacement (e.g., increased breakage). It could also simply represent a change in sampling sites for the HRCS and participants accessing those sites.

The most commonly reported site for accessing these supplies was harm reduction sites. It bears repeating that the HRCS surveys people accessing harm reduction sites and therefore does not represent the general population of people who use drugs in BC. Substantially more people obtained free pipes from a harm reduction site in 2022 than free and paid combined in 2021. Compared to access via harm reduction sites, fewer people purchased pipes from a store or from someone selling pipes. (See Theme 4: Supply distribution and access).

A substantial increase in borrowing pipes occurred between 2021 (3.6% reported borrowing) and 2022 (24.4% reported borrowing). Borrowing pipes carries a risk of cross-contamination and overdose if the recipient does not use opioids but the lender does. Borrowing also carries a risk of transmission of blood-borne infection. The increase in borrowing occurred even as substantially more respondents reported obtaining free pipes at harm reduction sites. This finding suggests that there are multiple reasons why people who smoke drugs share pipes and thus increased availability of pipes will not necessarily prevent harms from sharing pipes. (See Theme 3: Health outcomes related to safer inhalation supplies).

There was also a substantial increase across years in people reporting making homemade pipes (1.3% in 2021 to 14.5% in 2022).

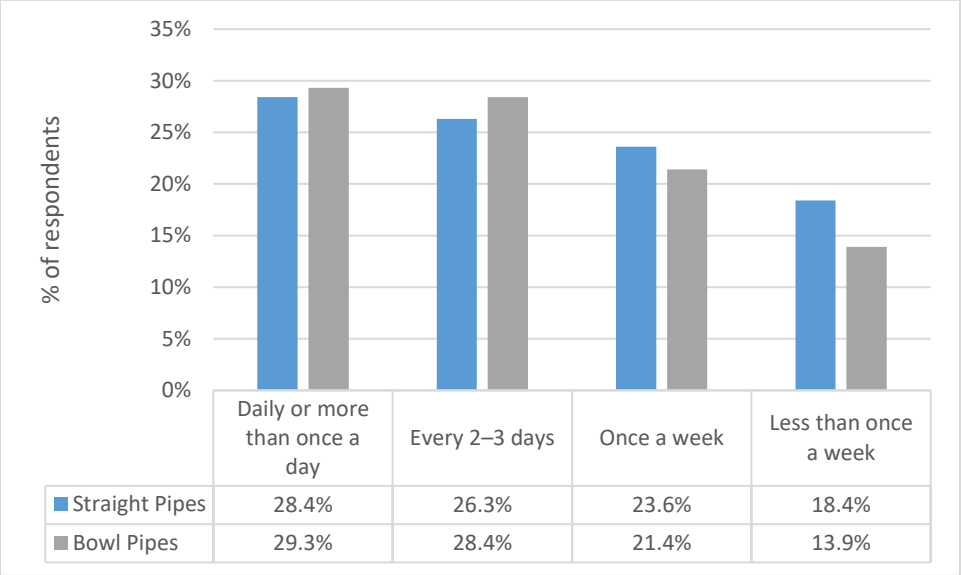
Table 7. Number of people who self-reported where they obtain their pipes from, among all participants who reported using a glass pipe (2021 and 202 HRCS).

	Participants who used a glass pipe	
	2021, N=288	**2022, N=393**
Received for free from HR site	203 (52.3%)	380 (96.7%)
Bought HR site	87 (22.4%)	N/A
Bought store	33 (8.5%)	50 (12.7%)
Bought from someone selling pipes	Suppressed due to small cell size	29 (7.4%)
Borrowed from a friend	14 (3.6%)	96 (24.4%)
Made a homemade pipe	5 (1.3%)	57 (14.5%)

Glassware replacement

Participants in the HRCS reported replacing their pipes very frequently. The most common pattern was replacing pipes daily or more than daily (28.4% replaced straight pipes this often, and 29.3% replaced bubble pipes this often) (Figure 6). Fewer than one in five respondents reported replacing glassware less than once per week. There were no major differences in how often respondents were replacing straight pipes versus bubble pipes.

Figure 6. Frequency at which people self-reported replacing their glassware, by type of glassware (2022 HRCS).



By far the most common reason for replacing pipes was breakage (84.5%) (Table 8). Close to three quarters reported that they replace pipes when they are burned, dirty, or have too much residue built up in them. Approximately half of respondents also reported theft or losing their pipes as reasons for replacement (respondents could select multiple reasons). Less frequent, but notable, reasons for replacement include seizure by police (17.8%) and having blood on the pipe (13.0%). This question was examined for the subset of respondents who replaced their pipes daily or more than daily; no major differences were seen (data not shown). (See Subtheme 2.3: Considerations in accessing supplies).

Table 8. Self-reported reasons for pipe replacement (2022 HRCS).

Reason	People who reported replacing a pipe, N=393
It breaks, chips or cracks	332 (84.5%)
It gets taken away by police	70 (17.8%)
It gets stolen	198 (50.4%)
I lose it	188 (47.8%)
I lent it/give it to someone else	151 (38.4%)
It gets burned/dirty/has too much residue built up	247 (62.8%)
It gets blood on it	51 (13.0%)

Connection to harm reduction services

The 2023 and 2024 HRCS asked participants about access and barriers to accessing an observed consumption site (e.g., overdose prevention site/supervised consumption site). In both years, a lack of witnessed inhalation services was commonly reported barrier to accessing a witnessed consumption site. Among respondents who reported difficulty accessing a site, 29% (75/263) reported there was no inhalation/smoking available in 2024, and 39% (77/199) in 2023 (Table 9). The lack of supportive spaces for witnessed inhalation was also highlighted as a major

barrier to supporting PWSD in the qualitative findings (See Subtheme 1.3. Lack of spaces for supervised inhalation).

In the 2024 HRCS, 64% of participants indicated that they accessed additional services or supports at a witnessed consumption space (Table 10), with a significant relationship between smoking status and access to other supports. Among those participants (n=349), 83% picked up harm reduction supplies, 56% got support from or socialized with others, 37% were connected to social services, 36% received wound care or health care, 11% got a referral, and 7% reported another type of service. This data reflects the integrated nature of harm reduction services and further supports how having spaces for witnessed inhalation may promote access and uptake of safer inhalation supplies. (See Subtheme: 3.4. Impact on connection to care).

Table 9: Difficulties experienced accessing OPS/SCS (2023 and 2024 HRCS).

Characteristic	**2024, N = 510**	**2023, N = 379**
Experienced at least one difficulty accessing OPS/SCS	263 (52%)	199 (53%)
Reasons for difficulty using substances at an OPS/SCS	**N = 263**	**N = 199**
Inhalation/smoking is not available	75 (29%)	77 (39%)

Total survey sample is 622 respondents. For 2024, the proportions in the top section of the table are based on a denominator of 510 (excludes 18% of all responses), the denominator for reasons for difficulties is 263. In 2023, participants responded that they couldn't access an OPS/SCS without specification of what type of mode of consumption was offered.

Table 10: Other services or supports accessed at OPS/SCS in last six months (2024 HRCS).

Characteristic	**2024, N = 537**
Accessed other services or supports at OPS/SCS	349 (64%)
Other services or supports accessed	**N = 349**
Picked up harm reduction supplies	291 (83%)
I got support from or socialized with others	195 (56%)
Connected to social services (e.g., income assistance, housing, employment programs)	130 (37%)
Wound care/health care	127 (36%)
I got a referral	37 (11%)
Other	26 (7%)

Total survey sample is 622 respondents. The proportions in the bottom section are based on a denominator of 349 who accessed other services or supports at OPS/SCS.

BC Coroners Service: Demographic characteristics associated with unregulated drug poisoning deaths by mode of consumption

The BC Coroners Service conducts investigations of all suspected unregulated drug poisoning deaths in BC. Field and investigating coroners record evidence at the scene and from witnesses that suggests a particular route or routes of consumption of substances. For example, a bubble pipe found near the decedent would be recorded as evidence of use by inhalation. Multiple routes of administration can be recorded for a given individual. The BC Coroners Service does not determine which route of administration was used to consume the substances that ultimately proved fatal (e.g., a person inhaling crack cocaine and injecting fentanyl, where the fentanyl was most likely the cause of death, would be recorded as using by both inhalation and injection).

Smoking has been recorded as the most common mode of consumption among unregulated drug deaths since 2017 (BCCS, personal communication). In June 2025, 67% of unregulated drug deaths were recorded as being by smoking, 10% by injection, 15% by snorting, 7% by oral and 23% unknown (British Columbia Coroners Service, 2025). These percentages have fluctuated by month, but the trend towards smoking has been consistent. Qualitative results further investigate some of the underlying reasons for this trend (see Subtheme 1.1 Experiences of smoking compared to injection and 1.2. Perceptions of smoking risks).

We conducted an additional analysis of the BC Coroners Service data (2015-2021) to understand demographic features (age, sex, and geography), comorbidities, and medical histories associated with use by inhalation and other routes of consumption.

There were minor differences in age by route of consumption. A higher proportion of decedents who inhale and inject were 60 years and over compared to decedents with other routes of consumption (15% were in that oldest age group among people who inhale and inject compared to 10% (inhale only), 10% (inject only) and 7% (other combination). A higher proportion of decedents using by other routes of consumption and combinations (e.g. oral only, insufflation) were 39 or younger compared to the age distribution among people inhaling, injecting, or inhaling and injecting (Table 11).

No substantial differences in sex were seen by mode of consumption (Table 11). Some regional differences were noted, with a higher proportion of those inhaling and injecting being in the Vancouver Coastal Health region and a lower proportion being in the Interior, Fraser or Northern Health regions (Table 11). A multivariate analysis has not yet been conducted, so these results may reflect age or other demographic differences between the regions rather that regional patterns of use alone.

Table 11. Characteristics of people who died from unregulated drug poisoning in BC by mode of consumption, 2015 to 2021.

Characteristic	Overall, N = 6,136*	Smoke only, N = 1,726	Inject only, N = 968	Inject and smoke, N = 258	Other combination, N = 1,609	Unknown, N = 1,575
Age, median (IQR)	42 (32, 53)	44 (33, 54)	43 (34, 53)	45 (34, 55)	39 (29, 50)	43 (32, 53)
Age						
0 to 18 years	68 (1.1%)	9 (0.5%)	*supp*	*supp*	25 (1.6%)	32 (2.0%)
19 to 39 years	2,659 (43.3%)	699 (40.5%)	402 (41.5%)	92 (35.7%)	806 (50.1%)	660 (41.9%)
40 to 59 years	2,818 (45.9%)	843 (48.8%)	465 (48.0%)	127 (49.2%)	659 (41.0%)	724 (46.0%)
60 years and over	591 (9.6%)	175 (10.1%)	100 (10.3%)	38 (14.7%)	119 (7.4%)	159 (10.1%)
Sex**						
Female	1,210 (19.7%)	315 (18.3%)	208 (21.5%)	55 (21.3%)	312 (19.4%)	320 (20.3%)
Male	4,925 (80.3%)	1,411 (81.7%)	760 (78.5%)	203 (78.7%)	1,297 (80.6%)	1,254 (79.6%)
Unknown	*supp*	*supp*	*supp*	*supp*	*supp*	*supp*
Health Authority						
Interior	977 (15.9%)	252 (14.6%)	137 (14.2%)	28 (10.9%)	329 (20.4%)	231 (14.7%)
Fraser	2,072 (33.8%)	630 (36.5%)	241 (24.9%)	69 (26.7%)	543 (33.7%)	589 (37.4%)
Vancouver Coastal	1,548 (25.2%)	422 (24.4%)	342 (35.3%)	97 (37.6%)	329 (20.4%)	358 (22.7%)
Island	973 (15.9%)	272 (15.8%)	169 (17.5%)	47 (18.2%)	245 (15.2%)	240 (15.2%)
Northern	377 (6.1%)	98 (5.7%)	62 (6.4%)	5 (1.9%)	108 (6.7%)	104 (6.6%)
Unknown	189 (3.1%)	52 (3.0%)	17 (1.8%)	12 (4.7%)	55 (3.4%)	53 (3.4%)

*Sample: Closed BC Coroner Service unregulated drug poisoning death cases between January 1, 2015 to December 31, 2021. There were 8,914 unregulated drug poisoning deaths between January 1, 2015 and December 31, 2021; after excluding open cases, the final sample was 6,136 drug poisoning deaths.
**Data is not shown for cell counts <5.

A larger proportion of fatal drug toxicity cases where injection supplies were found at the time of death (alone or in combination with inhalation supplies) had an experienced non-fatal drug toxicity event in the year prior (Inject only: 31.5%, Inject and Smoke: 30.2%), compared to cases where only inhalation supplies were found (20.3%). These results should be interpreted with caution – cases where injection supplies were found may represent the profile of a more marginalized, at-risk substance user, and does not necessarily point to an inherently higher risk of drug toxicity for people who inject.

Communicable disease data: Frequency of self-reported inhalation and supply sharing among people newly diagnosed with HIV

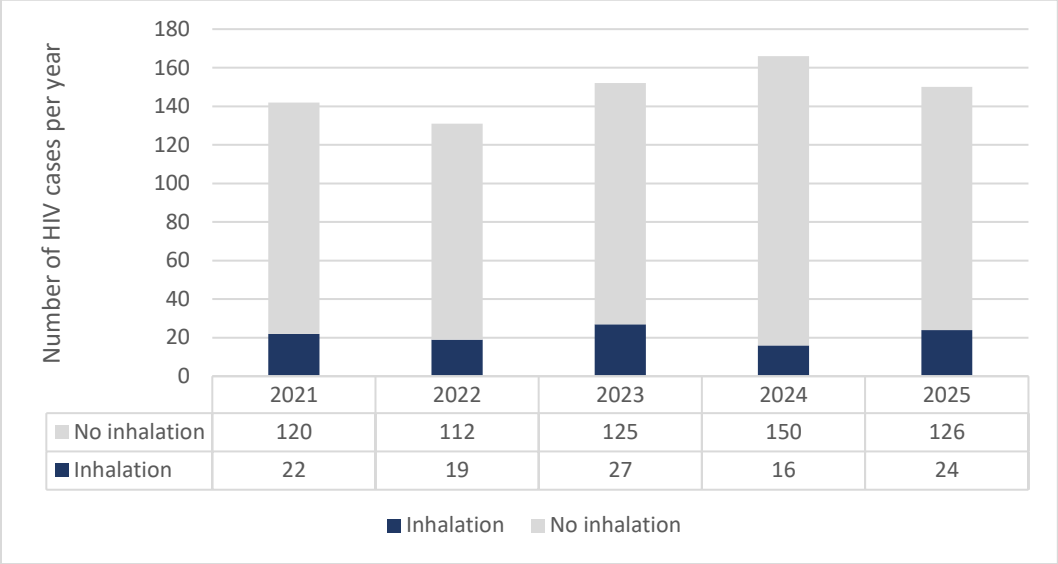
This following section includes provisional information on individuals newly diagnosed with HIV and HCV. The pathogens that cause these conditions are transmitted among populations as a result of a complex mix of social, cultural, economic and structural factors. BCCDC continues to work towards enhancing surveillance systems to advance the understanding of the prevention, acquisition and transmission of STBBIs and TB disease and the key populations that are affected by specific syndemics.

Information on route of consumption of substances is self-reported on case report forms for select communicable diseases which are reportable to the Provincial Health Officer under the *BC Public Health Act*. These case report forms contain information (including demographic information, potential routes of acquisition, laboratory results, and treatments given) on people who were newly diagnosed with these diseases. The information is routinely collected by public health staff (usually communicable disease nurses) at the regional health authorities, as part of ongoing surveillance and monitoring of disease transmission.

Use of shared injection equipment is a strong risk factor for acquisition of HIV/HCV, and use of shared inhalation equipment is theorized to be a risk factor as well (Strike et al., 2021). We examined self-reported route of consumption information from case report forms for HIV and hepatitis C (HCV). **Data for these questions have high levels of missing and under-reported responses, so any interpretation should be made with caution.** The number of self-reported inhalation and supply sharing among people newly diagnosed with HIV was small, limiting further stratifications. For HCV, the number of cases with substance use reported (by any route) was too small for further analysis and therefore the data are not presented in this report.

The HIV case report form includes data elements about route of administration of substances ("recreational drugs") and use of shared substance use supplies. From 2021-2025, 14.6% (108/741) of people with newly diagnosed HIV had reported use of substances by inhalation recorded on their case report forms (because of changes to the case report form, these data are only available for 2021-2025). The number and proportion of people with reported inhalation fluctuated slightly without a clear trend between 2021 and 2025 (Figure 7). Some under-reporting of substance use and supply sharing is expected due to stigma.

Figure 7. HIV cases by year and history of inhalation (2021 – 2025 Case Report Forms).



Case report forms include questions about sharing substance use supplies. These do not imply certainty about the route of acquisition (people can have multiple potential routes of acquisition, including sexual transmission, in addition to shared substance use supplies). In addition to providing information about the potential source of acquisition of HIV for these cases, information about shared supplies can help understand the extent to which there is a risk of onward transmission from people whose HIV remains undiagnosed.

Table 12. HIV cases by year and supply sharing (2018-2025 Case Report Forms).

HIV Cases	2018-2019	2020-2021	2022-2023	2024-2025	Total
Did not share any supplies	298 (79.9%)	211 (75.9%)	248 (87.6%)	286 (90.5%)	1,043 (83.4%)
Shared injection supplies exclusively	32 (8.6%)	37 (13.3%)	11 (3.9%)	7 (2.2%)	87 (7.0%)
Shared inhalation supplies exclusively	27 (7.2%)	18 (6.5%)	18 (6.4%)	19 (6.0%)	82 (6.6%)
Shared both	16 (4.3%)	12 (4.3%)	6 (2.1%)	4 (1.3%)	38 (3.0%)
Total	373	278	283	316	1250

Between 2018 and 2025, use of shared inhalation supplies was slightly less common than sharing of injection supplies among people with newly reported HIV. This is congruent with shared injection supplies being more likely to transmit HIV than shared inhalation supplies. However, in 2022-2025, there were markedly fewer people newly diagnosed who reported shared injection supplies exclusively or in common with also sharing inhalation supplies. The proportion sharing inhalation supplies did not change substantially in this period; instead, there was an increase in the proportion of people with newly diagnosed HIV who did not share any supplies. While HIV

diagnoses were particularly low in 2020-2021 (a period when Covid-19 related closures reduced health care access for some groups) and increased somewhat is 2022-2025, they did not rebound to the level seen in 2018-2019.

Overall, these data do show that there are likely people whose HIV is as yet undiagnosed who engaged in sharing of inhalation supplies.

These data were available by gender identity, but only cismen and ciswomen were large enough categories to meet data sharing thresholds. Non-binary, transgender, and other gender expansive individuals are included among newly diagnosed people with HIV, but data is not shared here to maintain privacy when small numbers are reported. Among cismen, 6.6% (n=67) reported sharing injection supplies exclusively, 5.9% (n=60) reported sharing inhalation equipment exclusively, and 2.3% (n=23) reported sharing both types of supplies. There were 85.1% (n=859) that did not report any sharing of substance use supplies. Among ciswomen, a higher proportion reported sharing any substance use supplies: 10.1% (n=20) reported sharing injection supplies exclusively, 10.1% (n=20) reported sharing inhalation supplies exclusively, and 6.6% (n=13) shared injection and inhalation supplies. Only 73.2% (n=145) did not report sharing any substance use supplies.

Qualitative data further explores sharing of safer inhalation supplies and risk of communicable disease (See Subtheme 3.2. Impact on spread of communicable disease).

Qualitative Data Findings

While the quantitative data allowed for an understanding of the program across many respondents, the qualitative component of this evaluation supported a more in depth understanding of how people are smoking substances and their experiences of the safer inhalation supplies program. We conducted one-on-one interviews with 20 PWSD across BC[3], 24 harm reduction site staff (including 5 group interviews), and one focus group with BCCDC HRSUS operations staff. These were recorded, transcribed, and thematically analyzed into six main themes, described briefly below:

1) **Inhalation as the main mode of consumption:** why PWSD choose to smoke substances, rather than use them in other ways.
2) **PWSD experiences and preferences with supplies:** how PWSD experience different supplies used for smoking substances, and what leads PWSD to prefer some supplies over others.
3) **Health outcomes related to safer inhalation supplies:** how access to, and use of, safer inhalation supplies, impacts the health of PWSD.
4) **Safer inhalation supply distribution and access:** models of supply distribution and barriers and facilitators to access.
5) **Safer inhalation guidance and education:** engagement with safer inhalation educational materials and approaches, and supply distribution guidance.
6) **Provincial supply program operations:** experiences with the provincial supply program operations.

[3] Demographic characteristics of our sample are summarized in Appendix III.

Theme 1: Inhalation as the main mode of consumption

In this section, we present what we heard from participants about reasons and motivations for choosing to smoke substances. These findings add context for why smoking has become the most common mode of consumption over injection.

