

Accessing and Implementing Community Drug Checking in Smaller Urban Vancouver Island:
Contextual Factors to Consider

by

Abby Hutchison
B.F.A, Concordia University, 2011

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We acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory the university stands
and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land
continue to this day.

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Abstract

The criminalized drug supply in British Columbia and, on a larger scale, in North America is unregulated and leaves those who access the supply to navigate consumption of substances that may be of unknown composition. Drug checking has increasingly been used as a harm reduction measure that provides individuals with greater information about the substances they consume, share, manufacture, and distribute. There is a growing body of evidence related to the acceptability, implementation, service delivery models, and impacts of drug checking. However, much of this research is centered in large urban regions. This follows a trend of inequitable access to harm reduction services within smaller urban centers with a concentration of harm reduction resources and research in large urban regions.

This research focuses on the experience of those who will be accessing and implementing drug checking, with specific focus on the context of smaller urban geographic location informs these activities. Data collection tools were informed by the outer context domain of the Consolidated Framework for Implementation Research, to capture experiences related to service implementation and accessibility of drug checking within a smaller urban setting and 39 in-depth interviews were conducted.

We identified six core factors related to smaller urban context: community and political climate; lack of anonymity and experiences of stigma; social groups and personal relationships; resource availability; geographic profile; and criminalization. Consideration of these factors in drug checking program development and implementation can support equity-oriented services within smaller urban settings.

Table of Contents

Supervisory Committee	ii
Abstract.....	iii
Table of Contents.....	iv
Acknowledgements	vi
Introduction.....	1
Research Purpose	1
Definitions	3
<i>Smaller Urban Centers</i>	3
<i>Contextual Factors</i>	4
Chapter 1: Literature Review.....	7
Unregulated Supply	7
Overdose Distribution Across Geographic Regions	7
Smaller Urban Service Inequity and Implications	8
Drug Checking and the Unregulated Supply.....	9
Smaller Urban Harm Reduction	11
<i>Political Context</i>	12
<i>Structural Barriers</i>	13
<i>Social Context</i>	14
<i>Study Context: Four Small Urban Communities on Vancouver Island</i>	14
Conclusion.....	18
Chapter 2: Methods	20
Research Question.....	21
Positionality.....	22
Community Based Research	23
<i>Interpretive Framework: Community-Based Research in Theory and Practice</i>	23
Research Methods	27
<i>Study Participants</i>	27
<i>Unit of Analysis</i>	28
<i>Participant Recruitment</i>	28
<i>Data Collection</i>	32
<i>Analysis</i>	37
Chapter 3: Findings	40
“ <i>I don’t think it’s going to be an easy sell to change the community attitudes</i> ”: Heterogeneous Community and Political Climate	40
<i>Resistant or Unwelcoming</i>	40
<i>Lack of Understanding, Agreement, or Interest</i>	43
<i>Welcoming</i>	44
<i>Politics and Policy</i>	45
“ <i>It's such a small community, everyone knows each other</i> ”: Lack of Anonymity and Experiences of Stigma.....	48

<i>Within the Context of “Everyone Knows Everyone”</i>	48
<i>Social Media and Sigma</i>	50
<i>Lack of Anonymity and Implications</i>	51
“Here, the drug community is like one big tight knit family community”: Benefits and Limitations of Close Social Groups and Personal Relationships.....	54
<i>Tight-Knit Social Communities and Implications</i>	54
“Everything kind of slows down here”: Limitations of Resource Scarcity	56
<i>Being Deprioritized and Feeling Like an Afterthought</i>	56
<i>Resource Scarcity</i>	57
<i>Lack of Relevant Programming</i>	59
“A small community doesn’t necessarily mean less space. It could be widespread...in fields, and in the country”: The Geographic Profile of Small and Rural Serving Communities.....	60
<i>Areas of Concentrated Services</i>	61
<i>Connection to Rural and Remote Communities</i>	62
<i>Transportation</i>	64
“I think they’d probably feel afraid to have drugs on them because of the police”: Impacts of Criminalization.....	66
Chapter 4: Discussion	68
Limitations.....	76
References	79
Appendices	98
Appendix A: Consent Form	98
Appendix B: Demographic Instrument for Prospective Service Users.....	101
Appendix C: Demographic Instrument for Prospective Service Implementers	105
Appendix D: Recruitment Email and Handbill	108
Appendix E: Interview Guide for Prospective Service Implementers	110
Appendix F: Interview Guide for Prospective Service Users	112

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Introduction

Research Purpose

The aim of this research was to assess prospective service users' and service implementers' perspectives of the contextual factors that will be important for accessing and implementing drug checking services within their smaller urban communities. While there is an existing body of evidence that evaluates the development and implementation of various harm reduction interventions in smaller urban settings – including naloxone kit distribution, availability of harm reduction supplies, agonist therapy, and supervised consumption sites – there is a lack of research on the contextual factors that may facilitate or hinder the implementation and accessibility of drug checking in smaller urban areas (Buck-McFadyen et al., 2021; Mema et al., 2019; Parker et al., 2012; Young et al., 2019). This research addresses a gap for implementation research related to drug checking in smaller urban areas by inviting perspectives of those who anticipated accessing and implementing drug checking in four smaller urban communities on Vancouver Island (Campbell River, Courtenay, Port Alberni, and Duncan). The research builds on previous implementation research in the larger urban center of Victoria, BC on Vancouver Island that explored the preferences and experiences of people accessing drug checking services (Wallace et al., 2021).