1.1. Experience of smoking compared to injecting

Inhalation has overtaken injection as the most common mode of consumption of unregulated drugs in BC. Both PWSD and staff observed an increase in people inhaling and a corresponding decrease in people injecting their substances. Staff commented seeing this reflected in the types of supplies they were distributing:

> *"More people gravitate towards the pipes now and I find less and less people are injecting." (Staff 10, Metropolitan)*

> *"We arrange supplies into injection and into smoking and over time we noticed that the trend with smoking is up. More people are going to smoking than injecting." (Staff 6, Metropolitan)*

There were several reported reasons why smoking was the preferred mode of consumption among participants. One was the improved ability to titrate how much substance was being taken. People could start by smoking a small amount and then adjust the amount of substance over time based on the effects they were feeling. This is a particularly practical strategy in the context of a volatile drug supply in which people do not always know the exact potency or contents of their substances. Comparatively, injecting more commonly involves taking in the selected amount of substance all in one shot. As described by one participant:

> *"Well, that's a big reason why I don't use needles as well is overdosing when you're shooting. Down is a lot easier to happen if you're, you know, shooting. Because you don't know how strong something is, right, unless you're getting it from the same person all the time or whatever, right. […] Like, say if you normally put a half point in or a quarter of a point you don't know what percentage of dope is in that unless you've had it tested first, right." (Person who smokes drugs 13, Metropolitan)*

Responses reflected how participants saw themselves differently when injecting versus smoking substances, suggesting that smoking may be seen as more socially acceptable both outside and within the drug using community. Injecting was also described by some as being more 'hardcore' compared to smoking:

> *"I think some people feel like if you're using needles you're like a hardcore drug user. Whereas if you're just smoking that's just kind of normal and expected. So it's kind of one of those, like, it seems a bit of that lateral oppression in a way where people are judging each other based on what substances they use or how they use them." (Staff 11, Metropolitan)*

Some participants had never injected, stating their fear of needles. Others had previously injected and may have preferred to inject; however, they were no longer able to access their veins following years of injecting. *"I used to use needles, but I don't have veins anymore so I went to smoking" (Person who smokes drugs 19, Rural)*. Some respondents explicitly connected their challenges with accessing their veins due to aging.

> *"But now that I'm getting older my veins are not as good as they once were and it's harder for me to inject. So I find myself doing it a lot less frequently. I'm smoking more often. Yeah, sometimes I can't hit myself at*

all, you know, I try for hours and I can't do it. I'm drug sick so I'll just smoke it out of desperation." (Person who smokes drugs 01, Metropolitan)

The shift from heroin to fentanyl in the unregulated drug market may also have impacted people's chosen mode of consumption. Several PWSD participants commented that fentanyl had 'no legs' to describe the short-lasting effects of fentanyl compared to heroin. For those who injected or previously injected their substances, using more frequently as the drug supply transitioned from heroin to fentanyl may have further contributed to vein damage. Among those who chose to smoke fentanyl, it was common to smoke throughout the day to maintain their high. This participant compares their experience using heroin versus fentanyl, and the shift from feeling like they could maintain their daily activities to feeling dependent on a substance.

"Heroin was the only one [drug] that I could keep everything together. So that worked fine for me. I could do a job and rather than any other drug, it worked for me, as far as killing my addiction, filling a hole, as they say. And now there's no heroin, so I'm filling a hole and now I'm using it for pain and escape [inaudible] the same way fentanyl. Now comparing the two, there's no comparison. Heroin's a long lasting-- comparatively, like, it's six to eight hours. It's not as strong but it's completely different. I don't know how to compare the two. Everybody always says they're comparable and fentanyl's a hundred times stronger. But it's not really the case at all. It just coats the receptor completely for a very short time. Heroin didn't coat it as strongly and was a longer time. So completely different." (Person who smokes drugs 07, Metropolitan)

Participants also commented on the convenience of smoking compared to injecting. PWSD referred to the simplicity of carrying and using a pipe versus all the supplies needed to safely inject (i.e., cooker, sterile needle).

"I find a lot of people like to smoke. The other way is too much of a process. You have to prepare everything and make sure everything's right and-- with smoking you just cook it up, your cocaine and baking soda or ammonia. Stir it up, cook it. Heat it up, what you got to do-- it's so much easier than sitting there trying to bang it or anything. Yeah, less steps. Less pain in the ass." (Person who smokes drugs 09, Metropolitan)

"It's [smoking is] more convenient. I've heard from clients in the past that it's easier to move around with it. They can go kind of walk down the street and be smoking and be a bit more inconspicuous that way. Or just kind of be in other spaces and smoking and not have to worry as much about having to have that whole kit or finding a bathroom or something like that." (Staff 03, Large urban)

Participants also reported experiencing a different high when smoking compared to other modes of consumption which factored into their preference for smoking. One participant described their intentional choice to switch from snorting to smoking because the high was not as intense:

"I actually started side by snorting it and then discovered smoking it. I could, like, it doesn't get you quite as, like, as high, I guess you could say. It doesn't accelerate your heart as much." (Person who smokes drugs 11, Metropolitan)

In summary, the trend towards smoking as the main mode of consumption was commonly observed and participants named multiple motivations for smoking that were based on experiences, preferences and fentanyl replacing heroin in the unregulated drug supply. Participants spoke to the improved ability to titrate as well as the convenience of smoking compared to injecting. Social norms around smoking compared to injecting contributed

to people's perceptions of self and other PWUS. Changes in the drug supply from heroin to fentanyl, a more potent and short-lasting substance, also contributed to the shift towards inhalation as the preferred mode of consuming substances.

1.2. Perceptions of smoking risks

Participants commented on risks related to smoking drugs, often in comparison to risks from injecting, which were perceived as overall higher than with smoking. The risk of drug poisoning was, in participants' views, the most important risk related to substance use. In general, 'shooting up' was viewed as riskier and worse for one's health compared to smoking.

> *"I would never inject. Just 'cause I've had bad experiences with friends and family members et cetera. […] So I just prefer to smoke it." (Person who smokes drugs 03, Rural)*

> *"I did try shooting side, but we-- shooting's not good for you. No drugs are good for you. But shooting's really not good for you." (Person who smokes drugs 13, Metropolitan)*

Regardless of mode, consumption of the toxic unregulated drug supply was seen as inherently dangerous: *"And people say, like, oh, it's safer to be smoking. But if you're smoking crazy-ass fentanyl it's still going to put you down."* (Staff 13, Metropolitan).

While there may be some reduced harms comparatively to injection drug use (e.g., infections, transmissible disease), smoking impacts respiratory health and involves supplies that can lead to cuts (i.e., glass pipes) and burns (i.e., lighters). The following staff questions if the historical public health emphasis on harms from injection use may be contributing to a false sense of security when people smoke their substances and a covering up of the new harms that smoking introduces.

> *"Are some people getting a false sense of security that it's safer? Do they understand why it's [smoking is] allegedly safer [than injection] because, like, inhaling smoke in your lungs isn't that great. No, it's not the same as injecting into, like, the infections and whatever things that can come from an injection. But I almost wonder, like, whether or not people actually feel like it's-- and I wonder if people still feel like it's safer. I think it's just dangerous in a different way." (Staff 11, Metropolitan)*

Participants commented extensively on the common perception among PWSD that smoking fentanyl is less likely to lead to overdose than injecting fentanyl. Staff participants reflected what PWSD shared, noting that fentanyl was more potent than heroin which factored into the decision to smoke versus inject. They observed that people were scared to inject fentanyl due to its high potency and felt more comfortable smoking fentanyl instead as smoking was an easier way to use a small amount and test the strength of the substance before consuming more.

> *"There's no heroin anymore. It's all fentanyl. And injecting fentanyl's not the same as injecting heroin. So it's [smoking] safer. People were-- they were dying injecting fentanyl. Every time they'd shoot up they would be overdosing. So now they-- people are smoking instead because they can handle it. […] It's a more controlled dose, right. It's a better tester to know how strong a drug is to smoke it than inject it." (Staff 01, Metropolitan)*

"I noticed when the fentanyl came in people were really scared and they thought by smoking it, it would be less dangerous than by injecting it. So I've seen a big shift away from intravenous use to smoking. But it's not true, really. It's, like, very dangerous just like that too. But there was this conscious shift, you know, thinking that by smoking it would be less, you know, potent or dangerous." (Staff 14, Metropolitan)

1.3. Lack of spaces for supervised inhalation

Although this evaluation was focused on inhalation supplies, contextual information about the settings for inhalation was frequently offered by participants as information relevant to supply use. The lack of available spaces for supervised inhalation of substances commonly came up in relation to overdose risk. Participants reported PWSD attempting to lower their drug poisoning risk via smoking instead of injecting, but this meant they could not access most observed consumption sites (i.e., supervised consumption sites (SCS), overdose prevention sites (OPS)), as most sites allow only injection, insufflation, and oral use.

The lack of access to supervised inhalation spaces led some PWSD to choose to use directly outside a harm reduction site because they knew someone would respond if they overdosed.

"Now it's [the harm reduction site] not a safe injection site or anything like that. But I have noticed there are users that will sit on the grass and will-- and there's a reason for that. It's because they get their supply and they haven't been using because they've been dope sick and we all know if you've been off it for so long and then you use, there's the potential to die, right. That tolerance build up. So they actually will park their butts there and they might not be able to go in. But if they drop, they're right there, right. And they know that someone's going to save them." (Person who smokes drugs 15, Metropolitan)

Similarly, this staff member explains how people tend to congregate around supervised consumption sites, even if they are unable to use the service for smoking, because they are more confident that someone will see them and respond in the event of an overdose. The description of people using substances outside while waiting for the supervised consumption site opens pinpoints how limited supervised consumption site hours are a barrier to safer substance use.

"Like, by people who use drugs it's [area around a supervised consumption site] designated a safe zone. Because-- yeah, because they know that they'll be responded to 'cause we watch-- they all watch on cameras. And we do during the day and still I respond to overdoses out back all the time during the day. People injecting and smoking out there waiting for the safe injection site to open." (Staff 06, Metropolitan)

Criminalization of public substance use shaped PWSD's experience of attempting to reduce overdose risk via smoking. Participants identified that there was no place where PWSD who were living outside or in a supportive housing unit that did not allow smoking could legally smoke. Some PWSD responded by choosing to smoke somewhere private which decreased the likelihood of response in the event of an overdose. Staff expressed frustration at the mismatch between people using primarily by inhalation and currently available injection-only observed consumption services, and at the risk environment under criminalization, as the following comment illustrates.

"But the services that are available are absolutely just there for injection users. 'Cause you can come in as someone that smokes drugs. You can come in. […] But then you got to walk out the building-- or walk out that door again to a breezeway. Then you're escorted out of the breezeway by security to the front doors.

And then there's smoking bylaws and public consumption bylaws so you can't consume your substance right out front of the door. So you've got to go into the alley where there's no cameras and it's just, like, it's kind of like infuriating, honestly." (Staff 07, Medium urban)

"Most people are overdosing because of smoking now is my understanding, like, 66 percent something like that. And we don't have a way to support them other than them smoking drugs in front of our clinic which is right across from the courthouse." (Staff 09, Medium urban)

Some participants also emphasized how the visibility of smoking in public places, particularly for PWSD who are unhoused, contributed to stigma and community backlash.

"Really smoking […] contributed certainly to the backlash here. Because people are, like, more visibly, like, people are just, like, they'll smoke where they are, right. […] You're not constantly-- when you're smoking you're kind of always taking little tokes. Whereas injecting you inject and then, like, you don't for a long time. And you kind of do that somewhere where it's a little more private. It's not that there's more drug use, but it is more visible." (Person who smokes drugs 21, Rural)

The lack of available supervised inhalation sites was commonly raised as a barrier to preventing overdoses. Continued criminalization of substances influenced where people chose to smoke: efforts to avoid attention or negative interactions when smoking had the unintended consequence of increasing risk if people chose to use alone or in a secluded area where no one was available to respond if they overdosed. As such, there was an articulated need for both smoking supplies and smoking settings where people could be supervised and supported as needed.

Theme 2: PWSD experiences and preferences with supplies

This section provides an overview of the various supplies that are used by PWSD – both supplies that are provided through the provincial supply program and supplies which are not. We share findings about how the supplies are used, what PWSD reported liking and disliking about different supplies, and the distinguishing characteristics that led participants to choose to use one type of supply over another.

2.1. Supplies provided by provincial supply program

How they are used

Bubble pipes (also known as bowl pipes and sometimes described as "meth pipes" even though they are used for a variety of substances) are a popular and common inhalation supply used for both fentanyl and methamphetamine, either alone or in combination. People put their substances in the bowl part of the pipe, use a lighter to heat up the glass bowl portion, and inhale fumes through the straight portion of the pipe. Bubble pipes

were initially intended to be used to smoke methamphetamine which vaporizes with minimal heat, however participants commonly reported using bubble pipes for fentanyl as well. Importantly, fentanyl has a higher melting point and thus required considerably more heat to be applied to the glass bowl when smoking fentanyl. The high heat that was required to heat fentanyl led some people to prefer butane torch lighters for smoking substances out of a bubble pipe. In between inhalations, some participants have strategies to cool their pipe down by placing it on a cool cloth or napkin so as not to 'waste the product.'

Participant experiences of bubble pipes

In general, participants liked how discreet and easy the bubble pipes were to use as they could put their pipe in a bag or pocket, substance(s) sat directly inside the bowl part of the pipe, and the only additional supply required was a lighter. This ability to smoke one's substances efficiently and with minimal supplies enabled more discreet substance use. This participant explains how their bubble pipe could be used discretely throughout the day:

> *"Because I just grab my bubble pipe, take two puffs, and then put it away. And I can do that pretty discretely and then that will last me an hour or so until I'm going to need another little fix before the pain starts coming back, right." (Person who smokes drugs 08, Metropolitan)*

A major challenge with bubble pipes was that the glass broke easily which meant that participants reported they frequently had to replace their pipes and/or use a broken pipe (See Subtheme 2.3. Considerations in accessing supplies).

The bowl shape of the pipe also made it hard for some people to gauge how much substance they were smoking. One participant explained that it was easier to see the amount of substance being consumed when using a straight pipe compared to a bubble: "*I prefer the straight pipe over the bubble for down because I can tell how much I'm taking in easier through using the straight pipe than versus the bubble" (Person who smokes drugs 10, Small Urban).* The round part of the bubble pipe was also difficult to clean, leading to substance residue building up inside the pipe and limiting the number of uses out of a single pipe.

Our findings indicated that PWSD more commonly use bubble pipes for smoking fentanyl which has a much higher vaporization point and thus requires the glass to be heated to a much higher temperature (see Subtheme 2.3. Considerations in accessing supplies). Participants reported that the high heat can cause burns and injuries (see Subtheme 3.3. Other physical and mental health impacts) and can damage the glass, rendering it more vulnerable to breakage. The high heat also sometimes 'wasted' more of the substance by burning it to the inside of the pipe. Despite these challenges, bubble pipes remained one of the most popular supplies.

How they are used

Straight pipes, also referred to as stems or 'crack pipes', are often used along with foils and/or some kind of filter (i.e., brass screen or Brillo). For smoking crack, participants fit a mouthpiece onto one end of the straight pipe and insert a screen or Brillo into the other end along with the drug. The end of the pipe is then heated up to create fumes which could be inhaled. Brass screens or Brillo (note that brass screens are provided by the provincial supply program whereas Brillo is not) is placed inside the straight pipe to hold the substance in place and to prevent larger chunks of substance debris from entering the mouth and throat.

Straight pipes are also used to consume other opioids and methamphetamine. When using opioids, participants use straight pipes as 'hooters', that is, they heat up their substance of choice on a piece of foil to create fumes before using a straight pipe to inhale the fumes – this is sometimes referred to as 'chasing the dragon'. For using methamphetamine, some participants use a straight pipe to 'hot rail' which involves a straight pipe with tubing on the end and foil. The end of the straight pipe is heated up so much so that when the end of the pipe hovers about the methamphetamine, it immediately vaporizes it and is inhaled through the pipe and mouthpiece.

Participant experiences of straight pipes

Our findings suggest that PWSD like straight pipes for their versatility, ease of use and ability to clean and/or collect residue out of the pipe for secondary use. Straight pipes were initially intended for smoking crack but have also been used as a hooter to smoke fentanyl or a combination of fentanyl and stimulants off a piece of foil. Other objects that are used as a hooter include rolled up foil[4], rolled up paper, plastic or paper straws, pen casings, or metal or brass pipes. While foils can be safely used as a hooter, the other items listed here are not intended for smoking and may increase risk of burn or injury.

The straight shape of the pipe made it easier to clean out using a push stick and/or alcohol swab – this method was perceived as beneficial both for participants being able to collect residue that they could smoke again and for reducing health risks of using a dirty pipe.

> *"As long as there's not a bunch of resin in there and once it's, like, say the resin is out, then I would clean it with an alcohol swab and push that through there". (Person who smokes drugs 13, Metropolitan).*

[4] The BCCDC has an educational resource on making a foil hooter: https://towardtheheart.com/assets/uploads/1609803211oOHplU8Lzu3EKxUtkekxgrCMZbSX4oRpAPZQHXg.pdf

Foils

How they are used

Foils are commonly used in combination with straight pipes or other hooters (e.g., rolled up foil or paper, straws, pen casings) to smoke fentanyl, or a combination of fentanyl and stimulants. Participants use a lighter underneath the foil to heat up the substance of choice to be inhaled, often with a straight pipe being used as a hooter. Notably, foil provided for harm reduction purposes are distinct from household aluminum foils because they do not contain coating and are thicker which prevents the foil from disintegrating when being heated up for the purpose of smoking drugs.

Participant experiences of foils

Participants tended to like foils because they were readily available, convenient to use, easy to assess the quantity of substance being consumed, and because of how substances tasted when smoked off foil. No participants mentioned trouble accessing foils, suggesting that foils are a readily available supply at harm reduction sites compared to glassware.

Consuming substances through smoking off foils also enabled people to be able to consume smaller amounts of substances at once; the following participant explains how using a straight pipe as a hooter off the foil felt like the safest mode of consumption for this reason:

> *"Smoking off tinfoil with a straight pipe is probably the safest way in my bag 'cause you can test it out first. You don't got to drop a bunch into it or you're not heating up the whole thing at once. You can do a pretty small amount in a bubble too and test it out before you do an amount that you think's going to get you where you want to be." (Person who smokes drugs 04, Small urban)*

A main drawback for participants who used foils was the limited ability to scrape off and recover substance residue to reuse. Instead, participants sometimes smoked off the foil a second time to use as much substance residue as possible. Longer sheets of foil were preferred by participants as they were easier to get multiple uses out and the edges could be folded up to block against the wind when smoking outside.

Many participants also brought up health concerns related to the foils including worries that they were inhaling toxins from the foil and reports of a sore throat. Some participants chose not to use foils at all due to concerns about inhaling toxins from the foil how that might impact their health. Others felt that that potential health impacts from the foils were a secondary concern given the toxicity of the substances they were smoking. This participant seeks to use 'fresh foil' each time when smoking to avoid inhaling chemicals.

> *"Foil's not good for us to inhale either. But using, like, an old foil that you've already used is even worse because it's already burnt up so you're inhaling more and more of those chemicals of the foil. So it makes it*

a lot easier to be able to get fresh foil which is important so that-- not inhaling more and more chemicals from the foil or using toasted foil already or something like that." (Person who smokes drugs 13, Metropolitan)

How they are used

Pieces of vinyl tubing are intended to be inserted on the end of glass pipes as a mouthpiece to prevent burns, cuts, and transmission of communicable disease (e.g., hepatitis B, hepatitis C). BCCDC guidance suggests cutting tubing to be three to four inches long and distributing two pieces with each pipe. In practice, staff observed that PWSD often requested significantly longer pieces of tubing, up to a couple of feet long or an arm's length.

Participant experiences of vinyl tubing

Some participants discussed using tubing for its intended harm reduction purpose of preventing disease transmission and/or injury from hot or sharp glass. The following staff explains why some PWSD are adamant about using tubing on their pipes following experience of getting sick or infected after sharing a pipe with others (see Subtheme 3.2. Impact on spread of communicable disease).

"Yeah, and then that's where the hose [tubing] comes in too. Not just the glassware, but the hose. Because some people actually do care. But I think they care from experience. Because a lot of people aren't open if they have cold sores or if they have some kind of, I don't know, even, like, I don't know, cold sores for sure. And if you use the rubber tip or if you're sharing your pipe, then you can change the rubber tip as opposed to their pipe. Or if somebody says, can I use your pipe and you don't look at them and then you look at them after they've used your pipe and they may have sores or something. Then you're, like, no, no, you can keep that. And then they need a new pipe." (Staff 16, Metropolitan)

Our findings revealed a strong preference for using longer pieces of vinyl tubing for reasons related to user experience and function rather than disease transmission. Participants reported liking to smoke through longer tubes because the smoke cooled more while going through the pipe and before being inhaled and people liked the high they experienced after inhaling for longer.

"Yeah, they love a long piece of that mouthpiece, like, I'm talking a couple of feet. I think the thought is that the further you pull-- the further you draw the smoke the clearer it gets, the less contaminants there are in it." (Staff 06, Medium urban)

Longer pieces of tubing also enabled more discreet and/or comfortable use by leaving the hot pipe on the ground attached to the tubing and holding the other end to inhale from, including when hot railing (see section on straight pipes).*"I think they're hot railing, so they're putting it [long pieces of tubing] under their clothes and-- so they can be more discreet with their inhalation" (Staff 02, Small urban)*. Some participants also suggested that long tubing

might simply be a trending way to consume substances. The following participant details how people use the long tubing to inhale for longer and thus get a 'smoother smoke', how they see people increasingly using longer tubing, and the overall benefit of everyone having their own mouthpiece.

> *"So using like a long piece of hose when you light something and smoke it makes it less-- it's a smoother smoke, I guess you could say. So I know lots of people who've been increasing the usage of those." (Person who smokes drugs 11, Metropolitan)*

Regardless of reason, the interest in longer tubing facilitated more overall uptake of tubing among PWSD. These staff members confirm that people liked to use the tubing when they could get a long piece:

> *"A1: Oh. they like it [the tubing]. Some like it really long, like, four feet long. Some like the little pieces. Yeah.*
>
> *A2: You wrap it-- they put it in their coat […]. But it winds around their body so people ask for three feet, four feet." (Staff 06, Metropolitan)*

This same participant goes on to explain the benefits of everyone having their own piece of tubing which could easily be inserted and removed when sharing a pipe. This meant that people's lips and mouths were not touching the same surface area, thus reducing the risk of disease transmission.

> *" That's the reasons too also that people I think like to use them is because then you have your own piece of hose. So if everybody has their own piece of hose you could just, like, tear someone else's off and then just pop yours onto it. And it's, like, it's not as contaminated. (Person who smokes drugs 11, Metropolitan)*

While our evaluation elicited several reasons why longer pieces of tubing were preferred, there was no definitive public health benefit to having a longer versus shorter tube (the cooling effect is of potential benefit, but the clearest public health benefit is in interruptive disease transmission, which is independent of tubing length). However, the enthusiasm for using long pieces of tubing did suggest that disease transmission could potentially be reduced via increased uptake of mouthpieces when variable lengths of tubing is supported.

How they are used

Brass screens are supplied as filters for inserting into glass pipes to prevent burns and injuries when smoking substances. The intended use is for several brass screens to be stacked together and inserted into the pipe to prevent small pieces of substance or debris from being inhaled and causing injury. Brass screens were initially added to harm reduction supplies to be used with crack in straight pipes but are also now encouraged for use with other substances and in other types of glass pipes. They are a safer alternative to steel wool (called 'Brillo' after one brand of steel wool, but not necessarily the name brand product), which poses a health risk because pieces of it may burn off and be inhaled.

Participant experiences of brass screens (and other filters)

Our findings suggest that brass screens are widely disliked by PWSD and infrequently used. Staff reported that people were resistant to taking screens and often discarded rather than used them. Participants reflected that the screens were challenging and time-consuming to get into pipes and had sharp edges that made them difficult to maneuver. Additionally, the functionality and experience of using brass screens was inferior to using self-made filters like Brillo. Participants explained that the brass screens were ineffective for collecting residue to be re-smoked later, rather the substance 'runs through' the brass screen.

> *"A: And also, like, the substance, like, runs through it [the brass screen] more so, so it's, like, you get less bang for your buck, if that makes sense. Like, a piece of Brillo would, like, smoke longer than a piece of, like, than the screens would.*
> *Q: Okay, and when you smoke longer do you mean the drug there'll be less residue with the screens?*
> *A: There's way more residue with the screen. It almost, like, it runs right through it. And it rolls a little bit better in the Brillo.*
> *Q: Okay. So with the screen it's almost like wastage of the drug.*
> *A: Yeah." (Person who smokes drugs 11, Metropolitan)*

> *"With the screens their dope runs right down the straight shooter quicker. Most people just don't want to take the time to clip on five or six screens inside the straight shooters to do it. Because they want to get high. They want to get high now, not in five minutes or ten minutes. With the Brillo it's-- they put it in. […] Put the dope in and they're good to go." (Staff 04, Metropolitan)*

Brillo was clearly the preferred supply to insert inside a pipe. Brillo was noted as being easier to physically get in and out of pipes, improving the taste of substances, and reducing wastage of the substance, which effectively stretched the dollar value of someone's substance by enabling them to get more smokes from the same amount of substances.

> *"With screens you got to wait till they dry out and you got to twist […] to get all the resin out of them. Otherwise it's just a waste. And Brillo you have four to six hoots usually on one side of the Brillo, you know, you flip it over and you still got, you know, you've got another three hoots left from resin on the Brillo already. And [inaudible] knows how much in the pipe itself." (Person who smokes drugs 09, Metropolitan)*

> *"With Brillo you can just roll it in your fingers and it'll fit inside the pipe and it's, you know, pack it down with a wooden stick and it's-- damn, you're ready to go-- can smoke. Whereas with the screens you got to take each screen out and you got to roll it into a, like, a tube kind of shape and then you gotta take the next screen and roll that over top of that and keep doing it until it's wide enough that it'll fit into the pipe and stay there." (Person who smokes drugs 01, Metropolitan)*

However, there were many accounts of Brillo getting hot and disintegrating inside one's pipe, causing small flecks of steel wool to break off and burn the inside of a person's mouth and throat: *"I swallowed Brillo once. So I really don't like the straight pipes" (Person who smokes drugs 18, Small urban).* Staff described trying to navigate the tension between Brillo being the supply that participants clearly preferred and knowing that using Brillo to smoke often caused injury. For instance, the following staff member describes explaining why screens are offered instead of Brillo to PWSD and being met with resistance.

"A1: People ask for it [Brillo] all the time. We're, like, we don't give that. We can give you these [screens], right […] And so they'll take the screens. They often say that Brillo is better. We try to explain to them why it is not better.
A2: Makes crack taste good, they say so--
A1: Well, we'll say, it's not good for your lungs. And they're, like, neither is what I'm smoking. And you're, like, okay, fair." (Staff 09, Medium urban)

Push sticks offer several functions: they are used to position screens inside of straight pipes before use, to remove filter following use, and to scrape out drug residue. Provincially supplied push sticks are wooden and were originally provided as a safer alternative to replace the scrap metal (i.e. umbrella rods, nails, paperclips) that was being used in community to pack screens and scrape residue out of pipes as metal objects often damaged or broke glass pipes. Specific feedback on push sticks was infrequent and limited during interviews. Push sticks were used by some participants to push to the screen or filter of choice back and forth through the pipe to collect any substance that had hardened on the pipe wall. Push sticks were also sometimes used to push an alcohol swab through the pipe by PWSD who had a practice of cleaning their pipes between uses. Comments from PWSD reflected that wooden push sticks were flimsier and less effective for scraping off residue than metal tools.

"... A lot of the times the-- you use the straight sticks, you know, the wood ones. Then you can clean out your device and then re-smoke what was left in it. And I think that's a good one for that, like, for being able to clean it out and reuse the product that you have." (Person who smokes drugs 11, Metropolitan)

Paper straws can be used to inhale vaporized drugs or to snort powdered drugs. Very few participants commented on straws at all during interviews, suggesting they are not as popular as pipes and/or that people are able to access them without issue. Straws remain cheaper to distribute and easy to access several at once, potentially making them less likely to be shared.

"Some of the people are using them [straws] to smoke or snort with. And I believe that the straws, I don't know-- I don't think people really like the straws that much. I have a hard time getting rid of them." (Person who smokes drugs 19, Rural)

VanishPoint syringe springs

While naloxone distribution is not specific to safer smoking and was not the focus of this evaluation, in some communities PWSD are harvesting springs from retractable syringes in naloxone kits to use for collecting residue inside of pipes. Participants explained how the springs inside of VanishPoint retractable syringes were conveniently sized to insert into pipes and shaped for optimal residue collection.

> *"Usually only Narcan needles [VanishPoint syringes in naloxone kits] have the springs that are good to use because all the other ones get rusty. And then they, like, there's this horrible taste in residue [inaudible] normal springs. But Narcan needle springs, which is kind of a waste, end up being the best ones." (Person who smokes drugs 04, Small urban)*

Staff expressed concerns about naloxone kits being wasted and potentially leading to a life-threatening situation if someone opens a naloxone kit that does not have a working syringe. The follow staff articulates the impact of tampered naloxone kits when responding to drug poisonings in community as well as the lost cost for the provincial program:

> *"And the other thing that they do-- and I really want to push to find a way to get springs or brass springs or something, because they're taking them out of the Narcan needles. They're putting them in their pipes. Resin's collecting on it. They wash out their pipes. They put that in a little cook tin and then they inject it, just to save money. But often people will come. They'll ask for a Narcan kit. We want to give them one and we do and then we see them go outside. Rip it open, throw it on the ground and just take those frickin' springs. So if there is any way that you can ship us springs or brass, like, I think it would save this whole program a lot of money. And would really cut down on people wasting life saving medication." (Staff 09, Medium Urban)*

The growing concern about springs being removed from naloxone kits prompted staff to intervene by finding ways to provide springs without wasting naloxone kits. One group of staff kept the springs used from naloxone training kits and distributed them with other harm reduction supplies.

> *"The springs, we can't get the springs. They're taking them out of Narcan needles. When we do Narcan training we'll harvest them. We'll put them in little baggies and if they ask for springs we'll give them those." (Staff 09, Medium urban)*

Another staff member had a similar strategy with expired naloxone kits. They discussed taking the springs out of expired kits and having them as a supply which they would actively offer when custom making a safer smoking kit for someone (See Subtheme 4.4. Pre-packaging versus single supplies).

> *"We take some springs out of-- we get a ton of naloxone needles, like, those vanish point syringes. And even the expired ones we'll break them open and we'll get the spring out and we'll put them in the pipe for the client themselves. And that is something that has been really well received. 'Cause it's kind of like you come to the door and hey, man, can I get a smoke kit? You're, like, yeah, dude. For sure. Do you want a thick stem or thin stem? Do you want springs or no springs? Do you want a mouthpiece or no mouthpiece? And kind of gets them to-- it provides them the opportunity to make a decision and choose what they want." (Staff 07, Medium urban)*

Another staff experimented with directly sourcing springs from a commercial store to be distributed and quickly identified challenges finding the appropriately sized spring that people could use inside their pipes*: "The problem with the kit from [commercial store] is that […] there's 200 springs in it and there were just a ton of different sizes. So maybe half of them would work. If we were able to find out exact diameter in spring we wanted…" (Staff 07, Medium urban).* This staff member also described challenges disentangling springs upon arrival of the shipment from a commercial store, all in attempt to explain why springs from inside the Vanish Points syringes remain a desired supply that is difficult to replace. Ultimately, the staff who observed naloxone kits being taken apart for their springs advocated for distributing springs as both harm reduction and cost savings.

> *"I feel like we can save money that way and reduce harm by keeping Narcan kits intact when we hand them out. So I think it's a twofold solution by figuring out how to get them springs." (Staff 09, Medium urban)*

Our findings point to an opportunity to promote springs access from an appropriate source to prevent harm and lost resources due to naloxone kits being made unusable by removal of springs.

2.2. Supplies not provided by provincial supply program

Bongs and accessories

How they are used

Bongs are not supplied by the provincial harm reduction supply program, however several participants described buying and using bongs as their preferred way to inhale substances.

Bongs come in a variety of shapes and sizes. The base of a bong is filled with water prior to smoking. A wide cylinder mouthpiece coming out of the base is where vapours are inhaled from. The down stem, a narrower cylinder piece comes out the side and contains a bowl for holding the substance being smoked. A lighter or alternate heat source is then used heat the substance and cause the vapours to move into the base of the bong before being inhaled through the mouthpiece. Additionally, some bongs have a small piece called a nail which is inserted in the down stem and heated to a high temperature. The substance being inhaled is then added to the hot nail which immediately vaporizes it.

Some participants who had access to hammer pipes also described using bongs in combination with hammer pipes to smoke their substances. Notably, bongs were only discussed by smaller groups of PWSD participants who were located in two major cities and one smaller community. This suggests that using bongs to smoke substance may be more 'trendy' or have higher availability in specific communities, and/or that the cost of a bong for personal use was a major limitation. Bongs were not discussed by any staff.

> *"Yeah, it's becoming a new fad, I guess […] (a) because you can do a bigger hoot easier, like, by doing the drop method. You can take a way bigger hoot off of the bong and or get higher easier. And the other thing I noticed was flavour because you can flavour your water in the bong and therefore it tastes better." (Person who smokes drugs 10, Small urban)*

Participant experiences with bongs

Participants who used bongs had a clear preference and practice for using them; this preference was underscored by people choosing to put their resources towards buying a bong for personal use rather than accessing free harm reduction supplies. Bongs provided a more potent hit than smoking the substance with a pipe and a less potent hit than injecting substances which some participants preferred. Participants described how the nail of the bong had improved temperature control for heating the substance, which was beneficial for efficiently using the substance and not burning or wasting any. Additionally, the bong was easy to clean, and people described being about to get many uses out of their bong which justified purchasing a bong as a worthwhile investment. Using a bong was often a more comfortable experience than other smoking methods as the water inside the bong cooled the smoke and added moisture which reduced throat irritation when smoking.

> *"And with a bong you can put water in it and it allows you to cool the smoke. So people that have a hard time or have breathing issues, they would rather prefer putting water in their bong and smoking their-- whatever they're using, through the water. 'Cause it cools the smoke and it's easier for them to smoke." (Person who smokes drugs 01, Metropolitan)*

People who used bongs emphasized the convenience factor of being able to customize the temperature, the amount of water in the bong, and the nail set up to use exactly how they wanted. Participants also chose to use certain supplies for the benefits experienced, namely getting a better high or a better taste from using a particular supply. For example, participants who used bongs explained how bongs offered a more potent hit, resulting in a stronger high than could be achieved through other smoking methods.

Cost was major barrier to having and using bongs to inhale substances. Participants who bought a bong for personal use expressed satisfaction with their supply and being able to use their bong for a long time. The longevity of the bong may depend on material: glass bongs remained at risk of breaking, but silicone bongs were highly resistant. One participant spoke to the indestructability of a silicone bong with a titanium nail:

> *"They're [bongs are] made with titanium nails which are unbreakable. […] If it's made out of silicone then it won't break and it won't burn. So it doesn't matter. You don't have to worry about it breaking 'cause it won't break with heat or if you drop it. (Person who smokes drugs 01, Metropolitan)*

Bongs are also considerably larger and bulkier than a bubble or straight pipe and were not a discreet option for carrying around or using if living outside. Some participants with bongs named their preference to smoke with a bong when at their private residence but to otherwise use a pipe.

> *"Yeah, having the hammer supply or hammer pipes, it's good to have them, but, you know, I like using the bong but it depends on my economics and where I'm at, right. It's, like, not always, like, a lot of people they don't care. They just walk around with their bong all over the place, right. I try to be a bit more discreet, you know, and don't [have] my bong hanging off me." (Person who smokes drugs 05, Metropolitan)*

How they are used

Hammer pipes[5] are glass pipes with a cylindrical bowl (flat bottom) attached to a tube. They are often used by heating up the glass 'bowl' or 'hammer' part of the pipe by using a lighter, before dropping in all substance of choice to vaporize it and inhaling the vapor through the stem (also known in some communities as a 'drop hoot'). Hammer pipes were more often discussed for smoking fentanyl, though a couple of participants mentioned experimenting with smoking crack or mixing fentanyl and crack.

The few participants who had access to both hammer pipes and bongs discussed using the two together by inserting the hammer pipe into the bong in place of the nail as a 'drop bong'.

> *"And then I know a couple people that liked taking them and using them in their bong because that was something else that the bubbles didn't really work for was using it for a drop bong piece." (Person who smokes drugs 10, Small urban)*

Preferences and experiences (specifically compared to a bubble pipe)

Hammer pipes are not provided through the provincial supply program, however between May and August of 2024, select sites in Interior and Fraser Health regions (18 sites total) participated in a one-time pilot distribution of a limited number of hammer pipes in response to community requests and to better understand experiences and impacts of hammer pipe distribution. A quality improvement process, led by the BCCDC, was aligned with this distribution to generate evidence to contribute to better understanding demand and inform future programming. Because distribution was in a limited number of communities, knowledge of and access to hammer pipes varied considerably among survey respondents. Some PWSD had never heard of hammer pipes, or had heard of them but knew very little, others had tried them but were neutral, and others advocated for expanding the accessibility of hammer pipes.

Participant comments about hammer pipes were often made in comparison to the currently available bubble pipes. Participants reported that hammer pipes had thicker glass than bubble pipes which made them less likely to break if dropped but also required more time or stronger heat to get the glass bowl part hot enough for smoking. For this reason, torch lighters were a preferred heat source when using hammer pipes because of the stronger flame provided. The ability of the hammer pipe to retain heat also meant that substances evaporated quicker, leaving less residue and leading to a stronger hit. The flat bottom of the hammer part of the hammer

[5] For more information about hammer pipes see: How to Use a Hammer Pipe.

pipes had the benefits of being easier to gauge how much substance was inside the pipe and being more stable when the pipe was put down. The shape prevented the pipe from rolling over and losing substance, causing burns, or shattering – all of which were reported when using bubble pipes.

> *"I think that the hammer pipe was a really good tool for people who smoke. I mean, it didn't work for everybody but if there was a little bit of education around how, like, what it does and why it's built the way it is and maybe it being built a different way is an option. I don't know. But I think the whole idea, like, the thicker part at the bottom so that-- 'cause people use these great big lighters and stuff, right, and crack bubbles and stuff like that. And plus drop them too, and, like, a bubble pipe is easier to break than a hammer pipe." (Person who smokes drugs 19, Rural)*

> *"But honestly, the hammer pipe, I held one, like, the functionality makes a lot of sense. People love them. They got a good diameter. They don't smash into pieces when you drop them, you know, the amount of time I spend cleaning up shattered bubble pipes is just crazy. So I feel like the hammer pipe would not only save money but it would also be a lot more user-friendly." (Staff 12, Rural hub)*

Participants further reported on how the high heat needed to smoke with a hammer pipe meant that drug burned more efficiently leading to a stronger hit from smoking. Some participants were seeking the more intense experience, while others pointed to the potential risk for overdose or harm from using hammer pipe if someone did not know their tolerance well or were not expecting such a potent hit. The efficiency of burning the substance also meant less residue built up inside the pipe which had the benefit of keeping the pipe cleaner, though some participants did not like how quickly their substances burned. Finally, PWSD and staff alike noted that offering two distinctly shaped pipes was a strategy to reduce cross contamination as people could use a hammer pipe for fentanyl and another pipe for stimulants or a combination of stimulants and fentanyl (see Subtheme 3.1. Impact on overdose risk).

> *"[Hammer pipes are] easier to control the dose is what I've heard from clients before that it's just easier. And then as well it's kind of the differentiating piece because a lot of times people will use down in the hammer pipes. So that way it can kind of be like okay, if that person has-- you can assume that in the hammer pipe it's down versus the bubble pipes it can be kind of anything. But in those it might-- most likely will be some sort of down." (Staff 03, Large urban)*

Heat sources

How they are used

Heat sources, namely matches and lighters, are not provided through the provincial supply program. A heat source is used to vaporize the substance to be inhaled. Additionally, some participants mentioned using a lighter to burn off unwanted residue that had accumulated to clean their pipe.

Participant experiences of heat sources

Most participant comments regarding heat sources emphasized the utility and conversely the dangers of torch lighters over standard lighters. Torch lighters provided a stronger flame which was advantageous for efficiently heating up glass pipes, particularly when smoking outside in wet or windy conditions. Some participants highlighted that torch lighters were useful for smoking fentanyl which required high heat to vaporize; comparatively a torch lighter might burn methamphetamine and crack too fast given that less heat is needed for

those substance. Standard BIC lighters were acceptable for participants who smoked on foils, as a piece of thin foil required less heat than glass. A couple participants preferred a non-torch lighter to avoid burning the drug too fast.

> *"I use a torch with it because the torches don't leave a black residue on the bottom of the pipe and it's not dirty. 'Cause if you use a normal lighter there's creosote built up. And then the bottom of the pipe will turn black. So these ones-- people use torches, they're cleaner, they're quicker, they're more efficient. They just work better." (People who smoke drugs 06, Metropolitan)*

> *"I think the lighter could be more effective, for sure. I mean, they're more convenient […] if it's wet weather obviously the lighter would be more effective for them to just, like, use. Rather than light a candle or a matchstick." (Staff 09, Metropolitan)*

However, torch lighters with lock mechanisms that enabled a continuous flame were a serious fire hazard. There were several reports of torch lighters causing burns and injuries, as well as loss of personal belongings and shelters. The lockable mechanism aided participants who had less dexterity to hold a lighter on while heating up their pipe and was used as a source of heat for participants who were sleeping outside. There were also concerns about lockable lighters being used by people who were potentially sedated or drowsy from using the unregulated supply.

> *"I haven't done it myself. But I have seen people get too high and forget to unlock it and put the torch back into their bag or something and catch on fire." (Person who smokes drugs 11, Metropolitan)*

These findings highlight the function of torch lighters, particularly for PWSD who are experiencing homelessness or unstable housing, as well as the dangers of the locking mechanism.

2.3. Relevant characteristics of supplies for PWSD

Several supply characteristics, including fragility, heat retention, and resin collection properties of different safer inhalation supplies strongly influence the experience of these supplies for PWSD as well as preferences for specific supplies.

Fragility and Breakage

The frequency of glass pipes breaking was a major concern for PWSD. When someone's pipe breaks, it can become unusable or increase risk of injury. Breakage was the most commonly cited reason for requiring pipe replacement in the 2022 HRCS (see Table 8).

> *"Yeah, but you have to remember, like, it's glass at the end of the day, right. Even if it's Pyrex, it still breaks. And if you're on the nod and it hits the pavement, like, there goes another pipe, right." (Staff 16, Metropolitan)*

Participants emphasized the impact of an unregulated opioid supply that sedated PWSD on the frequency of pipes being dropped:

"It's probably people who are using down is a bigger issue. Because you're smoking down, you nod off a little bit, you drop your pipe. Whereas [inaudible] side I'm not dropping my pipe." (Person who smokes drugs 21, Rural).

PWSD who were experiencing homelessness did not have somewhere to safely store their belongings, including pipes, and may be more likely to drop their pipe on the ground. PWSD and are living outside during colder times of the year may also increase the likelihood of breakage due to the glass fluctuating in temperature.