These smaller communities were selected as they would be part of an effort to expand drug checking services from one large urban location, Substance Drug Checking in Victoria BC, to various smaller urban communities. This was supported through collaboration with various harm reduction sites within the participating smaller urban communities. As part of the early collaboration, Substance offered on-site pop up drug checking in each community. These events were meant to support skill and knowledge sharing for those who would be supporting drug

checking implementation within the communities and those who would be accessing it. It was during these pop-up events that data collection occurred. Drug checking was the focus of this research because it has been positioned as one of many harm reduction strategies to respond to the unregulated supply in Canada. In Canada, rates of unregulated opioid overdose fatalities began to rise around 2012 to 2014 as fentanyl adulteration became common within the unregulated opioid supply (Belzak & Halverson, 2018; Canadian Centre on Substance Abuse, 2015; Mullins, 2022). This led to a provincially declared public health emergency in British Columbia (BC) in April 2016 (Government of BC, 2016). In response to the continued elevated rates of overdose fatalities related to the unregulated supply in BC, the call for expanded options for harm reduction supports continues. In these discussions, drug checking is often named as one strategy within a diverse range of supports to be implemented (Office of the Provincial Health Officer, 2019; Select Standing Committee on Health, 2022). Drug checking is a harm reduction support that uses various analytic technologies to assess the contents and composition of substances from the unregulated drug supply (Kerr & Tupper, 2017). This technology, traditionally used in festival and event settings, has more recently been explored as a response to the ongoing public health emergency (Bardwell & Kerr, 2018; Kerr & Tupper, 2017; Laing et al., 2018; Wallace, van Roode, et al., 2021). This has included the expansions of fixed-site drug checking locations and integration into existing harm reduction programming, such as overdose prevention sites (Betsos et al., 2021; Karamouzian et al., 2018; Tupper et al., 2018). The technology-based analytic information combined with the experiential knowledge that service users hold intersect to produce context specific and responsive information on the variable unregulated supply.

In BC, rates of overdose related to population distribution are similar across urban, rural and remote areas, demonstrating that communities of all sizes are experiencing significant and ongoing effects of the unregulated criminalized supply (BC Coroners Service, 2022). However, harm reduction responses are often developed for and concentrated in larger urban centers, resulting in inequitable access to harm reduction resources that are context specific and relevant for smaller urban settings (Hu et al., 2022; Rural and Indigenous Overdose Action Exchange [RIOAE], 2019). This research seeks to identify contextual factors that service users and implementers consider to be important for accessing and implementing drug checking services within their smaller urban communities.

Definitions

Smaller Urban Centers

The way that characteristics of place have shaped experiences of drug use and the distribution of health outcomes for people who use drugs has been an ongoing discussion within harm reduction literature. Rhodes (2002; 2009) introduces a “risk environment” framework in which health outcomes related to substance use are informed by the various intersecting social and physical environments that individuals are positioned to engage with day-to-day. This shifts the focus of drug related harm from the outcome of individual behaviour to the larger context of the social and physical places and situations that one interacts with day-to-day (Rhodes 2002; 2009). With attention to the way that place and environment can inform health experiences, Duff (2010; 2011) describes “enabling places” and “enabling resources” that support health and wellbeing not because of the properties of the place or the resource, but because of how the spaces and resources respond to environment and context. Situating this research within pre-implementation activities can support the concept of “enabling resources” in that it explores

individual interactions with various contextual elements of place for the participating communities. The focus of this research is not to explore the utility of the material properties of drug checking for the participating communities, but to focus on how individuals envision accessing and implementing drug checking services within the various intersecting elements of the smaller urban center on Vancouver Island in which they are located.

This research is part of a larger and ongoing body of research related to the implementation and operations of Substance – a community drug checking service in Victoria, BC that has been operating since 2018. Prior research with this project has primarily included individuals living within the larger urban center of Victoria, BC. The communities participating in this research are exclusively smaller cities and towns that all act as the closest urban hub for surrounding smaller and rural communities where there are greater options and offerings for health and social services. In addition, people from surrounding communities travel to these urban hubs for employment, entertainment, and to access commercial spaces and goods. These four smaller urban communities were selected to be included in the research as part of implementation activities. Campbell River, Courtenay, Port Alberni, and Duncan were a part of collaborations with Substance that would support the implementation and ongoing operation of drug checking services at each site. What is captured then, is experiences of individuals from within these smaller urban communities who have an important function as service, transportation, employment, and economic hubs for surrounding smaller towns and rural communities. For continuity throughout the document, the phrase used is smaller urban communities.

Contextual Factors

This study sought to explore the contextual factors that are important for accessing and implementing drug checking services in a smaller urban setting. The definition of “contextual factors” was informed by various sources including conceptual frameworks for environments of substance use and service provision, previously aligned research related to implementation and access of harm reduction services, and commonalities across implementation theories and frameworks. Related to substance use, Galea et al. (2003) presents a conceptual framework that situates policy and regulatory directive as the primary influencer for contextual factors (both social and structural) that inform individual risk behaviours. Rhodes (2009) presents a framework for considering harm reduction within the context of the social and structural environments rather than individualized behaviours, identifying the physical, social, economic, and policy environments as core contextual factors that individuals navigate. Related to implementation science, Nilsen (2020) describes context as a significant and commonly discussed factor across implementation theories and frameworks. Within these spaces, considerations of context are “generally understood as the conditions or surroundings in which something exists or occurs, typically referring to an analytical unit that is higher than the phenomena directly under investigation” (p. 65). As this is applied to investigating elements of outcomes, context often includes factors related to social and physical environment surrounding implementation Nilsen (2020).

For this research, specific elements of the Damschroder et al. (2009) Consolidated Framework for Implementation Research (CFIR) were used as reference for guiding the development of data collection tools to capture the contextual factors of interest. CFIR is a conceptual framework that presents guidelines for assessing various elements of implementation, including process and context. These factors are grouped into five thematic core domains – one

being the “outer setting” domain which pertains to the context in which the implementing organization is situated, including economic, political, and social climates (Damschroder et al., 2009). This domain illustrated elements of environments of interest and further contributed to the overall definition of contextual factors as it pertains to this research. Finally, the development of the definition of contextual factors referenced McCutcheon and Morrison’s (2014) data analysis methods when examining service needs for people who inject drugs in smaller urban settings, which also drew from Galea et al. (2003) and Rhodes (2009). Drawing from all contributing conceptual frameworks and research methods, the definition for contextual factors considered within this research is: the structural level factors that service users and implementers navigate. This includes elements of the social, cultural, policy, and physical environments in which one is located.

Chapter 1: Literature Review

In this chapter I will review relevant literature that informs the current context in which this research takes place. This includes an exploration of the current state of the unregulated and criminalized supply in Canada and BC, resulting rates of overdose fatality, and how this has specifically impacted communities outside of large urban centers. It will also include a focus on drug checking as a response to the unregulated market, and a look at the current state of smaller urban harm reduction services.

Unregulated Supply

Exploring factors that are facilitators and barriers to drug checking access and implementation is important within the current context of the unregulated drug supply and high rates of overdose fatality in Canada. In Canada, rates of opioid overdose fatalities began to rise around 2012 to 2014 as fentanyl adulteration began to impact the unregulated opioid supply. This initial increase was noted by people who use drugs within their communities and recorded by the Canadian Center on Substance Use and Addiction (formerly called the Canadian Center on Substance Abuse) (Belzak & Halverson, 2018; Canadian Centre on Substance Abuse, 2015; Mullins, 2022). As the rates of fatalities continued to rise, BC's provincial health minister declared a public health emergency in April 2016, which remains in place as of 2023 (Government of BC, 2016). The drug supply in Canada remains unregulated, with a wide and expanding range of adulterants being detected in the opioid supply, including benzodiazepines, various opioids, and fentanyl analogues, to name a few. In turn, rates of overdose fatalities continue to be elevated in BC and across Canada. The most recent data shows that BC had 2272 fatalities in 2022 - a rate of approximately 6 fatalities per day (BC Coroners Service, 2023).

Overdose Distribution Across Geographic Regions

In BC, large urban centers consistently experience the highest numbers of opioid-overdose fatalities (BC Coroners Service, 2022). However, overdose rates related to population distribution are elevated across urban, rural and remote areas, demonstrating that communities of all sizes are experiencing significant and ongoing effects of the unregulated criminalized supply (BC Coroners Service, 2023). The most recent data shows that rates of fatal overdose continues to be distributed across the population with some equivalency, despite geographic region. The January 2023 BC Coroners Services report shows that by health region in 2022, Fraser, Vancouver Coastal, Interior and Island Health Authorities experienced rates of drug toxicity deaths that ranged from 33.6 – 50.5 per 100,000. In addition, Northern Health Authority – one of the largest but least densely populated health regions, with many small and rural communities – experienced 59.5 drug toxicity deaths, which was the highest rate per capita amongst all regions (BC Coroners Service, 2023). Statistics from Vancouver Island further demonstrate that overdose is not exclusively experienced with concentration in larger urban centers. South Vancouver Island is the most urban region of Vancouver Island and was found to have an overdose rate of 37.0 deaths per 100,000 from January - July of 2021 (BC Coroners Service, 2022). Comparatively, Central Vancouver Island – a less population dense area with more mid-sizes and small communities – was found to have an overdose rate of 34.3 deaths per 100,000 during this same time frame (BC Coroners Service, 2022). North Vancouver Island – the region with the lowest population density and the most small and rural communities – saw an overdose rate of 50.9 deaths per 100,000 (BC Coroners Service, 2022).