"It happens in the winter more often than it does in the summer. Because of the cold, right. Heat and cold don't breathe with each other. One expands and one contracts. And when you heat a pipe outside, right, and it's hot, it expands. And then as soon as it hits cold air, it cracks. It's going to break. It's just a matter of time. Maybe not right away, but after a couple uses, it'll break." (Person who smokes drugs 01, Metropolitan)

Bubble pipes were reported as being particularly prone to breakage compared to straight or hammer pipes. The bowl part of a bubble pipe was thinner glass that easily shattered when dropped.

"Yeah, I definitely think a big part of the breakage piece is the bowl part 'cause the bowl part is so much thinner than the actual stem itself. Most of the time when we're-- even when we're filling the machine and we're dropping bubbles or, like, I do that at least once a week where I'm dropping a bubble on the ground. That's the part that's breaking. And sometimes the bowl will just clean, like, just snap off the end just because the glass just gets that much thinner around the outside." (Staff 03, Large urban)

Some PWSD had strategies for reducing breakage and made a conscious effort to try and make their pipe last longer. Efforts to keep pipes from breaking and thus last longer included having a designated case or spot to keep their pipe, personalizing or 'bedazzling' them with paint or stickers to try and reinforce the glass, and using long tubing to keep the pipe closer to the ground. Participants enforced that they would continue to use a pipe 'basically until it breaks' which could be days or weeks depending on circumstance.

"A: I can reuse pipes for quite a long time. I've had pipes for weeks that I use.
Q: Okay. Have you ever had a pipe break or shatter?
A: Oh, yeah. Every day. It's just being careful and I have a case that I'll put it in. I don't want it to break. Or if I have stuff in it that I need to keep for later." (Person who smokes drugs 04, Small urban)

"Q: How long do you reuse it [bubble pipe] for typically?
A: Basically until it breaks.
Q: Okay. And do you have a sense of how long it usually lasts until it breaks?
A: It depends. 'Cause sometimes if I drop a pipe it'll break instantly if it's just straight glass. But the ones I've decorated actually don't break as easy because they've got, like, the coating of the paint that I put on them. And so they don't break as easy." (Person who smokes drugs 13, Metropolitan)

"So they've got this long thing [tube] and that way, you know, they keep-- you can have your pipe closer to the ground if you want. Or, you know, make sure you're sitting down when you're using […] But yeah, just, like, keeping it closer to the ground. (Person who smokes drugs 21, Urban)

Heat retention

The ability of a supply to absorb and retain heat was a distinguishing factor in discussions about inhalation supply preferences. Participants wanted their supply to retain heat long enough to vaporize the substance for smoking without burning the substance or heating it up so quickly that vapour was lost in between uses. The thinness of foils made them easy to heat up, but also meant they did not retain any heat which was problematic for PWSD in rainy or windy conditions. Conversely, bubble pipes retained heat so well that some participants had a system for cooling down their pipe in between uses to preserve the substance.

> *"The glass and the bubble pipe needs to be hotter to start heating it more and it takes a second. And then it holds the heat there, so just keeps on smoking. Whereas the tinfoil right when you touch the heat to it starts [inaudible] and then it, like, right away you take it off it cools down. The bubble you take the heat off and it still stays hot for five, ten seconds. And then-- so it's either burning the rest of what's left on there off or it's-- unless you cool it down with, like, a cold cloth or a cooling pad." (Person who smokes drugs 04, Small urban)*

> *"Well, the thing is with the bubble pipe I can put a bunch in altogether and it'd be safe and just bring it out as I need it. Whereas with foil you'd have to find somewhere where there was absolutely no wind. You lose a lot of your smoke. It's much more efficient this way." (Person who smokes drugs 08, Metropolitan)*

Different types of glassware held and responded to heat differently, which was particularly important with regard to smoking fentanyl which requires a higher heat to vaporize than other substances. To smoke fentanyl, bubble pipes had to be heated up so much that the glass bowl became weaker, compromising the integrity of the glass. Comparatively, the thicker glass used for hammer pipes could better withstand the required heat needed to smoke fentanyl. Hammer pipes were discussed as getting so hot that the participant would drop their substances in all at once to take a toke. Some participants liked this characteristic of the hammer pipe as it provided a more potent hit of substance and left a clean pipe afterwards (i.e., no residue). Others found that heating the hammer pipe was inefficient and ineffective for smoking methamphetamine which had a much lower melting point than fentanyl.

> *"A: You light up the bubble. And you bring it to temperature and it smokes and it goes out and it's like stuck to the glass, right. Whereas with the drop filter you heat it up red hot so when you drop it on it's, like, sssssss, it just pours the smoke out in one second, right." (Person who smokes drugs 08, Metropolitan)*

> *"A: I just didn't really have a lot of use for it [a hammer pipe]. […] It's even thicker than a bubble pipe so for smoking anything, you have to get it too hot to smoke meth in it and then down it's, like, you're heating it up, it takes forever to heat up. And then it holds the heat even longer so you can heat it up to where it's really hot. And then drop your drugs in it and it'll, like, burn it off [inaudible 22:48] it's pretty harsh and it burns your throat and shit. I just didn't like it." (Person who smokes drugs 04, Small Urban)*

Finally, some participants who had bongs commented on the ability to set the temperature of the bong. *"They sell electric nails that have thermostats on them. And you can set the temperature at whatever temperature you want." (Person who smokes drugs 01, Metropolitan).* The control of heat settings on bongs enabled customization of harm reduction equipment while also potentially being protective from burns when smoking.

Residue/Resin Retention

The ability of supplies to collect residue that could be reused was a central consideration for participants' preferences for supplies. Residue formed on the inside of straight pipes or bubble pipes and could be scraped off for later use. It also formed on Brillo or a screen and could be reheated to smoke again or dissolved off for injection. Residue collection on supplies was perceived by participants as beneficial because it enabled them to save some substance to be smoked later, and in some cases, have a contingency supply to use when experiencing withdrawal. The benefits of having residue inside a pipe that could be smoked later contributed to people sharing supplies; if someone lends their pipe to someone else to smoke their substances out of, they get to keep the residue that forms inside the pipe, also known as 'stealing a hoot'. This staff member details how the type of substance and the type of supply together dictate how much resin is available.

> *"It depends how much dope or where in the pipe that dope is. Because, like, I mean, if you're using a bubble and it's fentanyl in there, the fentanyl burns differently and it sticks to the pipe and it burns to the pipe. And if you're using just speed you can-- and your pipe is broke the speed will break off in chunks. And you can, like, it's kind of like a resin, you know what I mean. But it's not like weed resin. It's, like, hard resin and they can always melt it off that pipe and pour it into the new pipe. Or if you've got a broken pipe but-- and a bubble and it's-- the fentanyl in it, like, depending on how long that pipe's been, you could have so much resin or powder, you know what I mean, in the stem of that pipe that they're going to scrape it and then put that into a new pipe so that they can smoke it. If that's what they're smoking it on. Or whether it be tinfoil, right. So it depends on what's inside the pipe." (Staff 16, Metropolitan)*

Residue collection was an important distinguisher between bubble and straight pipe. Many participants commented that it was harder to clean and reuse residue out a bubble pipe than a straight pipe which many people used with a filter inside. For people trying to get as much use out of their substance as possible, the lack of reusable residue was a major deterrent. Similarly, many participants preferred glass pipes over the foil because *"'cause you get more resin that way" (Person who smokes drugs 09, Metropolitan).* The following participant also points out how the because the resin cannot be scraped off the inside of a bubble pipe, the burnt residue is left which negatively affects taste and ability to tell how much substance is inside. This restricts the reusability of the bubble pipe.

> *"A: Well, the straight pipe you can smoke the residue. With the bubble you can't. You usually just throw it out. Like, you can't smoke it anymore. It's done. Yeah, so it's, like, quite different." (Person who smokes drugs 16, Metropolitan)*

Some participants strategically saved their pipes to re-use later with the resin:

> *"Well, me and my girlfriend [identifier removed] we usually keep all of our old pipes in a bag. And to be honest, we call it a graveyard and [inaudible] really hurting we'll go-- we'll wash every single one of them and [inaudible] it down and smoke the residue out of there. And then we'll throw-- one of those bins or whatever that you usually put needles in and stuff." (Person who smokes drugs 12, Metropolitan)*

> *"Just be-- yeah, just because it's, yeah, dark and I can't see where the drug is that I just put in-- inside it, yeah." (Person who smokes drugs 16, Metropolitan)*

As previously noted, in some communities, PWSD had discovered that springs were an effective tool for collecting substance residue by inserting it into a pipe while smoking. Springs were specifically used for residue collection as described by the following participant.

> *"I collect the resin easier instead of putting a spring-- 'cause I do put a spring in there to collect resin so then I can smoke that later if you run out of product." (Person who smokes drugs 16, Small urban)*

Residue was a strong consideration for how participants chose to use as they wanted to be able to spread out the use of their substance and retain some to use if they were experiencing withdrawal. Simultaneously, participants reported on how smoking lead to drug poisoning if when someone intentionally smoked the residue out of a pipe they found and it turned out to be fentanyl residue, or if they smoked out of a used pipe without realizing that there was fentanyl residue in it at all.

Themes 3: Health outcomes related to safer inhalation supplies

This section discusses how respondents perceive that use of safer inhalation supplies impacts the health of PWSD. Our findings are organized into impacts on overdose risk, spread of communicable disease, burns and injuries, and respiratory and neurotoxicity concerns. Additionally, we discuss how harm reduction supply distribution can facilitate connection to other health care and social services.

3.1. Impact on overdose risk

The unregulated supply remains the primary driver of the drug toxicity crisis, and drug poisoning is the most substantial acute health risk facing people who use substances. Participants emphasized how the shift from heroin to fentanyl, and now the addition of fentanyl analogues, benzodiazepines and tranquillizers, has escalated the risk of drug poisoning.

> *"If I could I'd turn back the clock, back to the days of heroin and, you know, avoid this whole fentanyl fucking bullshit […] from fentanyl to carfentanil to fucking benzos and fucking animal tranq benzos and tranq and flesh eating disease causing fucking cuts […] it's just a nightmare I'd like to wake up from." (Person who smokes drugs 05, Metropolitan)*

> *"But as far as, like, specifically inhalation, I would say, like, the big risk is coming from the dealers right now. We've had a big shift in where our supply is coming from." (Person who smokes drugs 03, Rural)*

Participants reported using specific safer inhalation supplies to attempt to lower their overdose risk. The ability to titrate is particularly relevant in the context of using an unregulated drug supply which contains varying potency of fentanyl and contaminants. Some supplies lend themselves better to titration than other supplies, for instance the following participant describes how smoking from tinfoil and a straight hooter allowed them better gauge the amount of drugs they were using (see also Foils). Conversely, some participants identified that the shape of the bubble glass created an optical illusion, making it appear that there are less drugs in the bowl than there really are, thus increasing risk of overdose:

> *"So people are putting too much down in bubble pipes 'cause it looks-- it's round and it's visibly, you know, it looks different. And so we're seeing more overdoses from that very thing. I see it almost every day.*

Somebody smoking down in a bubble pipe goes down because they just put too much fent in their bubble pipe." (Staff 01, Metropolitan)

Some participants commented that hammer pipes provided a stronger hit and could be harmful to people with a lower tolerance or less familiarity with hammer pipes: *"There probably would be a higher incidence of overdosing with the hammer pipe if you use too much and you're a new user" (Person who smokes drugs 06, Metropolitan).* Hammer pipes involve heating the bowl first and then dropping the drugs in all at once, making it harder to titrate the amount of substance being consumed.

Cross-contamination of opioids/stimulants

Cross-contamination of substances in/on supplies leading to overdose was a primary concern among both PWSD and staff. This includes circumstances when people think they are smoking a stimulant but end up smoking fentanyl: *"If you're using someone else's pipe it could be changing, of course, it could be down or it could be fentanyl in the pipe as well as crack. And they don't tell you that" (Person who smokes drugs 09, Metropolitan).* While the small amount of opioids in the residue might not be harmful to a person who regularly uses opioids, for opioid-naïve stimulant users, small amounts of opioids could potentially cause overdose. Many participants reported witnessing and hearing about this type of overdose occurring among people who smoke stimulants. It was reported that they may occur when people intentionally share pipes with their partners/friends/others or when people smoke from a used pipe which has residue from the last substance used in it but are not intentionally shared (e.g., found pipes).

"So if somebody's smoking side in a bubble or even down first in a bubble and then passes it off to somebody who smokes side, the risk of a drug poisoning is that much higher." (Staff 03, Large urban)

"Nobody will-- not too many of them will share a needle unless maybe they're, you know, not at our harm reduction site and they're somewhere else where they can't get more than one or two needles. But most of them know, you know, to use their own needle. But smoking, you know, they get a pipe and somebody else will use that pipe and they don't know what's been smoked in it and they go down." (Staff 06, Metropolitan)

People were more likely to smoke from a contaminated pipe when other options weren't available, illustrating how having supplies available reduces risk of overdose.

"Well, it was because people were using other people's pipes. So if I'm a side user and a down user and I have a pipe that's going all night and then my friend who's a side user who's hanging out with me drops their pipe at two in the morning, and they're jonesing and they decide to use my pipe, they throw some side in it. But there's down residue in there. Boom, overdose, right. It's drug poisoning, right." (Staff 13, Metropolitan)

The awareness and concern of cross-contamination prompted PWSD to take actions to mitigate this risk, such as asking before sharing, using a marker or tape to distinguish the pipe used for fentanyl versus the pipe used for stimulants.

"Well, I usually clarify with somebody what is in it beforehand 'cause I've seen people take a speed pipe thinking it was speed in it. It had down in it and it, of course, resulted in an overdose. So I always clarify what's in it if I'm using somebody else's." (Person who smokes drugs 10, Small urban)

"One practice that we've taken from our sites in town is that because everybody shares their pipes, right. And, you know, of course, some particularly smoke up or down or side or whatever. So what the sites in town started doing is they got, like, a roll of tape. So one would be yellow. One would be green. One would be red. And they signify a different type of substance. And so when somebody's smoking up out of a pipe they'll wrap it in the yellow. And so that person remembers, oh, that pipe is what I was smoking that in." (Staff 12, Rural Hub)

Other strategies to prevent sharing supplies included having separate pipes for using fentanyl and using side and having a spare unused pipe to give someone when asked to share.

"I don't know the person and I'm not sure about them, no, you can't use my pipe. No, you can't borrow it because you never know. Somebody say oh, I'm going to put some crack into it and use it. And you ask them, is it crack? Oh, yeah, yeah. It's crack. And it's down." (Person who smokes drugs 09, Metropolitan)

The accumulation of residue on pipes created potential for cross-contamination. Residue can be collected from used supplies and smoked again – with or without the person knowing what substances are in the residue. In addition to cross-contamination, overdose happened when the substance in a shared pipe contained more fentanyl than the person borrowing it had tolerance for.

Other times people found used pipes and smoked with them to get the resin or because an unused (new) pipe was not available. This staff member observed how people who use drugs are careful to not share and to properly dispose of their rigs used for injection, but that same safety mentality had not translated to smoking supplies yet.

"And everybody picks up a used pipe and everybody's just saving pipes. I mean, they have residue in them. You're throwing drugs away or whatever. But people are always using other pipes and going down is like what we hear. We're hearing it more and more and more." (Staff 13, Metropolitan)

Sharing of smoking supplies was commonly reported by participants. This is partially due to the social norms of smoking – it was easy and common to pass a pipe between people. Sharing supplies was also a way that people took care of each other if they saw someone experience dope sickness as they knew how painful withdrawal was.

"So somebody's sick downtown and they say oh, I'm so dope sick right now. And then somebody goes oh, well, here, have a little bit of this or whatever. That can be really dangerous depending on what you're using. […] Like, so somebody smokes crack, they can have contaminated crack because, you know, it has come in contact with even just, like, a little dust or something like that. It's like they use the same surface to cook up whatever they're doing. And then they're cooking it up and then putting the crack on some surface that they've already used to bag up fentanyl. Then obviously you're going to have somebody overdose." (Person who smokes drugs 06, Metropolitan)

People experiencing dope sickness were also less likely to ask questions about what was in the pipe being offered when they were feeling poorly and needed to use.

"Well, when somebody is dope sick and they don't have anything to use, I know that they are-- they're sharing. I mean, it's just obvious. When you're sick you're going to-- you look at the things that-- some of the things that people do for just to get drugs, right. If somebody's going to give them a toke, offering them a toke off theirs, they're going to take it." (Person who smokes drugs 19, Rural)

While harm reduction supplies have historically been provided as a way to reduce spread of transmissible diseases, preventing spread of communicable diseases (e.g., hepatitis B, hepatitis C, HIV, respiratory viruses and bacteria) was a secondary concern for PWSD compared to preventing overdose. Similarly, staff reported promoting safer inhalation supplies primarily as a tool to prevent overdose by reducing sharing and cross-contamination of supplies in the context of a volatile unregulated supply.

> *"That's what we're dealing with every day is overdose not bloodborne pathogens. So that to us, isn't the concern. It's people overdosing sharing pipes and OD'ing 'cause they're not used to fent when they're smoking crack only out of their straight pipe." (Staff 06, Metropolitan).*

> *"It's hard to tell somebody that, like, strep throat or a nasty cough or pneumonia is going to be the problem when overdose is the most commanding one that they don't give a shit about. So telling them that, like, herpes is an issue […]. I will pay you my entire year's wages if you're able to get one of them to give a shit." (Staff 15, Metropolitan)*

These responses highlight the ever-present and immediate risk of overdose deaths and brain injuries amongst PWUD in the context of the toxic supply.

3.2. Impact on spread of communicable diseases

While overdose was an overshadowing concern, among PWSD participants there were varying degrees of concern about transmissible disease, from little to no concern to taking various precautions. For instance, *"alcohol swab the pipe after you're done with it or before each person has a hoot. Should always grab the mouthpiece-- mouth pipe. Because I don't feel like getting hep C again" (Person who smokes drugs 02, Metropolitan).* Another participant was very aware of the risk of disease from shared pipes and detailed how broken and hot pipes led to open sores and cuts, which could lead to pathogens spreading.

> *"Like, crack pipes you're a lot more susceptible to transmitted disease because […] people end up, like, pushing their Brillo through to the other side so that they can scrape up all the stuff that's on the inside of their pipe, right, if they run out. And then they can't wait for their next hoot, so they end up putting their lips on the pipe and burning their lips, like, to the point that they have sores all over their lips. And then they're sharing that with their friends, and the same thing happens with their friends. Then what do you get, right? You end up with pathogens and you end up passing that on." (Person who smokes drugs 06, Metropolitan)*

Other participants described trying to avoid sharing supplies with other people or being selective about who they shared supplies with. This participant's strategy to avoid sharing involves carrying extra pipes so that they can give a new pipe to someone instead of sharing their used pipe.

> *"I'll share with my spouse. There's a couple friends that I'm okay with sharing with because I'm-- I trust that it's safe and not going to be an issue of catching something. But I try not to share them. That's why I keep a lot of extras on hand because somebody will be, like, oh, hey, can I use your hooter? And I'll be, like, oh, yeah, hang on one sec'. And I'll just go get them a brand new one and give it to them. And, like, oh, no, keep it; it's yours. You can have it." (Person who smokes drugs 10, Small urban)*

Among participants, staff tended to be more concerned about transmission of communicable disease than PWSD and made efforts to distribute enough supplies and provide education about the importance of using mouthpieces

and not sharing pipes when smoking. Some staff seek to educate around risks of transmissible disease, but find it difficult when overdose is a more immediate risk, as explained by the following staff member:

> *"I've watched people come out with one leg that's four times bigger than the other one from some sort of infection. And they're, like, oh, can I get a fent pipe? And I'm, like, can I get you an ambulance ride, dude? Can we talk about this? And they'll-- oh, it's fine. And I'm, like, fine is not the four-letter word I'd think about it but-- all right. Let's talk about this. And then they're, like, oh, can we get that pipe? And I'm, like, oh, yeah, […]-so yeah, in answer to your previous question, yes, there are many different diseases that can be passed on and they are aware of them. But there's [inaudible] we can do when they're-- the preventable one that they often ignore which is overdose is often ignored. And so we have to-- that's the most commanding one, right." (Staff 15, Metropolitan)*

3.3. Other physical and mental health impacts

Burns or injuries

Smoking also introduced risk of burns and injury from using hot glassware and/or Brillo. Participants spoke about how the high amount of heat required to melt fentanyl inside a bubble pipe could subsequently lead to burns on the lips or body. The potential for burns was amplified by a toxic drug supply that causes sedation, potentially leading people to drop pipes or lighters. Staff were cognizant of burns and made efforts to educate individuals about using mouthpieces to prevent burns, as well as educating themselves and other staff to treat burns.

> *"Yeah, a little more burns, you know. […] I guess it's an inevitability when you're high and dealing with some things that are hot, right. It's just an inevitability you're going to get burned, right, if you're not paying attention properly, right." (Person who smokes drugs 05, Metropolitan)*

> *"We get so many burns. I've actually taken an expert course in my wound care to care for burns 'cause we see them so often. So-- from pipes definitely. People who are using their pipe and just kind of doze off with the substance. One lady got a burn right on her eye from her meth pipe. So we've seen tons of burns." (Staff 02, Small urban)*

Participants also shared experiencing internal burns from accidentally inhaling Brillo. When heated up, the Brillo would disintegrate, leading to shards of thin, hot metal to break off from the larger ball of Brillo and travel up the pipe into someone's mouth and throat. *"I got it [the Brillo] too hot and it come and it shot me in the back of my throat and, like, my fourth-- I took a gulp of my juice and even my fourth gulp of juice still went psshh" (Person who smokes drugs 18, Small urban).* Staff were aware of this risk, and many described providing education for why and how to use the provincially supplied brass screens over Brillo, however Brillo remained the filter of choice for many PWSD.