Smaller Urban Service Inequity and Implications

The elevated rates of overdose across the province demonstrate the need for dedicated harm reduction and life-saving resources in all regions regardless of population density.

However, there must be consideration to region-specific environments and experiences for the implementation of services that are relevant and accessible. There is much evidence illustrating the significant social, economic, systemic and environmental factors that contribute to inequitable health outcomes among people who use drugs (Merchant et al, 2020; Vigo et al., 2020). Further, people who use drugs are often navigating various intersecting social and structural contexts - such as race, ethnicity, gender, ability, sexual orientation, and socioeconomic status, to name a few - that further present systemic barriers to the availability and accessibility of relevant health supports (Clarkson et al., 2015; Collins et al., 2019; Gunn et al, 2018; Newman & Crowell, 2021). These factors are experienced differently across geographic regions, as smaller urban location presents additional social and structural factors that can further exacerbate health inequity among people who use drugs outside of large urban centers (Parker et al., 2012; Young et al., 2019, RIOAE, 2019). For example, Hu et al. (2022) found that in BC, the odds of fatality in the event of an overdose were 30% higher in rural regions when compared to larger urban centers. The authors suggest that this can be attributed to the inequitable distribution of harm reduction and life-saving resources to large urban centers (Hu et al., 2022). The concentration of health and harm reduction resources are in large urban locations has resulted in inequitable access to relevant services and disproportionate risk of adverse health outcomes among people who use drugs in smaller urban communities (Parker et al., 2012; Young et al., 2019, RIOAE, 2019).

Drug Checking and the Unregulated Supply

Drug checking is a harm reduction support that uses analytic technologies to assess the contents and composition of a wide range of substances (Kerr & Tupper, 2017). Individualized and context-specific harm reduction advice is offered based on the analytic results of a drug

check, offering service users an opportunity to learn more about the substances they are consuming, sharing, manufacturing and distributing. Because the criminalized supply remains unregulated and criminalized, individuals are often left with very limited access to comprehensive information about their substances. In response to the unregulated supply and elevated rates of overdose fatalities in BC and across North America, the call for diversified and expanded options for harm reduction supports continues. As a result, drug checking technology that has traditionally been used in festival and event settings has been explored as a response to the ongoing public health emergency (Bardwell & Kerr, 2018; Kerr & Tupper, 2017; Laing et al., 2018; Wallace, van Roode, et al., 2021). While events-based drug checking continues, new applications of technology to address the unregulated market continue to be explored. This has included the expansions of fixed-site locations and integration into existing harm reduction programming, such as overdose prevention sites (Betsos et al., 2021; Karamouzian et al., 2018; Tupper et al., 2018).

Research has accompanied the novel approaches to drug checking technologies as a response to the overdose crisis, including the potential impacts, barriers and facilitators to implementing and accessing services, and acceptability of services among service users. When evaluating the potential impacts of drug checking, the intervention is often framed as a behavioural intervention. Researchers have explored changes to individual harm reducing behaviours related to substance consumption based on engagement with drug checking, including discarding substances that yielded unexpected results and changing dosage accordingly (Goldman et al., 2019; Karamouzian et al., 2018; Krieger et al., 2018; Mema et al., 2018). In a broadened consideration of the potential impacts of drug checking services, Wallace, van Roode, et al. (2021) present potential impacts at various levels including individual, market, community

and policy, and Betsos et al. (2021) and Bardwell, Boyd, Arredondo et al. (2019) explore drug seller motivations engagement with drug checking, including quality control and community care. Concerning implementation and access of services, research has focused on acceptability of drug checking services among people who use drugs (Bardwell, Boyd, Tupper, et al., 2019) as well as the technological and social factors to be considered when implementing services (Wallace, Hills, et al., 2021). In their considerations for service implementation, Wallace, Hills, et al. (2021) identify the need for service models that address geographical barriers. Despite the growing interest in both the implementation and research of drug checking services, there has been little focus on the considerations for implementation and accessibility of services specifically within the context of smaller urban environments.

Smaller Urban Harm Reduction

Harm reduction centered approaches have become a central focus in addressing harms related to the social and structural violence of continued criminalization of substances and substance use. Many of these interventions are designed for and implemented in larger urban areas where numbers of overdose deaths are the highest, but may not always be transferable to smaller urban environments. Outside of larger urban regions, the intersecting social, structural, and physical environments of these communities create barriers and facilitators to both accessing and implementing harm reduction interventions that are uniquely experienced in smaller urban communities. Importantly, these environments may be unique to smaller urban regions but are not homogenous across all smaller urban communities.

As the unregulated criminalized drug supply and the ongoing criminalization of drugs continue to produce significant harms for people who use substances, there are growing calls for expanded harm reduction services that are researched, developed and implemented specifically

for smaller urban settings (Bardwell & Lappalainen, 2021). The Canadian Drug Policy Coalition, the Canadian AIDS Society, the Working Group on Best Practice for Harm Reduction Programs in Canada, the Rural and Indigenous Overdose Action Exchange, and members from different regional drug user organizations have all made calls to prioritize the development and implementation of harm reduction supports that address the unique contexts of smaller urban environments (Canadian Drug Policy Coalition, n.d; Jozaghi & Marsh, 2017; RIOAE, 2019; Strike et al., 2015; Thomas & Scruton, 2014).

Existing evidence has explored various elements of the contextual factors that impact the implementation and accessibility of harm reduction services. The following section outlines recurring themes.

Political Context

Implementing, maintaining and accessing harm reduction initiatives in smaller urban areas is often challenged by barriers related to policy and funding. Because of differences in prioritized social issues and political values between larger urban and smaller urban communities, North America has often experienced a political divide between these geographic regions (Badger, 2019; Thompson, 2021). Areas with higher population density most often favour liberal values while areas with lower population density lean towards conservative ideology (Speer & Loewen, 2021). This has a significant impact on how issues are politically framed and socially viewed, with substance use often being framed as a moral and criminal issue rather than a health issue.

In research assessing the challenges experienced by individuals planning and delivering public health programming in smaller urban areas, a common barrier cited was the expectations of community leaders, funders, and community members for services that prioritize prevention

and treatment rather than harm reduction for ongoing substance use (Childs et al., 2021). Additional aligned research found that community stakeholders in the law enforcement, health, and policy spheres in rural communities felt responsible to community members to allocate limited financial resources to reflect popular public opinion within the community, often understood to be community safety through punitive and treatment based approaches (Ezell et al., 2021). Public health and social program planners factor in expected community support, and stakeholders in rural areas may be influenced by anticipated opposition within the community (Russell et al., 2020).

Structural Barriers

Lack of supportive policy and designation of funding away from harm reduction based programming has led to a scarcity of supports for people who use drugs in smaller urban communities, including harm reduction supplies, naloxone and opioid overdose reversal training, supervised consumption sites, relevant housing options, health providers versed in harm reduction, and criminalized substance substitution prescribers and available spots in treatment (Elkhalifa et al., 2021; McCutcheon & Morrison, 2014). People who live in smaller urban communities have commonly reported that harm reduction supplies are either unavailable or difficult to access within their communities (Allen, et al., 2019; Antoniou et al., 2020; Davis et al., 2019; Elkhalifa et al., 2021; McCutcheon & Morrison, 2014; Parker et al., 2012). Harm reduction resource scarcity in smaller urban communities can also present in various other forms. The lack of available health and social service providers with intimate knowledge of substance use and harm reduction centered practices has lead to significant wait times (Buck-McFadyen et al., 2021; McCutcheon & Morrison, 2014) and restricted operational costs may result in limited hours of service availability (Antoniou et al., 2020). Additionally, smaller urban location

presented geographic barriers for service users who often described travelling distances to access services, limited availability of public transportation outside of large areas, lack of access to a vehicle, cost of transportation and time constraints (Buck-McFadyen et al., 2021; Greer et al., 2019; Parker et al., 2012).

Social Context

The social environment of smaller urban regions is frequently cited as an important factor that shapes the way harm reduction services are implemented and accessed in these settings. Perhaps the most universally experienced barrier within the social context of smaller urban environments is the ongoing stigmatization of substances, the people that use substances, and the services that support them. Studies exploring community perceptions of existing or proposed harm reduction supports found mixed levels of support, with oppositional opinions linked to a fear of increased drug activity, preference for abstinence-based services, anticipated threat to public safety and general lack of knowledge or support of harm reduction ideology (Baker et al., 2020; Cruz et al., 2007; Mema et al., 2019, Parry et al., 2021; Strike et al., 2014). Allen and colleagues (2019) found that anticipated and experienced community-level stigma related to substance in a smaller urban community dissuades people from accessing the harm reduction support services. For some individuals, accessing harm reduction supports poses a threat to personal comfort and safety due to potential lack of anonymity in a smaller community, as people risk personal and professional consequence if their use of substances is revealed within their social network (Ezell et al., 2021; Parker et al., 2012; RIOAE, 2019).

Study Context: Four Small Urban Communities on Vancouver Island

To provide greater context for and familiarity of the participating communities, a description of each participating community is provided.

Campbell River.