Cuts on the lips and body from broken glass pipes created opportunity for transmissible disease if someone's blood or saliva was on a shared pipe. Mouthpieces on the pipe were used to avoid hot or broken glass being directly on someone's lips.

> *"I wouldn't say common but I've definitely heard of people talking about when they use the smaller stems, the thinner glass, that it's broken in people's mouths before when they're smoking. Just because it is a thinner glass. Yeah, that's pretty much all I heard aside from some people burning their lips on the pipes*

depending on how hot it is if they don't have the tubing attached as an additional filter." (Staff 03, Large urban)

"People will use broken pipes. If there's drugs in it, people will use it. If you break a pipe and there's, like, a broken end on it but one end isn't broken people-- if there's drugs in it people will use it. A hundred percent. And even if both ends are broken I would imagine that people would use it too. I don't think people are really concerned about cutting their lip or whatever when they've got drugs to smoke." (Staff 13, Metropolitan)

Heat sources – particularly lockable lighters with mechanism to lock the lighter with the flame on – were similarly discussed as heightening risk of burns and injuries. This risk was particularly prominent in the context of a toxic drug supply that commonly sedated people due to contamination from benzodiazepines. PWSD and staff described situations where clothing and tents had caught fire following people dozing off due to their torch lighter being locked in the 'on' position,

"Because I feel like matches and candles would be-- that could be, like, dangerous […] if they're, like, sleepy, obviously that's like one of the most common thing. So that could be, like, problematic because if the candle is, like, if the candle is on the table, so that could lead to burning their hair more often because I've seen one or two times, like, people got fire on their hair." (Staff 05, Metropolitan)

"Yeah, we see that quite a lot. People are using them 'cause the flame locks on and then they knock it over and then their tent catches on fire. And these tents catch on fire real quickly. They go up. They go up fast. Scary." (Staff 01, Metropolitan)

Respiratory and neurotoxicity concerns

Diagnosed respiratory illness as a result of smoking was not discussed by participants. However, participants identified that some methods for smoking were reported as easier on the lungs than others. PWSD participants knew that smoking was hard on their lungs and several explicitly stated that they found tinfoil to be particularly harsh due to the dryness of the smoke they were inhaling. This harshness was also reflected in comments about previous experience smoking from lightbulbs or aluminum cans. Comparatively, those with access and preference for bongs noted how bongs were gentler on their throats and lungs.

"It's [the bong is] easier on the lungs because you put water into-- essentially you smoke through water so you're diluting it. It's, like, I would say it's purifying your smoke in a way. 'Cause you're drawing through water. […] and it cuts it down to the point where you're getting your buzz but you're not getting the harsh, straight chemical. (Person who smokes drugs 09, Metropolitan)

There was also a prominent concern from PWSD that toxins from foil were being inhaled negatively impacting neurological function. Several participants described avoiding using foils for this very reason: *"No, I did use the foil quite a bit and then I read that about using aluminum and heating it up and stuff and causing holes in your brain. So I decided I'd stop using the foil." (Person who smokes drugs 16, Metropolitan).* Another participant commented on why they chose to use foils:

"A: The taste is better and you don't, like I said, using glass you're not going to acquire, you know, Alzheimer's or Parkinson's or whatever.
Q: Yeah, is that something you've heard from, like, other people?

A: I've noticed a lot of people who smoke tinfoil a lot they lose their memory quick." (Person who smokes drugs 12, Metropolitan)

Other participants described wariness of how smoking off a foil impacted their respiratory health, though they identified the foil as less risky than the unregulated substances being smoked.

"Aside from, like, making it a lot easier to because foil's not good for us to inhale either. But using, like, an old foil that you've already used is even worse because it's already burnt up so you're inhaling more and more of those chemicals of the foil. So it makes it a lot easier to be able to get fresh foil which is important so that-- not inhaling more and more chemicals from the foil or using toasted foil already or something like that." (Person who smokes drugs 13, Metropolitan)

Few people discussed inhaling blackened resin as a concern for longer term respiratory illness, though some did note how smoking might be related to breathing challenges. The following participant describes smoking with a pipe that has built up residue being like 'hauling on charcoal'.

"If somebody's sitting there and they throw some fentanyl in a bubble pipe and they use a Bic lighter, then you're just going to see all this residue build it. And it's just going to be, like, charcoal in their pipe and they're sitting there just hauling on the charcoal, right." (Person who smokes drugs 06, Metropolitan)

3.4. Impact on connection to care

Provision of harm reduction supplies offers a connection point for people who use substances to get referrals or access to harm reduction, counselling, housing, food and other supports. Staff members spoke to the trauma-informed and person-centered approach they apply when speaking with PWSD. This staff member speaks to how their regular contact with people helps establish trusting relationships and enable conversations about other supports and care that may be less likely to happen in a more clinical setting.

"Because not only are these people comfortable with us, because they see us daily and talk to us daily, they-- we started offering more services to them or they become aware of more services to them, they open up more. They're way more likely to come talk to me about getting into treatment than they are a suit-and-tie guy behind a desk at the pharmacy or the clinic or something like that." (Staff 01, Metropolitan)

Some harm reduction sites are part of a wraparound service model which offers multiple health and social services from one place. For example, this staff member talks about offering counselling services through a harm reduction approach that meets people where they are at and discusses the individual's goals without requiring or seeking for people to be abstinence based.

"We're a counselling office primarily in terms of what people would access our service for. […] The harm reduction conversations would come up as-- part of our involvement with people who are coming in to seek counselling is, you know, what are your goals and [inaudible] as an agency honours that harm reduction perspective. So even in our clinical work it's not abstinence based. So if in that assessment it came to fruition that someone's goals was not to stop use but just to-- they can use more safely, then we are definitely going to support them in that, so-- if that makes sense from that perspective." (Staff Group 08, Rural Hub/Small Urban)

Though providing immediate harm reduction services may have been the primary purpose of a site, referrals to other services were also available:

> *"So what we do here is harm reduction care and so our main goal is to save people from overdose. And we do have, like, give supply and keep an eye when clients are using-- in case they're overdosed or anything. And then we have referrals. Referrals to-- for housing, health issue or mental issue or anything." (Staff 05, Metropolitan)*

Connection to care was seen in additional services being available at sites and in proactive outreach. Staff going to PWSD to ask what they needed was described as a stark contrast to being 'hustled along' by business owners, police, bylaw enforcement or others. Staff members explain their trauma-informed and person-centered approach to starting dialogue with people:

> *"Yeah, and then another part of it is just the support, you know, sitting there and just telling them that, like, you know, yeah, the stuff you're going through is real. I know it doesn't seem like it's real 'cause it's crazy, but, like, yeah. How do you tell somebody that, like, you know, how their life is going, you know, that, like, oh, yeah, you've got to get it together and tell them a bunch of unrealistic things that they might not be able to do that day, right. So it's just like being able to unpack that and make-- even a part of it make sense, you know." (Staff 15, Metropolitan)*

This staff member describes going to where people are and making an effort to sit with them have a conversation.

> *"A: By going out at different times and getting in vehicles, finding out where the people are, hanging out where they're camping or where-- their hotels and trailer courts that there's a need. And we show up. We go out in pairs and we give out free cigarettes and whatever it takes to open up conversation. And try it get it into people's hands.[…] you got to do some research and also you just talk to people and, like, love them and they'll, you know, they start talking. They get ignored so much, you know, or hustled along, that if you just kind of, like, open some dialogue they'll tell you where the need is." (Staff 14, Metropolitan)*

Finally, this PWSD speaks to their local harm reduction site as where they found their chosen family, underscoring how relationships established through contact at sites contribute to people's social and emotional well-being, and emphasizing that staff do much more than simply hand out supplies.

> *"If it wasn't for [harm reduction site] and us, a lot of the street people, there'd be a lot more dead, a lot more death, a lot more anger and violence. But we're helping through outreach. […]. Keep things clean. Keep people supplied. As far as [harm reduction site] is concerned I am very grateful that they came into my life. […] And they're my family. I don't have family, but they are my family." (Person who smokes drugs 09, Metropolitan)*

Theme 4: Safer inhalation supply distribution and access

This section lays out findings related to safer inhalation supply distribution and access across BC, including changes to supply access since the introduction of the provincial supply program, geographic barriers to access supplies, and the various models used to distribute supplies. We discuss the importance of multi-model supply distribution that balances being client-centered and low-barrier with opportunities for staff engagement.

4.1. Changes over time to supply access

Participant comments reflected improved access to safer inhalation supplies since the introduction of glassware (i.e., glass bubble pipes, stems) to the provincial supply program. Participants often reported that they had a harm reduction site where they knew staff members and were able to consistently access supplies without cost:

> *"They [harm reduction site staff] usually have everything that I need and they're honestly really great down there. I always go to the same place so they're always really good." (Person who smokes drugs 10, Small Urban)*

Access to free safer inhalation supplies prevented people from either buying or having to find an alternative object to use for smoking. Participants described past experiences of wanting smoking supplies but being unable to afford buying them from a commercial store, so instead resorting to using objects such as lightbulbs, tin cans or metal pipes. This participant explains the materials that PWSD have used as a pipe and underscores how the introduction of glassware was critical for reducing the likelihood of sharing supplies among PWSD:

> *"Tin cans, beer cans, pop cans. You poke holes in it and use the ash. Or we used metal pipes. Metal fitting. Plumbing fittings and electrical fittings and stuff that we could put together to make [cuts]-- but that was before the glass ones came along. But when they [glass pipes] first came out in the stores, they should have been-- they're making so many they should have just been giving them at half price. But they were charging me $5 for one tube. And people don't have that. They would rather spend the money on dope and then try and figure out how to smoke it after. But since this whole thing with free tubes and stuff like that, glass tubes being handed out, I think that's one of the best damn things that anybody could have done for the people in the drug community." (Person who smokes drugs 09, Metropolitan)*

This above quote speaks to the transition from makeshift pipes to glass pipes facilitated by having a funded program distributing pipes at no cost via harm reduction sites.

4.2. Geographic considerations

Access to safer inhalation supplies varied by community and urban versus remote and rural locations. For instance, comments from participants in Vancouver and Victoria suggested they were in locations with ample safer inhalation supplies. The following participant in Vancouver's Downtown Eastside speaks to accessing supplies in the middle of the night with ease:

> *"Speaking from down in the neighbourhood here, most places are covered, you know, and you don't have to go too far to get something. Even in the middle of the night you can access harm reduction supplies so-- it's pretty good. Pretty good with that, you know, other than a few more locations, you know, not much else you could improve on." (Person who smokes drugs 05, Metropolitan)*

Participants living in smaller communities often had to travel further to access their local harm reduction site and thus collected more supplies at once. Distributing supplies through outreach, as opposed to requiring people to come to a fixed site location, was a key facilitator of supply accessibility for PWSD. Mobile supply distribution models were sometimes available to bring the supplies closer to people, as described by this participant:

"A: I usually go down about once a week or once every two weeks and I get a lump sum of supplies. And then they have the community van that comes around on weekdays. So if I need anything extra in between the big pickups I just get it from the van." (Person who smokes drugs 04, Small urban)

Participants also spoke about some of the informal distribution networks which enabled access to people who may not otherwise have access due to limited mobility, site hours, or living a long distance from the site (including but not limited to rural and remote communities). Some PWSD tried to pick up extra supplies that they could redistribute to people in need. This redistribution occurred among PWSD who were employed as peer workers as well as voluntarily.

"I usually grab a couple just in case, 'cause I'll bump into a friend and they'll be, like, hey, do you got an extra one. So I usually grab two at a time just in case someone is in need. Or they're not close to somewhere where you can get one. Just so, you know, to help other people that are in need as well." (Person who smokes drugs 03, Rural)

People stocking up on extra supplies to share with others who needed them in their community was a common strategy to overcome limited site hours. As many harm reduction supply distribution sites are only open during the day, redistribution of supplies among PWSD beyond operation hours was crucial for maintaining access overnight. In several cases, trusting relationships between PWSD and staff supported this type of redistribution as staff knew that site hours limited access and gave out extra supplies at closing time to people.

"Well, I go one at a time during the day because they're accessible. I'm close to the accessible place. They don't like to give out more than one at a time. At nighttime they're a little more lax. They-- closing time they realize it would be a 12-hour span before you can get a bubble. So I might get two or three." (Person who smokes drugs 07, Metropolitan)

For others, a main barrier to accessing supplies was where the supply distribution site was located, and the appearance of the building itself. This participant explains feeling stigmatized and uncomfortable when picking up harm reduction supplies at a highly visible building. This feeling may be amplified in smaller communities where people are more likely to recognize each other, creating a barrier to privacy.

"It's great that they have these places where you can go pick up, you know, a smoking kit for meth. Or a smoking kit for crack. But they're in buildings like the government building. To go into the [identifier removed] building, they use to have them right outside their office. Well, you know, people walk-- seeing you come into the office and you're walking out with bags, they know exactly what's going on. Or you can pick them up the doctor's office. Well, it's still in a doctor's office setting. It's not, you know, and then places like the shelter that's-- have all the supplies, but they don't want to hand it out because they don't want it coming into the building. It's, like, well, if you're not going to hand it out, why even have it then." (Person who smokes drugs 17, Small urban)

The above quote points to the different barriers to accessing harm reduction supplies – from not wanting to be seen getting supplies to reticence from staff in some settings to give out supplies.

4.3. Low-barrier distribution models

Staff emphasized the importance of low-barrier distribution including outreach to community sites and indirect distribution such as kiosks. Outreach was repeatedly highlighted as a useful strategy for providing supplies to

people in community. For instance, one site had hired a team of peer workers who facilitated nightly outreach including supply distribution to single room occupancy (SRO) buildings in the community. Through team discussions, the peer workers had come up with a strategy to equally split the number of pipes they had each night, even though it meant that larger SROs had the same amount of resources as smaller SROs.

> *"All of our work is in SROs. It's just that we like to follow up in buildings so we go as the staff team ourselves and also hand out gear and meet with tenants and discuss needs and introduce them to the [identifier removed] that we have working in the building and stuff like that. So pretty much as far as how we decide then is we just say, we'll give you one per person, because if we give you as many as you want you'll take all of my pipes. And that'll be annoying. And everybody else will want something and we won't have them. So one per unit. And then if we run out by the end, sorry, you're kind of SOL." (Staff 13, Metropolitan)*

The above quote highlights what peer-to-peer distribution can look like while also emphasizing the need for a strategy and firm boundaries when distributing limited supplies.

Kiosks were one model for indirect supply distribution that has been trialed by select communities across BC, though as of the time of publication kiosks were not permitted at health authority-funded harm reduction sites. A small number of staff interviews reflected sites that had kiosk distribution, however staff from multiple other communities and sites expressed interest in kiosks and/or made a specific recommendation to explore models for providing harm reduction supplies when sites were closed. Staff noted that the kiosk (sometimes described as a "vending machine") was valuable for providing anonymity to people who use substances given the stigma and shame attached to drug use. They observed that people accessing the kiosk were more often housed or using substances less visibly, thus having a 24/7 access point enabled people to access supplies efficiently and discreetly.

> *"Yeah, so we see a lot more people pulling up to use the vending machine that are housed. Not necessarily even in supportive housing. Just living somewhere under a roof. People are wanting to usually-- they're approaching the machine usually to be a bit more anonymous. It's completely free. It runs 24 hours. It's always on. So people can come at whatever time they like. And we do have an office out front that looks right out onto the vending machine. And a lot of times people will pull up and they don't want anything to do with us. They just want to get their supplies and they want to leave. Because they just want that very brief, anonymous interaction. They don't want to discuss their names. And I think a lot of that comes from that sort of guilt and shame and embarrassment piece that a lot of people have when they're using substances." (Staff 03, Large urban)*

In addition to the kiosk at this site, staff accepted harm reduction supply orders from individuals which they would pack and deliver during their shifts. Sometimes they facilitated bulk orders which were supplying a group of people or an individual who was known to staff as someone who would redistribute to friends and/or people with limited mobility or who were street entrenched and unable to access the harm reduction site themselves. When supplies were running low, staff prioritized filling the kiosk over delivering orders. Staff reflected on delivering to individuals with varying living situations and sociodemographic characteristics (i.e., age, gender), pointing to the diversity of PWUD and the opportunity for distributing supplies in multiple ways to increase reach and uptake.

At the following two sites, a low-barrier model for supply distribution is available while the site is open. Supplies are available in bins or on shelves for people to grab as they need, except for tubing due to it needing to be cut,

and glassware due to restrictions on the number of pipes per person per visit. Both of the following staff reflect on the organizations' approach to facilitating low-barrier supply access.

> *"Our harm reduction is in our office so we fill up bins of different harm reduction and people can grab what they need. The only thing we really, like, don't allow them to have access to, and we have to cut it, is hosing because of how big it can be and how long. So they have to ask us for that and we'll cut it for them. […]Everyone's kind of-- freely can grab it, so it's not really a big issue here." Staff 10, Metropolitan)*

> *"So for our glass supplies and stuff like that it's staff up in the, like, we have an office area that oversees kind of everything. So they'll generally come there, knock on the door and then ask if they can get a straight pipe or a bubble pipe. They're also free. Like, a lot of them are so comfortable that they just come in and they, like, open up the drawers that they're in to grab it. And then we have, like, those Ikea Billy bookcase shelf things. We have a big one of those that has a-- that has drawers in it that we have other, like, we have our injection supplies in there. Sometimes there's foil. There's, like, safer sex supplies, everything like that. So they can-- Narcan whatnot. They can just freely access that." (Staff 17, Metropolitan)*

There was a call for more models that could support access to harm reduction supplies after hours or when site staff were unavailable*. "If we're not going to have personnel and staff, why not at least have them being able to get a bubble pipe at two in the morning." (Staff 01, Metropolitan)*. Staff also recognized that providing an anonymous option was necessary to reach some people: *"We want them to interact, but the bottom line is a lot of them don't want to." (Staff 12, Rural hub)*. This was particularly relevant for smaller communities and rural areas where people may have to travel further and work harder to maintain their anonymity as a drug user. Staff again emphasized the value of having multiple ways that people could access their supplies – either through a staff member or by being able to pick things up without engagement.

> *"Especially for, like, really rural areas I would love to see the CDC come forward with some sort of programming that could look at implementing, like, I don't know whether it would be a vending machine model. But basically an after-hours model for accessing harm reduction supplies. […] some sort of cabinet or mount or vending machine or something that can be in an outside space that we can stock and monitor. And still hold the drop-in hours. Make sure there's still that space for connection. Just making sure people can get the supplies when they need them too. So that would be a huge barrier that I would see that I would love to see a program that would support funding to put something like that in." (Staff 08, Small Urban/Rural Hub)*

Our findings suggest that low-barrier supply distribution, such as outreach and kiosks, promotes access for PWSD who may not otherwise access a site and/or are experiencing racism, sexism, ageism, and/or other forms of stigma and oppression.

4.4. Pre-packing versus individual supplies

Staff members articulated varying levels of engagement with PWSD when distributing supplies. Approaches ranged from staff proactively asking a person about their substance use and supply preferences and providing education about the supplies upfront, to having premade smoking kits available and not engaging in discussion at all. The former strategy reduced wasted resources as people were not receiving supplies that they did not intend to use and also enabled a conversation between staff member and the person accessing the site. These conversations were valuable for building relationships, understanding needs, and providing referrals and

education, including education about how to use specific supplies. However, direct engagement with staff was seen as not appropriate for every individual or circumstance. Sometimes people accessing the site were in a hurry or uncomfortable engaging, in which case requiring discussion with a staff member presented a barrier to accessing supplies without additional benefit to the client. Some people accessing supplies may already be well-versed in safer inhalation and other available supports, either having received education from staff previously, or through other supportive relationships. Having pre-packaged supplies available to quickly grab lowered barriers to access and was also more feasible when sites were busy, and staff had limited capacity. This staff articulates finding the balance between distribution approaches:

> *"We had that same kind of experience where people were, like, I don't want everything in the bag. I just want these few items. So we kind of have moved to a little bit of a happy medium of having some of the bags available. And those are really good for people who are either in a hurry or are really uncomfortable accessing our location for whatever reason. They're, like, I don't want to talk to you. I don't want to, like, I want this to be as short an interaction as possible. It's great to just be able to be, like, here's what you need. Come back any time. But I've also found the-- a really great piece about, like, having people come in specifically for just what they need is, like, the conversations that that opens up. And being able to have a little bit of a longer, like, are you using the narrower pipes or the wider pipes. What do you prefer. Can I show you how to use the screens. There's more room for dialogue in that and for support in that. And that's been a really lovely piece to have more of. And I would say, like, more clients are coming in for specific items than they are for the bags. But I do still find the bags helpful to have." (Staff 08, Small Urban/Rural Hub)*

The above quote illustrates the value of conversations between staff and service users when people are open to having those conversations. Similarly, the following staff talks about customizing supply kits for people as a way to engage them in education and conversations.

> *"Yeah, we just have the conversation and it opens the door to conversation. We do have some folks that work here that make up smoke kits, so they'll put, you know, the two straight-- the two different [inaudible] straight shooters with tinfoil. And then we'll ask if they want screens or push sticks and a bubble. And-- some do it that way. We actually will just have a conversation and ask them what they need and hand it to them and talk about it. It gives room to have those conversations and education. And folks ask questions. They're usually-- sometimes they argue with us 'cause they actually know more than we do. But, like, sometimes they don't know the safer way of doing it, right, so we can give them that. They take a little bit away from us." (Staff 09, Metropolitan)*

In summary, staff valued active engagement through supply distribution when and where appropriate and feasible. Our findings suggest that there is reason to encourage tailored and direct supply distribution while also supporting access through indirect supply distribution.