Campbell River is located on the east coast of northern Vancouver Island and has the largest population of all participating sites at 38, 100 (Statistics Canada, 2023). The city operates as a health and social service, commercial, and community hub for a total population of approximately 60 000 people total, including those from many surrounding small and rural communities, such as Gold River, Tahsis, Kyuquot, Zeballos, Port Hardy and Port McNeil, Oyster River, and the Discovery Islands (Campbell River Community Action Team, 2019; City of Campbell River, n.d.). People from these surrounding communities may travel to Campbell river to access an area of more concentrated commercial and service options, such as health and social services and opportunities for employment. While Campbell River is served by public transportation, availability of public transportation to and within the surrounding communities is limited (Strathcona Community Health Network, 2019). It is a port city on the Discovery Passage, which is accessed by various vessels for transportation, tourism and industry. Forestry, fishing and mining are significant industries for Campbell River. According to the Canadian federal census in 2016, 12.5% of people living in Campbell River and surrounding communities identify as Indigenous, compared to 7.6% across all of Vancouver Island. Campbell River falls into the North Island Health Service Delivery Area of Island Health – the health authority which is responsible for providing health care to Vancouver Island (Island Health, 2013). In 2022, the North Island health region experienced 53.3 deaths per 100,000. In comparison, the South Island health region which holds the larger urban center of Victoria experienced a rate of 39.17 deaths per 100 000 in the same time (BC Coroners Service, 2023). In 2022, BC Emergency Health Services recorded 525 emergency calls of overdose events in Campbell River, which was up nearly 250% from calls in 2016 (BC Emergency Health Services, 2022). Vancouver Island

Mental Health Society operates an overdose prevention site with a range of harm reduction services, witnessed consumption, and overdose prevention. In addition, Campbell River AVI provides a range of harm reduction supports.

Courtenay.

Courtenay is located on the east coast of central Vancouver Island on the Courtenay River estuary and has a population of around 28 000 (Statistics Canada, 2023). It is one of the three largest communities situated within the Comox Valley, the other two being Comox (population of approximately 14 800) and Cumberland (population of approximately 3 700). Courtenay functions as a commercial, health service, and community hub for neighbouring smaller communities of Royston, Union Bay, Fanny Bay, Black Creek and Merville, Denman Island, and Hornby Island. With all of these surrounding communities, Courtenay is a central hub to an approximate population of 72 000 within the Comox Valley (City of Courtenay, n.d.). The economy of Courtenay largely relates to aerospace (with the Canadian Forces Base Comox nearby), tourism, construction, and agriculture (Artibise & Favrholt, 2015). The 2016 Canadian federal census found that 5.9% of people living in Courtenay and the surrounding Comox Valley identify as Indigenous, compared to 7.6% across all of Vancouver Island. Like Campbell River, Courtenay also falls into the North Island Health Service Delivery Area of Island Health which experienced 53.3 deaths per 100,000 compared to a rate of 39.7 deaths per 100,000 in the South Island health region (BC Coroners Service, 2023; Island Health, 2013). In 2022, BC Emergency Health Services recorded 419 emergency calls of overdose events in Courtenay, which was up just over 350% from calls in 2016 (BC Emergency Health Services, 2022). Island Health Mental Health and Substance Use operate an overdose prevention site with additional harm reduction supports and programming for individuals living with HIV or hepatitis C. In addition, AVI

Comox Valley is located in Courtenay which provides a range of health and harm reduction supports.

Port Alberni.

Port Alberni is located on the west side of central Vancouver Island and has a population of around 20 700 (Statistics Canada, 2023). It is located within the Alberni Valley at the head of the Alberni Inlet and is bordered on the east side by the Beaufort Mountain range. Though it is up to 90-120 km away from the neighbouring communities of Tonfino, Ucluelet, and Bamfield, as the closest urban center, it functions as a transportation, commercial, and health and social service hub to these smaller communities. Forestry and fishing have been primary commercial interests for Port Alberni, with both industries experiencing economic downturn and significant layoff over various periods of time (Artibise & Favrholt, 2017; City of Port Alberni, n.d.). Additional major industries include other marine related industries, healthcare, Indigenous administration and education (Vancouver Island economic Alliance, n.d). 19.9% of people living in Port Alberni and surrounding communities identify as Indigenous, compared to 7.6% across all of Vancouver Island (Statistics Canada, 2016). Port Alberni falls into the Central Island Health Service Delivery Area of Island Health (Island Health, 2013). In 2022, the Central Island health region experienced 54.3 deaths per 100,000 – the highest amongst all health service delivery areas on Vancouver Island (BC Coroners Service, 2023). In 2022, BC Emergency Health Services recorded 375 emergency calls of overdose events in Port Alberni, which was up nearly 300% from calls in 2016 (BC Emergency Health Services, 2022). The Port Alberni Shelter Society operates an overdose prevention site in the community that provides supervised consumption, overdose reversal, harm reduction supplies.

Duncan.

Duncan is located on the east coast of southern Vancouver Island in Cowichan Valley and is the smallest city on Vancouver Island with a population of around 5 000 (Statistics Canada, 2023). Duncan operates as a service, transportation, and economic hub for the Cowichan region. It is surrounded by many communities, some of which include Lake Cowichan, Cowichan Bay, Maple May, Crofton and Chemainus. The most significant contributors to the economy local to Duncan include tourism, fishing, farming, and forestry (City of Duncan, n.d.). Accounting for these surrounding communities, Duncan sees a total population of around 44 000 who travel to Duncan for employment, recreation, and to access health and social services (City of Duncan, 2016). According to the Canadian federal census in 2016, 11.5% of people living in Duncan and surrounding communities identify as Indigenous, compared to 7.6% across all of Vancouver Island. Like Port Alberni, Duncan falls into the Central Island Health Service Delivery Area of Island Health, which was the region with the highest rates of overdose fatality on Vancouver Island in 2022 (BC Coroners Service, 2023; Island Health, 2013). In 2022, BC Emergency Health Services recorded 507 emergency calls of overdose events in Duncan, which was up just over 200% from calls in 2016 (BC Emergency Health Services, 2022). Harm reduction supports in Duncan include an overdose prevention site and mobile health outreach with harm reduction supplies. In addition, Cowichan Tribes offers culturally-grounded treatment, overdose prevention, harm reduction outreach, detox, and counselling for Cowichan Tribe members in the area.

Conclusion

There is a small body of existing evidence that explores the factors surrounding the implementation and accessibility of harm reduction related supports within smaller urban regions. Within this research, there has been a focus on a range of specific types of harm

reduction supports, including naloxone kit distribution, availability of harm reduction supplies, prescribed opioid substitution, and supervised consumption sites (Buck-McFadyen et al., 2021; Mema et al., 2019; Parker et al., 2012; Young et al., 2019). However, there is currently a lack of research that specifically looks at the contextual factors that may facilitate or hinder the implementation and accessibility of drug checking in smaller urban areas. In response to calls for context-specific harm reduction supports for smaller urban regions and expanded access to drug checking services, this research was undertaken to address this research gap by inviting perspectives of prospective drug checking service users and service implementers in smaller urban communities.

Chapter 2: Methods

This chapter outlines how principles of community-based research provided foundation for guiding the research objectives and processes. The chapter then continues to describe the research methods, including the development and application of research instruments.

This research is part of a larger and ongoing body of research related to the implementation and operations of Substance – a community drug checking service initiated in Victoria, BC that has been operating since 2018. Within the project, service programming goals and objectives have been community-driven through long-term partnerships with a local drug user organization as well as various other local harm reduction service delivery organizations. Through these partnerships, the service has adapted to respond to the diverse range of preference and experiences of people accessing the service. From the beginning of the service, operations have also been linked with various ongoing research activities. Similar to the service, this research is positioned within community-based research principles. Some of the earliest research with the project was conducted pre-implementation and explored the perceptions of prospective service users related the accessibility and relevancy of drug checking services. This scope of this earlier research primarily included participants from within the larger urban center of Victoria, BC. Within the limitations of that study, the researchers stated that future research on community drug checking should explore the perspectives of those located outside of large urban centers (Wallace, van Roode, et al., 2021).

A new service goal that Substance began undertaking was to support additional harm reduction sites on Vancouver Island in bringing drug checking services to their communities as part of their larger harm reduction programming. To support this service expansion, Substance entered long-term collaborative partnerships with service organizations in Campbell River,

Courtenay, Port Alberni, and Duncan. Substance developed a framework for supporting training and skillbuilding to support these sites in implementing drug checking services and operating drug checking technology. Throughout this process and continuing to this day, the partnerships between Substance and the participating harm reduction organizations are ongoing with a cyclical knowledge exchange to adapt service models to best suit the environments and communities in which they are located.

As part of the early implementation phase, Substance conducted collaborative drug-checking events at each of the venues, which included: presentations to implementers about Substance drug checking objectives and operations, strategic planning meetings with implementers, and pop-up drug checking services for people accessing services at the sites. The pop-up services were meant to provide a hands-on, realistic example of what is needed to implement drug checking services on-site as far as space requirements, technology, and staffing, while also providing an example of what implementers are able to offer service users with this service. In addition, the pop-up services were meant to provide an opportunity for service users to engage in on-site drug checking. By having pop-up services on site, individuals were able to have samples checked, engage in harm reduction conversations that are specific to the substances they have, and learn about how the technology operates. It was during the coordination and roll-out of the pop-up drug checking events from October – December 2021 that data collection was conducted. This gave services users and implementers the opportunity to learn about and experience drug checking services while also engaging in data collection. Further, this opportunity for engagement and exchange in knowledge rooted the research in principles of CBR, as discussed further within this chapter.

Research Question

The research question is: What contextual factors should be considered in scaling up drug checking services from a larger urban-center to smaller urban communities? Throughout the operation of Substance, there has been direct communication from harm reduction service providers in nearby smaller urban regions with an interest in integrating drug checking services into their existing harm reduction service model. This interest has stemmed from the service providers' perceptions that drug checking could be an important service to offer within the context of unregulated criminalized supply and as part of comprehensive harm reduction programming. Service providers, including peer workers, who have contacted Substance about scaling up services have also relayed interest expressed in drug checking from people who are accessing services at their sites, demonstrating a stated need from prospective service users at the various smaller urban locations.