4.5. Buying and selling supplies

Some participants chose to buy their own supply of choice outside of the harm reduction program. Some had previously purchased pipes and foils from a corner store or inhalation store and had since switched to accessing supplies at no personal cost from their local harm reduction site. Others had preferences for supplies that were not provided through the supply program, namely bongs and Brillo.

"Besides the bong, I get everything from the harm reduction supplies. But they don't have bongs there so-- yeah. But I just buy, you know, one whenever I need it sort of thing." (Person who smokes drugs 16, Metropolitan)

"Buy it [Brillo] at the corner store or you can go to a hardware store and buy it. On the Downtown Eastside they sell, like, a dollar's worth of Brillo. Yeah, people will go in there and buy, like, a dollar's worth of Brillo. And then give them just enough to put in their pipe." (Person who smokes drugs 01, Metropolitan)

Additionally, scarcity of glassware due to limited resources and site hours created a market for pipes and there were reports of people selling pipes. This mostly seemed to occur during the night when harm reduction sites were closed. "*If I run out of it and I need-- I'm being really jonesing and I find somebody that's selling pipes I'll buy one for two bucks" (Person who smokes drugs 02, Vancouver).* Another participant pointed out that while there might be a market for pipes sales, buying a pipe from someone for any amount remained unaffordable for PWSD who were experiencing homelessness and had minimal resources.

"It is pretty common to be selling them, I guess. Some people do. People are willing to buy them, right. There's always an entrepreneur there that there's-- where there's supply and demand there's always going to be somebody, right. But I mean, a lot of people are too poor-- on the streets are [inaudible] couldn't afford to buy a pipe." (Person who smokes drugs 08, Metropolitan)

While there were some reports of people accessing supplies to resell and make a profit, the accounts were limited. Staff who spoke to this issue emphasized that they only provided larger amounts of supplies to people who they knew were facilitating supply access by distributing to folks in their community who were unable to access the site (e.g., unable to travel long distances in a rural area, mobility constraints). Staff set firm boundaries and did not distribute extra supplies if someone who was asking for a higher volume of pipes was believed to be selling them to make a profit.

Theme 5: Safer inhalation guidance and education

5.1. Education opportunities

In this section, we share findings that identify opportunities for educational materials and approaches. Some of the following educational opportunities were explicitly named by participants, while others are reflective of recurring comments that suggest a knowledge gap or area for continued education.

Overdose risk from smoking

There was a common perception among people who use substances that smoking comes with less risk of overdose compared to injecting. One of the common reasons people shared choosing to smoke was due to the belief that smoking was a safer mode of consumption (See subtheme 1.1. Perceptions of smoking risks).

"So I find there's a whole new crop of drug users come up who've now been wired to down are all choosing to smoke. Because the stigma attached with injecting also. Coupled with the education of not-- of thinking that you can't overdose as easily." (Staff 06, Metropolitan)

This staff member brings nuance to the considerations of overdose risk: the ability to take smaller hoots at a time was a potentially protective factor, but simultaneously smoking was also easier to take continuous hoots which

was a potentially harmful factor. There is opportunity for staff to work with individuals and provide tailored education for individual use patterns.

> *"Smoking as a method of using substances is a little tricky 'cause sometimes I find that it helps mitigate the risk of overdose because people are able to take a small hoot. And then see how they feel. And then if they want more they can take more. But then it's also on the opposite side of that where I feel like smoking is so much easier than injecting that people will just take hoot after hoot after hoot. Because it's so easy to do that and you're not necessarily at risk of, like, 'cause you can't just inject over and over and over again in the same spot. So sometimes I find that it can kind of lean more to one side or the other depending on the person, how much they're aware of those risks, how much time they're wanting to take in between hoots. Or how much time they're willing to take in between to see how they feel." (Staff 03, Large urban)*

Participant responses suggested an opportunity for educational resources about overdose and smoking, in particular how the health impacts and overdose risks may differ for someone who smokes versus injects their substances.

Reducing risk of cross-contamination

As sharing inhalation supplies was a known occurrence and overdose risk a prominent concern (see Subtheme 3.1. Impact on overdose risk), many participants discussed education and strategies to facilitate more informed use. Multiple participants talked about using coloured stickers, elastics or markers to indicate whether a pipe had been used for opioids or stimulants at their local harm reduction site. Other participants discussed this idea but felt it would be challenging to implement a universal system to visually recognize what pipes had been used for fentanyl. The following PWSD spoke to how people customized their pipes which made certain pipes more recognizable in community/social circles.

> *"Some people bling out their pipe and you start to recognize, like, I have a girl but she just smokes cocaine, right. But you see a pipe and it has, like, all this sparkly bling on it, you know it's [that person's] pipe. Or, like, yeah, there's the odd one but-- it's not a big thing yet, and it should be." (Person who smokes drugs 18, Small urban)*

Even if having a coloured indicator did not prevent someone from using a coloured pipe, it had the potential to help someone set themselves up differently before using a found pipe, as described by this staff member:

> *"I mean, people are going to share no matter what, right. And like I said, a found pipe is intriguing to somebody, right. So maybe having that label on it just-- oh, that's down or whatever, maybe it would dissuade them a bit. I'm not saying they still wouldn't smoke it, but at least they know what they were getting themselves into. Might find a safe space to use. Might reach out to somebody on the phone or something like, hey, I'm about to smoke down." (Staff 12, Rural Hub)*

These findings signal an opportunity at the provincial level to develop and promote a system for distinguishing between pipes used for different substances to prevent cross-contamination.

How to use supplies

Our findings indicate opportunities to bolster education about how and why to use certain harm reduction supplies, specifically tubing/mouthpieces and brass screens. While there was interest and uptake among PWSD

to use the tubing for reasons related to experience and function, there was an identified knowledge gap regarding mouthpieces to reduce disease transmission when sharing supplies (See subtheme 2.1. Supplies provided by the provincial supply program).

The lack of uptake of brass screens and preference for Brillo among PWSD signals an opportunity for more education. Brass screens were noted as highly unpopular by both PWSD and staff and as such there were varied staff approaches to distributing screens. Some staff chose to only give screens if people asked for them as they regularly observed screens being discarded before use. Others stocked screens and Brillo and made efforts to actively engage people in discussion about the benefits of brass screens over Brillo and education about how to pack a pipe using both Brillo and screens. Comments suggested that PWSD in their communities often remained resistant, even pointing to Brillo as a minor concern in the larger context of the toxic unregulated drug supply.

Despite the resistance to screens, some staff took a firm stance and were able to promote screen usage. This staff member spoke to only providing the provincially supplied brass screens and actively explaining why Brillo was not available when participants asked.

> *"We don't see Brillo much anymore. I think I've been asked that maybe twice in the last four years that I've worked here. And then I go, we don't have Brillo. These are the reasons why. Here's the screens. And then that opens up that conversation. Yeah. (Staff 02, Small urban)*

Together, these staff reports suggest that increased education can support uptake of brass screens. Education likely will have a limited impact given the clear preference of PWSD for Brillo, however given the health risks associated with using Brillo inside of pipes, provincially supported distribution of Brillo is not an option.

Informing about drug supply

Staff and PWSD pointed to the varying knowledge regarding use inhalation supplies within the drug using community. One participant pointed out that those who had been using for a long time did not need to be shown how to use a pipe safely. Rather, interactions between staff and PWSD during supply distribution offered an opportunity to provide information about changes in the unregulated drug supply, such as new contaminant.

> *"So I'm not really too concerned with my guy that's been using 20 years and what pipes he's picking up and whether or not I should educate him. […] But drug checking and stuff like that, that is where I'm educating clients. So when it's, like, you know, medetomidine doing its fucking thing now." (Staff 17, Metropolitan)*

Supply distribution is a point of contact to provide regular updates about the drug supply so that PWSD can be more informed about the substances they are consuming.

Safe disposal of pipes

There was a clear gap in knowledge about how to appropriately and safely dispose of safe inhalation supplies. In some cases, participants reported that pipes were purposefully not disposed of because the drug residue inside was still valuable. However, this lack of safe disposal contributed to overdose risk because if people found a used pipe and smoked from it to get the residue, there was a potential for overdose. Harm reduction supplies left on the ground could also exacerbate negative public perception of harm reduction and stigma of PWSD. The switch from injection to inhalation was evident in conversations about disposing pipes; this participant explains how the

lack of awareness about safely disposing of pipes increased the risk of someone using a found pipe and potentially overdosing.

> *"People have been really indoctrinated with how to be safe around rigs and people who use rigs are usually pretty good about putting them in disposable boxes and getting rid of them appropriately. Whereas with pipes I just think they end up everywhere." (Staff 13, Metropolitan)*

Limited awareness about safe disposal of pipes was also reflected by comments from PWSD:

> *"To be honest, I always thought that those, like, device machines you know or whatever were just for needle objects, not for glass objects. I've only ever, like, I've never put anything in one of those unless it was, like, somebody's left a needle lying around that I put in there." (Person who smokes drugs 11, Metropolitan)*

There were efforts by staff and PWSD to educate about how and why to dispose of used pipes. There was awareness that reducing litter from harm reduction supplies was supportive of a more positive public perception of PWSD and harm reduction sites. Stigma was a cited barrier to implementing more sharps containers in communities; one staff recounted organizing bins and obtaining buy-in from PWSD for disposal around the harm reduction site, only to prevented from putting the bins out by the building owner. The following quote from a PWSD exemplifies community interest and effort to educate about safe disposal of pipes and enforce keeping a neighborhood free from used and/or broken supplies.

> *"When they're [PWSD] done with their pipe, where are they going? Are they going in the garbage or are they going, like, being left somewhere? Like, that's-- 'cause I have a problem walking. I can't walk that far anymore. Like, I can't do, like, a real good sweep. So I want to start a campaign about a glass grab, like, you know, talking to everybody. Like, you know, do you know anybody who has an old bubble that they want to get rid of. And providing education like just like they did with the needles, right. And putting them in containers and putting-- taking them in to get, like, rid of carefully. Not dangerously, right." (Person who smokes drugs 19, Rural)*

Our findings indicate an opportunity for an educational campaign about sharps and pipes disposal, however, people wanting to keep their pipes to smoke the residue out of is an anticipated barrier to promoting safer pipe disposal.

5.2. Staff approaches to education

In this section, we present results related to how harm reduction site staff engage in their work. Understanding the approaches they use helps to create systems that build on their strengths and offer staff supports where they may be needed.

Staff approaches

Staff discussed their different approaches to providing education along with harm reduction supplies; there was a range of active to more passive approaches which may have been indicative of people's experience and comfort working with PWSD. Forward approaches to education included offering up information about how to use supplies without being prompted. This staff member talks about garnering interest in straws – a supply that is less popular but amply available – through actively promoting how to use them.

"Well, even though we got the straws, like, you know, nobody had ever asked us for straws. […] And [identifier removed] started out handing them out like Christmas presents. It was just, like, here, take this-- and all colours and-- but explaining to them, right, like, different colours for different drugs. And, like, educating them while we give them. And now we go through quite a few of them. So sometimes it's having it and offering it too. 'Cause, I mean, folks are just used to getting the minimal, right. You're not getting a bunch of stuff, like, just what you need. But maybe they don't always know all the things that are going to be best for them until it's something that's offered to them as well." (Staff_09, Metropolitan)

The above quote highlights the opportunity for staff to expand clients' knowledge, and by doing so, increase access by exposing them to resources they may not have even known was available. Another staff member comments on peers showing each other how to use supplies – highlighting how lived experience can bring ease to knowledge sharing.

"So I would say some folk when they're first starting don't know about the tubing. So I would say that was-- that would be the big piece that's missing. But again, peers are very good at teaching other peers and then we have, like, our cupboard kind of set out with what we have. So it's kind of like oh, what's that for? So those questions are easily asked by our folks so they can see what we give out." (Staff 02, Small urban)

Staff further emphasized the importance of one-to-one conversations from a person-led and trauma-informed approach to understand people's needs and provide individualized support.

"We do have some good pamphlets and business cards and things. I don't even know if a lot of them would really even be able to hang on to that. But the one-on-one definitely with the people that I'm seeing that are coming to this site and that we do the outreach work with, it's definitely, you know, you can show them sometimes on pamphlets and-- or give it to them. But it's sitting down, looking them in the eye and just finding out where they're at. And what might help them a little bit more or what they may be needing but they don't even realize that we have available for them. And we can say yeah, no, I can hook you up with this and, you know, how many do you need?" (Staff 14, Metropolitan)

An alternate approach was one that prioritized confidentiality and privacy of people accessing harm reduction sites. Staff members talked about having information available through posters and pamphlets, as well as being an available resource for people to ask questions to. The aim was to create a space where people could access what they needed without judgement and without having to disclose information about themselves.

"There's information if we get poked by needles what should we do, like, the steps that we should follow up. So I mean, these type of posters are-- most of the time are very helpful. Because it gives the person just like see and get the information rather than asking personally someone […] maintaining confidentiality rather than asking. Or saying something. They can just, like, see or read or get information through a poster and then that could be one of the way that could be helpful." (Staff 05, Metropolitan)

This strategy of upholding agency and letting people choose for themselves may also stem from a practice of non-judgement. For instance, this staff members reflects on navigating their role in in the tension between people requesting Brillo and Brillo not being a provided harm reduction supply.

"But I hate to say to someone, that's [Brillo] unhealthy for you, because who am I to decide what's healthy for them or not, you know. So I don't say that. I just tell them, I'm sorry, I don't have any [Brillo] for you." (Staff 16, Metropolitan)

Staff also had pragmatic reasons to not offer education based on past experiences with clients. Multiple staff commented that education resources were not always desired: "*They just want the supplies to use. They don't want to know how to use them" (Staff 03, Large urban).* One staff spoke to the need for staff training and education to be knowledgeable of supplies and comfortable asking PWSD questions about their use.

> *"People that have been in for it a while that are-- work in Vancouver or something like that, even if they don't have so much of lived experience, you know, more outgoing people that are willing to sit down and ask the questions. 'Cause I think a lot of people are afraid to ask, you know, people who use substances questions about how they do it. Why is this effective versus this. Why do you like Brillo more than you like a pipe or like a screen." (Staff 17, Metropolitan)*

While a more tentative approach to interactions is understandable based on concerns about appearing judgmental or pushing clients away, it did appear that in some cases that there would be value in building staff confidence about how to provide supportive education and intervention.

Curiosity and relationship building

Curiosity was a strong value of staff and was used to improve the quality of their interactions with clients. Staff demonstrated curiosity by asking PWSD questions about their supplies and their set up to engage in harm reduction-centered discussions. This type of approach was mutually beneficial: PWSD were placed in a position of expertise in sharing their knowledge with staff, and staff learned more about how supplies were being used in community. For some, these conversations were part of building trust between PWSD and staff. The following staff member recognizes their lack of experience with smoking unregulated drugs and how they use that positionality to lead with curiosity and ask PWSD more questions.

> *"Yeah, so I'm going to be completely honest. I don't have a ton of experience when it comes to smoking a lot of the drugs that are typically consumed on the street. […] But, like, I ask the clients, hey, man, can I get this, this and this? You absolutely can. Just show me how you put it together and what it does. And that's been incredibly beneficial, to be honest. Because you get to learn a little bit of intricacy, the who does what and why and what folklore or wives' tale has been told to you. You kind of toy out what information is where. There's also, like, there is a degree of, hey, man, I normally smoke meth in lightbulbs. But I hear you've got something better. What's up? And it's, like, oh, come on in. Let me introduce you to my friend Mr. Bubble Pipe. […] And it helps to foster community trust too, right. 'Cause I show-- like right off the bat with you, I don't know shit. Teach me. And then they go oh, well, I taught you that. Now maybe you can teach me this thing. And-- yeah, it absolutely helps with yeah, community trust, building relationships, communication, all of those types of things." (Staff 07, Medium urban)*

Curiosity was a valuable strategy for staff to learn more about how new supplies such as hammer pipes and new trends such as using springs inside of pipes to collect residue. Hammer pipes were only available at select pilot sites and had been paid for by the site, making them a topic of interest for staff to discuss with PWSD. The ability to ask questions and build rapport with site users was central to this staff member identifying why naloxone kits were in high demand because people wanted the syringe springs to use inside their pipe.

> *"We were realizing that a whole bunch of people were taking the naloxone kits, taking out the needles and leaving everything else. We were, like, that's a lot of waste. What's going on? So we found a peer, peep, that was trustworthy and that would-- we had enough of a rapport that we could ask that. Hey, why are*

people taking the needles and leaving all the naloxone stuff? So they told-- they were using the springs. So we said well, you know, you don't have to take the kits. We can just give you the needles. They were-- oh, really? So that opened up that conversation. But it took us probably about two or three months to figure it out." (Staff 02, Small urban)

Curiosity thus functioned not just as a way for staff to learn more about individual clients, but also to engage in quality improvement activities and increase efficiency at their sites.

"I find sometimes I'm educated by residents at times because they use multiple different things like some might be, like, 'no one uses this anymore, so why do we order it?' Or why do they keep supplying it 'cause not a lot of people use, say, point-five syringes. More people gravitate towards the one milliliter, one ml, right. So they kind of ask questions of why do we have this." (Staff 10, Metropolitan)

These findings suggest bolstering staff training to ensure all staff are comfortable discussing supply distribution, including training for how to approach conversations with PWSD about their supply use.

Relationships facilitate information sharing

Participants spoke to relationships among and between PWSD and staff as facilitating information exchange about safer substance use and harm reduction supplies. The following staff makes a distinction between their efforts to create concise educational flyers to put inside harm reduction kits and the standard Health Authority resource cards which they observed as being largely unread by PWSD. This anecdote implies that information more likely to be well received when appropriately targeted for the audience (i.e., PWSD) and delivered from a trusted source.

"It [education] can't be from an authoritative, you know, authority position. I make them pretty cool little fliers I made. They're only little. I put four on one page so I don't waste paper and ink. And then I cut them out and I just get little-- a little whatever gets put into every kit. So I don't know, education pieces and-- that change up, so it's not all the same stuff. Same thing. We got the same cards from the health authorities for years. They're very clinical and they're very, like, nobody reads them. They're all over the ground around New Westminster. […] It's just also knowing your audience. It's marketing. Who are you marketing to?" (Staff 06, Metropolitan)

Staff were also a resource for each other. Staff with lived and/or living experience of substance use, and/or had been involved in harm reduction for a long time were invaluable resources who could teach others on their team.

"I don't know what I have, like, pamphlet wise on safer smoking. But there is a bunch of our staff who regularly do talk to people about it. And are fully capable from their own experiences and from other trainings that they have done throughout time. Some of our staff has been with us for eight, nine years and what they do is go out and teach people all this stuff." (Staff 04, Metropolitan)

Distribution guidance and staff discretion

Discussions about the uptake and application of the BCCDC's supply distribution guidance showed that there was varying knowledge of the guidance as a resource; even within the same site there was different knowledge of the guidance, from staff commenting they did not know where the guidance was located, to staff indicating they regularly referenced it as a resource for determining what they included when making harm reduction kits.

Where staff were aware of either BCCDC or site-level guidance, their comments showed that staff discretion was regularly practiced in implementing guidance. Staff knew that there were limited supplies, and they also demonstrated knowledge of their clients' living circumstances and needs.

> *"But sometimes we can understand, like, the person is coming from a long distance or the person needs that supply. So we sometimes give them two on our own discretion. But again, like, there's a limit to the supply, so usually as per the management is, like, maximum one. But in rare cases it could be two." (Staff 05, Metropolitan)*

> *"I also personally feel really strongly about not wanting to over promise and under deliver. And just like trying to be mindful of, like, not wanting to get folks really reliant on knowing that every Wednesday they can come to this space and get five pipes or whatever. Because if we're aren't able to access pipes consistently or we have to then reduce how much we're giving out, people will get angry. 'Cause they'll, say, like, oh, well, I used to be able to get as many as I wanted. So it's kind of like trying to be fair and judicious and-- not guard resources, but just be cognizant of how we're distributing, I guess." (Staff 11, Metropolitan)*

Challenges with the guidance mostly came up in relation to the number of bubble pipes that sites were advised to distribute: up to two stems and one bubble pipe per person per visit at time of data collection.[6] Staff underscored their primary concern was harm reduction and keeping people safe from overdose, even if it meant providing multiple pipes to a person. Participants encouraged people to only take the supplies they needed but they also recognized that sometimes those needs were more than what the BCCDC guidance recommended. Staff described trying to keep a general sense of how many bubble pipes individuals were grabbing throughout their shift but knew that pipes broke sometimes and that some people were requesting extra for a friend or partner.

> *"We just keep track of how many we take, like, how many [bubble pipes] are used through a shift. Like some people will, you know, they'll grab one. They'll get high. They'll nod out and break their pipes so they have to get another one." (Person who smokes drugs 02, Vancouver)*

Staff were challenged to work with constrained resources while also maintaining relationships with services users, many of whom had a distrusting relationship with the health care system already. For example, one staff member explained navigating a shortage of bubble pipes by clearly communicating to secondary sites and to service users that there was a strict 'one bubble per person per visit' policy. Despite this policy, people would be given a second pipe if they came back later in the day needing a new one. This dual approach demonstrates the role that harm reduction staff have in keeping PWSD connected to services in a resource-limited system.

> *"Yeah, we don't want to encourage people who have a hard enough time dealing with the healthcare system to lie to the healthcare system to get their needs met. It sends the wrong message, right. Yeah, so we try not to advertise that." (Staff 09, Metropolitan)*

Staff also demonstrated discretion at site closing time as they were aware that people would need pipes and supplies overnight. In some instances, staff chose to distribute additional supplies because they had an established

[6] Safer Inhalation (Smoking) Supplies distribution guidance was updated as of July 3, 2025: https://towardtheheart.com/assets/uploads/1752170289kfdGr5rzDZZy2irK9tYmb1zSTf33otfSmbc7QCk.pdf

relationship with the person asking and knew that those additional supplies would be distributed in the community after-hours. "*People are trying to stockpile supplies at the end of the night when they have no more services" (Staff 01, Metropolitan).* Staff were adamant about not distributing extra supplies to someone they thought was going to sell the supplies to make money.

Supplies were also discussed as a tool that some staff used when de-escalating situations, further demonstrating use of staff discretion when distributing supplies. The following scenario described by a staff member narrates how giving a pipe out can be used to intervene in a fight and speaks to the value of having relationships with the people who regularly access the site and knowing their supply preferences.

> *"I can use-- if there's an incident and I break up a fight between two guys. I could take the one guy that I know uses bubble pipes and he likes the plastic tips on them and I could go grab a bubble pipe, put a plastic tip on it for him, and hand it to him. Give him a smoke and be, like, hey, man, why don't you just go take a walk. Calm down, have a hoot. Come back. All the gear is de-escalation tools." (Staff 01, Metropolitan)*

Taken together, our findings suggest that staff discretion plays a central role in supply distribution at the site level. Discussions of using discretion illuminated the nuanced and quick-thinking that is required of staff when distributing supplies. The importance of staff discretion in distributing supplies supports the value of making the goals of supply distribution guidance clear and supporting informed decision-making across nuanced circumstances.

Theme 6: Provincial supply program operations

In this section we present findings related to operations of the provincial supply program including site registration, supply ordering process and frequency, and site management of supplies through redistribution and physical storage. This section highlights data from focus group with BCCDC operations staff and points to opportunities for operational process improvement.

6.1. Registration and distribution among primary and satellite sites

The BCCDC HRSUS operations team receives orders from registered harm reduction sites (primary sites) that may also supply one or more smaller sites (satellite sites) in the same community. This system is meant to centralize the ordering process across fewer sites. The main considerations for becoming a registered primary site are ordering volume, geographic location in relation to other distribution sites, storage capacity, and recommendation from the regional health authority harm reduction coordinators. Staff at primary sites described a nimble approach for communicating with satellite sites to identify shifting supply needs.

Reflections from staff at primary sites also highlighted the pressure to adequately support multiple satellite sites and identified a possible lack of awareness from the BCCDC team about the number of sites they were supporting. The following staff member expressed disconnect with the BCCDC team and expressed desire for a spot on the ordering form where they could indicate the number of satellite sites they were supporting.

> *"They [BCCDC] don't know what I do here really, I don't think. I don't think they quite understand the gravity of the amount of people that-- the amount of supplies that fly out of this place. I don't think they get it. Yeah.*

And that's no fault of their own. You guys have a lot of sites. Or BCCDC has a lot of sites to cover. But so do I." (Staff 06, Metropolitan)

The BCCDC operations team is in regular communication with primary sites and regional harm reduction coordinators; however, the number of harm reduction satellite sites attached to each primary site is not regularly updated in BCCDC tracking. The primary and satellite site system was developed to support new and/or smaller sites with lower supply ordering volumes and to remain adaptive to sites opening/closing in the same community over time. The primary site acts as a central ordering and distribution point. The BCCDC team reinforced the importance of the relationship between Health Authority regional harm reduction coordinators and harm reduction sites.

"We don't register harm reduction satellites. So they could distribute within their community. Like, I think that's where the harm reduction coordinator relationship is important and we kind of stress that, you know, sites-- we want them to have relationship and be in contact with coordinators if they have questions." (BCCDC staff)

As the demand for inhalation supplies has increased and resources are stretched, the BCCDC staff noticed an influx of satellite sites applying to become primary sites and order for themselves. This was observed as a response to primary sites not receiving their requested supplies which in turn meant that satellite sites did not feel adequately supplied. Becoming a primary site had the perceived benefits of having more control over ordering for and storing supplies at the specific site location. However, BCCDC staff emphasized that more sites submitting order forms ultimately created an ordering surge that could not be fulfilled.

6.2. Glassware orders

In general, the BCCDC operations team recommends that sites order three months' worth of harm reduction supplies at once and store supplies onsite. However, the higher cost and increasing demand for glass pipes has necessitated a distinct ordering process for glassware so that the program can keep within budget and attempt to more equitably distribute the limited supplies available. Sites are asked to order glassware on an 'as needed' basis and can submit an order form as often as weekly. The BCCDC team processes order requests and adjusts down according to volume allocations, budget targets, and supply constraints, meaning that sites often receive less glassware than they ordered. This allows for more fine-tuned tracking and strategic allocation of glassware resources but also amplified the administrative requirements from both distribution sites and BCCDC operations team. In response to increasing restrictions on ordering glassware, many sites have tried to order more and/or have switched to ordering more frequently and found that helpful for having their order requests met.

Order adjustments have always been part of ensuring equitable resources, however BCCDC staff reflected distress about having to restrict supplies to sites that they know needed them.

"When I do [adjustments] it's very much just like on a spreadsheet, so it's very-- just working with numbers on a spreadsheet, you know. But, like, I do feel that level of that, I take what the site's request is what they really need. So it's hard to take away from their need, and I feel like it's just getting harder and harder. Like, when I started it was more straightforward to do adjustments 'cause I could easily, like, identify sites that, like, you know, they hadn't ordered in four months. And now they want 10 cases, like, it's more straightforward to adjust that lower 'cause I'm, like, you probably don't need 10 right away. Whereas now

I have to adjust the sites that order, like, 16 every week and, like, I know they need the 16 every week. But then can only give them 10, you know, so it's-- yeah, it's getting more challenging." (BCCDC staff)

The above quote also reflects the increasing complexity of adjusting site orders as demand for glassware continues to outpace the volumes available. BCCDC staff have several considerations when adjusting orders, including site ordering frequency, consistency, and volume, as well as where a site is located in relation to other supply distribution sites and whether a site is supporting satellite sites. This BCCCDC staff details thinking through how adjusting a site located in a rural or remote area may detrimentally impact supply access more than adjusting a site located in an urban area where multiple supply sites are available within close proximity and may redistribute supplies among themselves.

"If there are a lot of sites that are co-located, you know, are all of those sites ordering with the assumption that they're sharing out those around them. […] Like, so, you know, there are a lot of concentrations of busy sites in very similar areas. Whereas, you know, in rural and remote those sites might be a lot more spread out. So Downtown Eastside, if there isn't glassware-- there isn't as much glassware at one site, likely it's going to be available at a site nearby. There'll be glassware in that community. Whereas sites that are not geographically, sorry, more separated, there's not that much option, right. Like, if it runs out, it runs out. And there aren't other options for the individuals at those sites to access. So I think that's just sort of one thing we have to consider too is it's not all going to the same kind of urban areas." (BCCDC staff)

Site staff expressed some confusion and frustration that they were unable to get the initial volume of supplies they requested. The following staff member comments on feeling limited at the site level and simultaneously unclear on the decision-making process from the BCCDC that is being used to adjust their order.

"We've been kind of throttled honestly. And I don't really know the way that the CDC makes those choices on whether or not there's hard and fast limits or whatever for-- that are the same for all sites. Or how much it's based on a given week's orders if they only have a certain amount of pipes per, like, for that week and everybody else has already ordered them so they have to throttle everybody. I mean, I understand that they're very fucking expensive to produce and to give out for free. But we definitely had to-- that's the only thing that we have limits on our site is just glassware…" (Staff 13, Metropolitan)

Adjustments to glassware orders are also done by primary sites so pipes ordered by sites trickled down to be restrictions on satellite sites. This staff member reflects on how they manage relationships with satellite sites in the context of minimal quantities of supplies by tracking needs versus storage and clearly communicating the amount of supplies available.

"What I've initially done was found out roughly what they [satellite sites] think they're going to need between each order day. And I-- counting in when I get on my orders and what I have in the storage. And I've-- came up with a way that would help out for the most part. I've limited the main outreach team by a lot more than what they like, but they understand why I've done it which is a good thing. 'Cause the outreach team can go through two boxes a day easily out on the street." (Staff 04, Metropolitan)

Given restrictions on glassware ordering, the BCCDC team recommends that sites order more frequently as needed – most high-volume sites ordered every week or every two weeks. This helps to carefully manage ongoing glassware allocations and order requests, keeping them in alignment with financial capacity and associated targets. There was also awareness from the BCCDC team that some sites may increase their order volume to

mitigate the impact of their order being adjusted down, or to stockpile supplies in case of future shortages. BCCDC staff continued to encourage sites to order fewer supplies more frequently. However, this resulted in the sites with higher demand having few contingency supplies and therefore requiring more communication with BCCDC above any order adjustments.

Some sites noticed that for glassware smaller orders less frequently might have even facilitated an overall increase in the amount of they received.

> *"I think the ordering system is totally fine. Really easy to put in the order. I know when our deadline is. […] The only thing that I think sucks about it is putting in those orders and then not knowing until we get it-- our order confirmed that the amount of glassware that we've asked for is going to get reduced. So if I put in, say, five and I won't know until it's already confirmed that it's coming that it's going to be two or three or whatever. But we have been ordering a little bit more frequently. I think we're doing bigger order batches and we're getting our pipes limited more frequently than-- and so we switched kind of to a biweekly thing and it kind of seems like we just get away with maybe ordering more now." (Staff 13, Metropolitan)*

Taken together, our findings suggest an opportunity for enhanced transparency and communication between BCCDC and sites, as well as reducing administration burden related to glassware ordering and site adjustments.

6.3. Redistribution among sites

Harm reduction sites in the same community often worked together to adapt to supply limitations. Staff spoke about experiencing bubble pipe shortages in the past and how they strategized with other sites in their community to reallocate and distribute supplies as equitably as possible. This redistribution of supplies among sites was a common strategy when a site ran out of glassware and showcases the importance of relationships between sites to strategize locally.

> *"Well, what we did was we took every available bubble pipe from every other place we could and brought them to the major areas. So, like, all the-- any stock any of our housing sites had we left them bare minimums, and then we took everything downtown to where-- the majority of the populations and we rationed. It was one bubble pipe per day per person and, you know, we were trying to be as strict as possible but sometimes somebody drops their pipe and it breaks. And you just to give them a new one, right, 'cause they're going to go and use a dirty one. Yeah, that completely is against what we do." (Staff 01, Metropolitan)*

Other staff commented on the day-to-day communication and redistribution that was sometimes required between local sites if one site ran out of supplies.

> *"Yeah, and we're lucky in that we're super close to major distribution places like [identifier removed] or whatever, where if we totally fucked up and had absolutely nothing of something that's important we can just walk down the street and they've usually got a backlog that they can give to us. Which is often that the community is able to work together that way." (Staff 13, Metropolitan)*

Interestingly, though staff perceived as a supply shortage by some participants, BCCDC staff noted that back orders on glassware had been rare[7]. Rather, glassware was increasingly limited by more sites requesting more glassware supplies. This does not neglect that what people experience in community as an adjustment is an inability to meet demand, creating moral distress for many staff.

6.4. Forms

The process for primary sites ordering harm reduction supplies, including glassware, is through a PDF form that the designated site contact submits to the BCCDC each week. The BCCDC team reviews all supply requisition forms, adjusts glassware requests, and confirms with each site what amount they will receive. A frequent comment from site staff about the ordering process was the various measurements used to quantify supplies on the order form.

> *"Challenging parts are the amount. Like, how it goes by cases and then units or whatever. And it varies per item. I hate that. It's, like, doing algebra every single time I have to put in an order. And I have made mistakes in the order and ended up getting 20 cases of condoms." (Staff 12, Rural Hub)*

Revisions to the order form have been made over time to clarify the amount of each supply in a single unit and updates were made as needed when manufacturer/distributor changed the packaging quantities. A couple staff also brought up that submitting PDF forms felt outdated and suggested having a web portal where people could submit orders with more ease and less administrative burden.

> *"I find it a bit antiquated, you know, having this form that's constantly having to be updated. So we, for example, because we distribute to so many sites, to make it easier for our sites we developed a website, a harm reduction website, called harm reduction supplies dot org. You can check it out. So once you're a registered satellite site, what I did is I-- we designed the site so that we had each, like, obviously into inhalation, sex, naloxone and inhalation-- or injection to order supplies from." (Staff 06, Metropolitan)*

This BCCDC staff similarly expresses the desire to simplify the ordering process through an online form that was more user friendly for sites and the operations team.

> *"My dream […] is that there'd be an online form for people to order that automatically populated something. […] Filling something out, scanning and then sending it in via fax or an email is just, like, so different than how we interact with most ordering-- online ordering. Like, for our shopping or whatnot. So even that part is hard and that would take away admin burden, for sure, if it was auto populating […] Cause the order form's so tiny 'cause we offer so many products. And having to go through-- and a lot of the time it's handwritten and you're, like, is that a q or a 5 or whatnot, right. You can imagine. Versus if someone was able to access something on their phone or on their computer at work or whatnot." (BCCDC staff)*

[7] After reviewing shipping records, operations staff confirmed that in the last two years there had been a backorder on glassware twice and it was for the 10mm straight pipe.

Despite this vision for a simpler online ordering process, BCCDC staff had been limited to take steps towards an online ordering process due to resource and capacity constraints, particularly while responding to increasing demand for supplies needed to support PWUD and address a public health emergency.

6.5. Storage

Several site staff noted the logistical challenges of having limited physical space to store harm reduction supplies for a long period of time. They recognized the BCCDC recommendation to bulk order supplies (other than glassware) but felt unequipped to store a high volume of supplies, particularly if they were also ordering for multiple satellite sites. The challenge to limit orders and store supplies was perhaps felt more acutely by sites in rural or remote areas for whom deliveries took longer or had a further distance.

> *"So the issues that I have with H.R. [harm reduction] ordering is that my space for storage is limited. So I know they want us to order, like, every three months, like, try to keep like a large enough stock. But the thing is is that when I'm supplying so many sites a large enough stock would take up an entire storage unit. So I have to order more in order to keep all the sites stocked with enough supplies." (Staff 12, Rural Hub)*

> *"That's why we're ordering weekly or biweekly because, you know, originally when I was first hired, you know, it said something like try to just order once a month. And it was impossible with the storage space we had and all the secondary sites. It is more manageable now, so I think, yeah, I think we're better off for storage now than we have been." (Staff 09, Metropolitan)*

A couple of staff members also commented on the mandatory minimums as contributing to the challenges of storage space, however BCCDC staff clarified that those minimums were historical and no longer in place, indicating challenges with communication channels with sites. This staff comments on finding balance between their orders meeting the requirements and having enough space to store the order.

Overall, findings regarding operations of the provincial safer inhalation supply program indicate that the centralized system supports balancing demand with capacity, enhances equitable allocation of resources, and provides a consistent process for sites to access supplies.

Summary

Harm reduction supplies remain a key component of the public health response to substance use and the toxic drug crisis in BC. As smoking has becoming an increasingly prevalent mode of consumption, and is the mode of use in the majority of drug toxicity events recorded in BC (British Columbia Coroners Service, 2025), there is a high and growing demand for safer inhalation supplies. The BCCDC has facilitated the provincial supply program for over two decades; this evaluation reports on the outcomes of the provincial program specific to safer inhalation supply distribution and names opportunities for program improvements. The findings above describe the myriad of underlying reasons for why people chose to smoke their substances, as well as why they may choose a particular supply or set-up over another. Findings also emphasized that cross-contamination through supply use was the most pressing health concern among both PWSD and staff at harm reduction sites. Smoking also introduced some health concerns such as burns from hot pipes, cuts from broken pipes, respiratory challenges and concerns about neurotoxicity from using the foils. There were a variety of staff approaches to supply distribution and education,

that taken together point to the value of engagement and relationship building while also maintaining a low-barrier and client-centered model. Finally, evaluation of the operations side illuminated areas for bolstering communication and transparency with sites while also supporting administrative efficiency. In all, we found that safer inhalation supplies remain a valued and sought after resources in response to substance use health and the drug toxicity crisis and there are several areas for ongoing program improvement.

The following recommendations are made with the intent to improve program effectiveness and efficiency, support site staff to feel confident and informed when distributing supplies, and to ultimately reduce harm from the toxic drug supply and promote the well-being of PWSD.

Recommendations

Findings from the safer inhalation supplies evaluation suggest several areas for consideration for improving the provincial program across the areas of educational resources, harm reduction supply distribution models, program operations, resourcing and budgeting, broader supports for people who smoke drugs, and areas for future research. As we worked closely with the BCCDC education and operations teams as well as health authority partners throughout the course of this evaluation, several of the recommendations emerging from the evaluation have already been actioned or are in process of being actioned.

Areas for education

Additional educational resources and approaches may further reduce risks of smoking unregulated substances among those who continue to smoke substances.

Reducing Risks of Cross-Contamination

1) *Educators supporting people who smoke drugs, including the BCCDC HRSUS education team, include 'Ask and Tell' messaging in safer smoking educational materials.*

   Staff and PWSD emphasized the risk of drug poisoning following opioid contamination of glassware. It is not always feasible for PWSD to procure new glassware before they use by inhalation, and sharing of glassware is a common practice amongst PWSD for social reasons and to avoid withdrawal. Educational materials highlighting the risk of cross contamination with regard to drug poisoning events and encouraging PWSD to 'Ask' what has previously been used in the pipe and to 'Tell' others borrowing their pipe what has been used in the pipe may reduce drug poisoning from cross contamination and raise awareness around risks of cross contamination.

2) *BCCDC operations and education teams collaborate, together with PEEP, regional health authorities and FNHA, to build out existing community-based approaches to marking pipes used for opioids to reduce risk of opioid overdose due to cross contamination.*

   To further reduce risks of cross contamination of glassware, many interview respondents suggested a system for 'marking pipes' so that PWSD would be aware that either a) the pipe had previously been used for opioids

and may contain opioid residue, or b) people, including the pipe owner, are aware of who the pipe belongs to. Several harm reduction supply distribution sites and PWSD have implemented systems or provided materials for marking pipes and colour coding has become common practice in several jurisdictions particularly for straws and cookers. Raising awareness of 'marking pipes' as a harm reduction approach and providing supplies and/or strategies for marking pipes may reduce incidences of drug poisoning due to cross contamination. This recommendation should be implemented alongside, and not instead of, raising awareness of the importance of 'Ask and Tell' messaging, particularly as sharing is a common and meaningful practice across several PWSD and one universal system of marking pipes should not be exclusively relied upon.

Supporting Harm Reduction Staff to Engage with PWSD

3) *BCCDC HRSUS education team, in collaboration with regional health authorities, non-profit partners and PEEP, promote engaging conversations between staff and PWSD regarding safer smoking practices.*

Staff noted a variety of approaches to working with PWSD, with some taking a more passive approach, distributing supplies without engaging PWSD in conversations, and others being more forward in engaging. Some staff noted that limited engagement came in part from a lack of confidence in harm reduction approaches for inhalation. Staff who reported engaging with curiosity noted having meaningful bi-directional conversations with PWSD about harm reduction approaches, safer substance use practices and building relationships which could then further be utilized to support ongoing engagement with PWSD. Additional and strongly promoted educational materials to support staff confidence and encourage curiosity as an approach to working with PWSD may strengthen the capacity of harm reduction supply distribution programs to provide education and connection. Employment of PWLLE who smoke unregulated substances at harm reduction supply distribution sites is a further approach that many sites are using to enhance sharing of harm reduction information to both staff and people accessing the site.

Enhancing Knowledge around Safer Inhalation Supplies

4) *BCCDC HRSUS education team collaborate with PEEP to create and revise educational materials and staff training with emphasis on:*
    - *Harm reduction focused approaches to packing a pipe, including using filter materials that support risk reduction and injury prevention while meeting the needs of PWSD.*
    - *Mouthpieces as a mechanism to reduce risk of transmissible disease and infection when used appropriately while sharing glassware.*
    - *Safer smoking using foils and hooters, including information on the benefits and risks of different types of foils.*
    - *Safer use of torch lighters, including emphasizing the importance of switching the lighter off or having a spotter if using a torch with a lockable switch.*

With the increasing preference for inhalation of unregulated substances over injection as a mode of consumption, PWSD noted several areas of uncertainty. Additional education in the above areas may increase intended use of some harm reduction supplies and enhance the health and safety of PWSD.

5) *BCCDC HRSUS education team to collaborate with PEEP to develop resources describing how to care for glassware, including heating, cleaning, storing, and transporting supplies.*

Bubble pipes and - to a lesser extent - straight pipes break frequently, particularly when exposed to higher temperatures required for smoking opioids and can build up resin deposits reducing their life span. Enhancing knowledge of pipe care may reduce frequency of pipe replacement and contribute to reducing program cost pressures.

6) *BCCDC HRSUS education team work with PEEP and regional health authorities to include messaging on the safe disposal of glassware and other smoking supplies.*

While awareness of appropriate disposal of injection supplies has been widely established, there remains a lack of clarity around appropriate disposal of safer inhalation supplies, particularly glassware. Appropriate disposal of supplies may reduce cross contamination from use of found (used) pipes, and reduce stigma related to substance use in community.

7) *BCCDC HRSUS education team continue to develop resources on new contaminants in the unregulated drug supply, their impacts, and responsiveness to naloxone or other approaches.*

While safer inhalation supplies can reduce harm from inhalation of unregulated substances, the potency and constitution of unregulated substances remain unknown and PWSD continue to be at increased risk for drug poisoning. With new substances continuously emerging in the supply and increasing unpredictability of toxicity/potency, educational resources on contaminants remain an important harm reduction tool for PWSD.

Supply distribution

While access to safer inhalation supplies has increased since the implementation of the provincial distribution program, several approaches to supply distribution demonstrably enhanced access, particularly outside of site operating hours and in geographical areas where distribution sites were more sparse. Additionally, due to ongoing stigma and discrimination towards PWSD, low-barrier access points were noted as important in improving access.

Facilitating Access

1) *BCCDC HRSUS Operations continue to work with regional health authorities and sites to support use of staff discretion in distribution of safer inhalation supplies, particularly in regard to supporting trained peer leaders distributing supplies in under-served settings, including through identification of appropriate settings for this model of low-barrier distribution (e.g. on reserve, housing settings, outside of site operating hours).*

Having multiple and low-barrier access points for safer inhalation supplies within community was noted as an approach to providing access when some sites may be closed, and in places that are relatively convenient for PWSD to access. Sometimes this was provided by a friend or peer who was well-connected with a supply distribution site and picked up extra supplies to distribute, at discretion of staff. Intentionally identifying effective settings for peer distribution and supporting peer distributors to have the knowledge and capacity necessary to promote harm reduction practices may enhance access to supplies, knowledge, and connection to the health care system for PWSD who might otherwise not connect with harm reduction or other health services.

2) *The Ministry of Health simplify processes for approval of supply distribution models that do not require interaction with a staff member.*

Harm reduction supply distribution sites are not always accessible due to location, limited hours of operation, people not wanting to be seen accessing them due to stigma of substance use and other barriers. Indirect models of supply distribution can address these barriers and enhance access, where gaps in in-person distribution supports exist.

3) *The Ministry of Health allow harm reduction supply distribution kiosks at existing harm reduction supply distribution sites and in other sites based on community needs.*

Current provincial policies do not allow for distribution of harm reduction supplies through electronic kiosks; however, these machines were reported to enhance access for PWSD who may experience barriers to direct interaction with staff at sites. Our findings suggest that having a low-barrier mode of distribution, such as a kiosk, promotes access for PWSD who may not otherwise access a site and/or are experiencing racism, sexism, ageism, and/or other forms of oppression.

Supporting Engagement Through Distribution Models

4) *BCCDC HRSUS Operations, regional health authorities, and harm reduction supply distribution sites collaborate to promote supply distribution models with higher levels of interaction (i.e. individual supplies), where appropriate.*

There are different approaches to supply distribution; for example, through pre-assembled kits, or individual supplies. While pre-packaged kits may support expediency and anonymity for PWSD who are picking up supplies and reduce immediate pressure on staff, provision of individual supplies was notably an approach to enhancing relationship building and harm reduction education. These benefits and challenges should be considered and balanced when informing how supplies are distributed at sites.

Enhance Communication of Program Guidance and Expectations to Sites

Whie the supply distribution system through both primary (registered) and satellite (non-registered) sites allows for flexibility and increased supply access in communities, our findings indicate a need for enhanced clarity and communication of program guidance and expectations to sites and a stronger system of knowledge sharing for satellite sites in particular which may experience most of their connection to the program through primary distribution sites rather than through the BCCDC and health authorities.

5) *BCCDC HRSUS Operations team develop and share general criteria for which types of sites should typically become primary vs satellite harm reduction supply distribution sites (including clarifying that glassware volume will be redistributed from primary to former satellite sites if a satellite site becomes a primary site), while maintaining flexibility for distinct site needs.*

Working within the context of glassware need exceeding investment, some satellite sites have sought to register as primary sites so that they can directly order glassware and other supplies. Having criteria in place and sharing

those with health authorities and primary sites would support a transparent distribution network and provide opportunity to enhance program alignment with a balance of community need, access, and program capacity.

6) *BCCDC HRSUS Operations team develop clear guidance and expectations for supporting the operations of satellite sites.*

Where regional health authorities and primary sites are supporting satellites, they are providing an intermediary linkage between the provincial program and the satellite site. Establishing clear guidance for this role provides an opportunity to enhance consistency of the program across sites in alignment with the provincial approach. This may include provision of educational resources, participation in recalls, and submission of data as appropriate.

7) *BCCDC HRSUS Operations team monitor and support primary sites and regional health authorities, to implement guidance for supporting the operations of satellite sites.*

Supporting primary sites and health authorities to align their communications to satellite sites through templates and resources, and monitoring use of these materials and supports will further align the program with provincial approach.

8) *BCCDC HRSUS Operations team, and health authorities, increase engagement with satellite sites by inviting them to participate in harm reduction communities of practice and other educational and collaborative opportunities as appropriate.*

Providing access to educational and collaborative opportunities (e.g. communities of practice) to satellite sites, is an additional supportive component to further support the knowledge, education, and capacity of satellite sites to provide effective harm reduction services.

Program operations

Some of the supplies offered through the safer inhalation supplies program were not as well received by PWSD, while some PWSD noted additional supplies that they would like to see offered through the program and some of these may offer a health benefit. In addition, site staff noted several ways in which the ordering process could be simplified. Adapting some operational processes may enhance acceptability of the supplies and ease of ordering for sites.

Procurement

1) *BCCDC HRSUS Operations and Clinical teams to explore alternatives to brass screens that effectively filter substances during inhalation while being acceptable to PWSD, aligned with health best practices, and affordable to the supply distribution program.*

Across interviews with staff and PWSD, respondents noted that while the brass screens are provided through the provincial program as a safer alternative to Brillo, they are not being commonly utilized due to challenges with packing them into the pipes, and their inferior collection of resin. Exploring potential alternatives to the brass screens and Brillo that better meet the needs of PWSD and reduce the health risks associated with using Brillo as a filter would increase the efficacy of the provincial supply program. Brillo will not be considered as an alternative to promote through the provincial program due to the health concerns associated with its use.

2) *BCCDC HRSUS Operations work with the Clinical team and PEEP to identify materials that are acceptable to PWSD for collecting resin when used in glassware, to reduce disassembly of naloxone kits for the springs from Vanish Point syringes.*

Some participants noted a practice of disassembling naloxone kits to utilize springs from the Vanish Point syringes to collect resin in pipes. This results in wastage of naloxone kits and an increased risk of no syringe being available in an overdose event. While some harm reduction supply distribution sites have sought out alternatives to the springs, to date no acceptable alternative has been identified. BCCDC does offer the VanishPoint syringes individually through the supply distribution program for training and kit replacement purposes, however these are not commonly requested by sites for distribution in numbers indicative of them being used for resin collection. Identifying and sourcing an alternative to the springs from Vanish Point syringes and/or increasing knowledge and supply of individual Vanish Point syringes through the supply distribution program may reduce wastage of supplies in naloxone kits and leave these kits intact for use during drug poisoning response.

3) *BCCDC HRSUS program factor in preferences and needs of PWSD into technical specifications for supplies within the procurement processes.*

Accounting for the acceptability of different supply options to PWSD when determining which supplies to offer through the program and balancing this with the public health benefits of various supplies, may help ensure the supplies offered through the program are utilized as intended.

Ordering

4) *BCCDC HRSUS Operations review existing ordering procedures for sites and consider opportunities to simplify and clarity of quantities ordered.*

Some site staff reported confusion with quantities being ordered using the order form, with some supplies being ordered by the case or lot and others being ordered individually. Clarifying the form may help ensure that sites are receiving the expected quantities.

5) *BCCDC HRSUS program identify potential funding opportunities to support the development and maintenance of an online ordering system for harm reduction supply distribution sites.*

Site staff and BCCDC operations noted that an online ordering system would reduce workload for sites and BCCDC Operations staff responding to orders. This could allow for tracking of previous orders and enhance user experience. Despite this, the operations team plays an important role in managing and reviewing order requests, factoring in regional allocations and making adjustments to manage supply volumes that are within budget and support more equitable distribution.

6) *BCCDC HRSUS Operations work with regional health authorities to enhance clarity and transparency around order limits on glassware and communicate this information with sites.*

Our findings indicate a lack of clarity and transparency around limitations and adjustments to glassware ordered by sites, resulting in some sites ordering more glassware and/or ordering more frequently than required in anticipation that their orders would be adjusted down and questions around limits and program capacity. Sites also desired to become primary sites to access more glassware. However, the financial resources of the program

are limited and additional glassware for one site results in lower volumes for another site. As a result, BCCDC HRSUS Operations is continuously monitoring and adjusting weekly order requests. Determining the annual amount of glassware available to each site, communicating that with each site, and supporting sites to remain within their glassware limits over the course of the year may reduce order frequency and enhance transparency. Flexibility should be built into this approach, so that emerging and/or changing needs can be addressed.

Funding and budget

The safer inhalation supplies program has been operating at financial capacity since its inception, and demand continues to increase. While the program has been able to respond to some growth, this discrepancy has resulted in difficult programmatic decisions such as limiting glassware distribution, implementing weekly order adjustments, and a limited ability to expand options for supplies offered under the current program.

1) *Ministry of Health provide additional funding to the provincial supply distribution program given the ongoing and increasing demand for inhalation supplies.*

Increased funding from the Ministry of Health, combined with fiscally responsible decisions on behalf of the provincial program, would reduce the need for inhalation supply limitations and thus the use of contaminated (previously used) glassware.

2) *BCCDC HRSUS program explore options to reallocate existing funding in order to provide supplies that are in high demand.*

There have been calls for the provincial program to offer hammer pipes alongside bubble pipes and straight stems. Feedback about the benefits of hammer pipes, as heard through the previous pilot project and evaluation, is mixed. Hammer pipes may be preferred over bubbles for smoking opioids and provide opportunities to reduce risk of cross contamination in bubbles, and hammer pipes may be less susceptible to breakage. However, some PWSD reported that more smoke would be inhaled through a hammer for a more intense experience, thus potentially increasing drug poisoning risk compared to the bubble. Before offering hammer pipes through the program in an ongoing way, additional research is recommended (see 'additional research' recommendations below). However, with hammer pipes being only marginally more expensive than bubble pipes, there may be opportunity to include hammer pipes in the existing program, anticipating some reduction in bubble pipe distribution. Notably, offering additional supplies within existing budget would require reductions in other supply distribution, particularly considering that demand exceeds available budget.

Broad supports for people who smoke drugs

While this evaluation focused on the provincial safer inhalation supplies program, other themes arose in the interviews about the importance of providing broader supports for PWSD.

1) *Ministry of Health fund expansion of overdose prevention services that provide observed inhalation.*

While safer inhalation supplies support a harm reduction-based approach to inhalation, PWSD and staff noted the importance of more places to smoke unregulated substances in witnessed settings where drug poisoning reversal

is available. Adding more inhalation OPS and/or expanding existing injection only OPS to include inhalation would require additional funding.

2) *Regional health authorities work with health systems partners including people who use drugs, to provide additional inhalation overdose prevention services and/or to expand the hours of existing services where appropriate.*

Expanding hours and services to support enhanced access to inhalation OPS would further support safer spaces for PWSD.

3) *Ministry of Health acknowledge that many participants called for access to regulated substances to reduce drug poisonings, including those resulting from cross contamination of glassware.*

Distribution of safer inhalation supplies is just one component of a comprehensive public health response to a toxic drug supply and the public health emergency. Throughout this evaluation, participants emphasized that safer substance use supplies are a necessary but also limited intervention. Participants strongly articulated that access to regulated substances is critical to meaningfully addressing the ongoing public health emergency in BC.

Additional research

Several areas for additional research about reducing the harms of smoking unregulated substances remain.

1) *The research and academic communities take on additional inquiry to understand the impacts of a variety of approaches to supporting and working alongside people who smoke drugs, including:*
   - *Equity-based inquiry regarding access to and uptake of safer inhalation supply distribution in rural, remote, and First Nations communities.*
   - *Gender and sex-based analysis of access to and uptake of safer inhalation supply distribution.*
   - *Impacts of provision of hammer pipes on cross contamination, drug toxicity events and deaths, and frequency of pipe replacement.*
   - *Respiratory impacts of smoking unregulated substances, including approaches to reducing harms from smoking.*
   - *Quantification of opioid potency in residue remaining in glassware after substance has been smoked and analysis of reduction in fentanyl residue following various methods of cleaning, to understand effective methods of cleaning for reducing cross contamination.*
   - *Lab analysis of glass breakability after exposure to heat and cooling, to make recommendations for reducing glassware breakability.*
   - *Harm reduction approaches to smoking unregulated substances using bongs as a mode of consumption.*
   - *Strategies for reducing inhalation of unregulated substances in order to reduce harms related to smoking unregulated substances.*

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Appendices

Appendix I: Glossary of Terms

2SLGBTQQIA+	An acronym that means Two Spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, and + which acknowledges the diversity of sexual and gender identities.
Community- and relationship-building	An approach that involves supporting and nurturing connections and relationships within communities to create a sense of belonging and participation to support and improve health and wellness.
Anti-oppression	Approaches that identify and challenge systems of oppression such as racism, sexism, transphobia, homophobia, ableism, classism, and settler-colonialism. This approach recognizes how these systems cause discrimination and unfair differences in health and social status for certain groups of people.
Anti-racist	A way of being that actively confronts and opposes racism, and that identifies and eliminates racism by changing attitudes, systems, and practices.
Anti-stigma	Approaches that aim to reduce or eliminate negative beliefs, attitudes, and discriminatory behaviours towards people based on a characteristic or identity.
Bubble	A type of pipe used to smoke drugs.
Chasing the dragon	An opioids is placed on aluminum foil and heated from below (often with a flame such as a lighter). The vapour produced is inhaled through a straw or tube-like object.
Cisgender i.e., cis man, cis woman	Person whose gender identity aligns with their sex assigned at birth
Cross-contamination	Substances unintentionally introduced to other substances causing unexpected, and at time, harmful effects.
Cultural humility	A process of self-reflection to understand personal and systemic biases and to develop and maintain respectful processes and relationships based on mutual trust. Cultural humility involves humbly acknowledging oneself as a learner when it comes to understanding another's experience.
Cultural safety	An outcome that aims to address power imbalances, so an environment is free of racism and discrimination, and all people are respectfully engaged and encouraged to draw strength from their identity and culture.
Down	Opioid
Equity	Fairness or justice in the way people are treated. This means consideration and attention to unfair and avoidable differences between groups of people to ensure that all people have fair access to resources and opportunities.
Harm Reduction	An approach to meeting community and individual needs that can be

	embedded within any type of program, service, or organization and includes the voices of people with lived and living experience of substance use; An approach to practice, policy, and programming that aims to minimize harms associated with substance use; An approach that focuses on the safety of people who use substances, regardless of substance use patterns; And a set of principles that inform policies, programs, and practices which aim to reduce harms associated with substance use, and substance use policies and laws.
Hoot	Small amount of drug taken by smoking.
Hot railing	A way of using substances (most commonly methamphetamine) that involves heating up one end of a glass tube and hovering it over a line of meth to vaporize the substance while inhaling through the other end of the pipe.
Indigenous- specific racism	refers to a type of stereotyping, bias, and discrimination against First Nations, Métis, and Inuit Peoples.
Observed consumption site/service	Term used to encompass overdose prevention services (OPS) and supervised consumption sites (SCS). These services allow clients to use pre-obtained drugs under the observation of trained personnel in order to have access to a timely response in the event of an overdose or other adverse event. A provincial Ministerial Order (M488/2016) directs the regional health boards and BCEHS to establish OPS wherever there is a need during the toxic drug public health emergency. Meanwhile, SCSs operate under a Health Canada exemption
OD	Overdose
Nodding off/on the nod	an effect that can be associated with consuming particular substances, such as opioids, that involves falling asleep, briefly or unintentionally
Public health approach to substance use	An approach rooted in core public health principles to reduce harms and maximize benefits of substance use to maintain and improve the health of populations.
Sick/dope sick	Being in withdrawal from opioids, opioid agonist treatment, or benzodiazepines and experiencing symptoms as a result
Side/meth	Methamphetamine
Street supply	Terms used to refer to drugs acquired through the illegal, unregulated market
Trauma- and violence-informed care	refers to services and care delivered in a way that acknowledges the effects of interpersonal and systems-level trauma and violence on a person's behaviour and health. Trauma informed care aims to promote safety and trust through connection and collaboration and using strengths-based approach.

Appendix II. BCCDC Harm Reduction Supply Program Resources

The following BCCDC Harm Reduction Supply Program Resources are all available at https://towardtheheart.com/

- Harm Reduction Supply Catalogue
- How to Order, Distribute, and Use Safer Inhalation Supplies
- Take Home Naloxone Program

Appendix III. Supplementary tables

Table 13. Characteristics of respondents who reported inhaling (smoking) their substances in the last 6 months (2023 HRCS).

Characteristic**	2023 respondents, N = 433	2023 respondents who smoked (last 6 months), N = 371*
Health Authority (survey site)		
Interior	69 (16%)	63 (17%)
Fraser	89 (21%)	71 (19%)
Vancouver Coastal	77 (18%)	65 (18%)
Island	89 (21%)	77 (21%)
Northern	109 (25%)	95 (26%)
Unknown / Did not answer	0	0
Community size (2021 Census Population Centre)		
Small population centre (1,000 to 29,999)	186 (43%)	169 (46%)
Medium population centre (30,000 to 99,999)	55 (13%)	44 (12%)
Large urban population centre (100,000 or more)	192 (44%)	158 (43%)
Unknown / Did not answer	0	0
Type of current residence		
Private or band owned residence	84 (21%)	68 (20%)
Another residence (e.g., hotel/motel, SRO, supportive housing)	108 (27%)	97 (28%)
Shelter	79 (20%)	69 (20%)
No regular place to stay (homeless, tent, couch-surf)	127 (32%)	112 (32%)
Unknown / Did not answer	35	25
Age group		
19 to 29	33 (8%)	30 (8%)
30 to 39	130 (31%)	110 (31%)
40 to 49	134 (32%)	120 (33%)
50 or older	122 (29%)	100 (28%)
Unknown / Did not answer	14	11
Gender^		
Man	267 (63%)	231 (63%)

Characteristic**	2023 respondents, N = 433	2023 respondents who smoked (last 6 months), N = 371*
Woman	142 (33%)	120 (33%)
Unknown / Did not answer	8	7
Sexual orientation		
Heterosexual or straight	337 (83%)	289 (83%)
Gay, Lesbian, Bisexual/Pansexual, Queer, Asexual, Unsure/questioning	69 (17%)	61 (17%)
Unknown / Did not answer	27	21
Employment		
Full time (at least 30 hours a week)	22 (5%)	15 (4%)
Part time (less than 30 hours a week)	62 (15%)	55 (16%)
No employment or volunteer work	325 (79%)	283 (80%)
Unknown / Did not answer	24	18
Injection vs inhalation drug use, last 6 months		
Inhalation only	183 (47%)	183 (52%)
Injection and inhalation	172 (44%)	172 (48%)
Injection only	14 (4%)	0 (0%)
Neither	22 (5%)	0 (0%)
Unknown / Did not answer	42	16

*Columns percentages are provided

**25 respondents did not respond to the smoking question in the 2023 HRCS.

***Nonbinary/gender expansive response not shown due to low count (fewer than 20 respondents).

Table 14. Characteristics of people who smoke drugs and participated in a qualitative interview.

Characteristic	PWSD interviewees N = 20
Age	
Mean (range)	46 (28-62)
Gender	
Cis man	12 (60%)
Cis woman	8 (40%)
Housing	
Band owned housing	1 (5%)
No regular place	5 (25%)
Own or rent	8 (40%)
Shelter	1 (5%)
Single Room Occupancy	1 (5%)
Supportive housing	4 (20%)
Supply(ies) commonly used	
Bubble pipe	11 (55%)
Straight pipe	7 (35%)
Foil	6 (30%)
Bong	1 (5%)
Hammer pipe	1 (5%)
Pipe (unspecified)	4 (20%)

Characteristic	PWSD interviewees N = 20
Frequency of using harm reduction supply distribution sites	
A few times a month	1 (5%)
Daily	6 (30%)
Less than once a month	1 (5%)
Once or a few times a week	12 (60%)
Type of unregulated substance and mode of use (last 3 days)	
Smoked (last 3 days)	
Down	14 (70%)
Crack	10 (50%)
Meth/side	10 (50%)
Injected (last 3 days)	
Down	4 (20%)
Crack	1 (5%)
Meth/side	4 (20%)
Snorted (last 3 days)	
Meth	1 (5%)
Cocaine	1 (5%)
Mode of consumption (last 3 days)	
Smoked only	12 (60%)
Smoked and injected	6 (30%)
Smoked and snorted	2 (10%)
Type of substance (last 3 days)	
Opioid/down only	2 (10%)
Stimulant only	6 (30%)
Opioid and stimulant	12 (60%)

Table 15. Characteristics of staff at harm reduction supply distribution sites who participated in a qualitative interview.

Characteristic	Staff Interviewees N = 24
Age	
Mean (range)	39 (22-58)
Gender	
Cis man	8 (33%)
Cis woman	16 (67%)
Role	
Management/supervisory	6 (25%)
Supply distribution (onsite, outreach or both)	22 (92%)
Supply ordering	10 42%)
Site type	
Fixed	8 (33%)
Fixed, outreach	15 (63%)
Fixed, outreach, primarily serve Indigenous community	1 4%)
Site urbanicity	
Medium urban	9 (38%)
Metropolitan/Urban	9 (38%)

Characteristic	Staff Interviewees N = 24
Rural or remote site	2 (8%)
Small urban	2 (8%)
Large urban	2 (8%)