Positionality

I offer my positionality as the primary researcher undertaking study design, recruitment and sampling, data collection, data analysis, and presentation of findings. I am a hetero, cis, able bodied woman with Canadian citizenship at birth. I currently reside on unceded Lekwungen territory, home of the Songhees and Esquimalt peoples, in the large urban center of Victoria, BC. While I was born and raised in a smaller urban center, I have been located in a larger urban center for all of my adult years. I am a graduate student and have experience implementing and providing drug checking services.

I recognize that my position as a researcher is situated within a broader societal context that shapes my perspectives, biases and privileges. I understand that my knowledge and assumptions may not fully capture the complexity and live realities of the individuals and experiences I seek to understand within this research. I am cognizant of the power dynamics

inherent in the researcher-participant relationship. I recognize that I hold a position of relative privilege and authority as a researcher, and that I entered into communities where I have not spent time in advocacy or activist roles, in building relationships, or in working to support individuals who navigate the unregulated supply and related structural factors. To address this dynamic, this research was paired with knowledge exchange, skill building, and drug checking service delivery as to not exclusively be extractive. I am mindful of the potential for unintentional judgment, bias, or misrepresentation, and worked to minimize these effects with continued reflection throughout the process. I worked to ensure that participant voices were accurately represented throughout the process, including supporting findings with direct participant quotes, and that their perspectives contribute to a more nuanced understanding of the study focus.

Community Based Research

This research was guided by elements of community-based research (CBR). CBR principles served as the interpretive framework to guide the research process and center research objectives and intentions.

Interpretive Framework: Community-Based Research in Theory and Practice

The interpretive framework encompasses the practical elements of the research process, including focus, objectives, and goals (Creswell, 2013). Mill and Caine (2016) describe CBR as a research approach that centers specific values that can guide diverse research methodologies. In the context of this inquiry, three central values of CBR will be discussed to set a contextual foundation for the research methods and goals.

Community-Centered. CBR views knowledge to be socially constructed through individual lived experience. To position the individual within a community context, community

is considered to be a group of people who share common interests, experiences, or circumstances (Mayan & Daum, 2014; Mill & Caine, 2016). By this definition, community is shaped by shared contextual factors rather than by the physical spaces that populations occupy. Though individuals may share commonalities that connect them to a community, knowledge is valued for its subjective nature due to the numerous factors that shape individual social environments and interactions. Community knowledge is understood to be complex and subjective rather than homogenized as a universal truth. Within the diverse individual experiences of a community, knowledge will both be unique to the individual and have some elements of a shared reality.

While the target populations have been defined by specific shared characteristics, experiential knowledge within each target population was recognized to be specific to the individual participants. In conducting research that explored perceptions and experiences within smaller urban environments, it was important to avoid homogenizing experiences based solely on smaller urban location, as different smaller urban communities bring unique geographic, economic, political, and social contexts. Recruitment of both target populations took place in four different smaller urban communities on Vancouver Island. The overall goal of this approach was to maintain community-centered values in which assumptions about transferability are informed by the diverse knowledge and varied experiences of both target populations with meaningful representation from numerous smaller urban locations.

Beyond the consideration of what is valid as knowledge, a CBR approach centers community interests as the driving motivation for undertaking research. The purpose of the research, including why the research is being conducted and how the findings will be applied, should be responsive to the interests expressed by the communities at the center of the investigation (Mille & Caine, 2016). Within the context of elevated rates of opioid overdose

fatalities and unregulated criminalized supply in BC, drug user organizations, individual PWUD, and harm reduction service providers have been vocal in stating what is needed to protect their communities with priorities identified as: decriminalization of substance use, possession, and distribution; and safe supply both as a medical intervention available by prescription and as community-based distribution model; and diversified and scaled-up harm reduction programming across geographic regions (Owen, 2019; Strike & Watson, 2019; Vancouver Area Network of Drug Users, 2021).

On a localized scale, Substance has received direct feedback from harm reduction service providers in communities outside of Victoria's large urban center about the desire for scaled up services to bring drug checking into smaller urban communities. On top of these stated priorities, numerous harm reduction agencies - including the Working Group on Best Practice for Harm Reduction, the Canadian Drug Policy Coalition, and the Rural and Indigenous Overdose Action Exchange - have stated the need for scaled-up harm reduction programming that is relevant and accessible for rural and remote regions (Carter & MacPherson, 2014; RIOAE, 2019; Strike et al., 2015). In alignment with CBR values, the research centered these expressions as the foundational motivation for undertaking investigation.

Social Change. CBR has been described as a praxis-based approach due to the emphasis placed on social transformation as a central goal of conducting research (Finley, 2008). CBR seeks to challenge inequitable social structures that produce and reinforce oppression and marginalization for populations central to the investigation (Willis, 2007). Axiological assumptions of CBR view investigation as being value-laden rather than value free. As an extension of this, praxis in CBR places value on the mobilization of knowledge to challenge inequitable and oppressive social structures in a way that reflects the diverse subjective realities

of a population (Finley, 2008; Willis, 2007). In the context of public health, a CBR approach emphasizes research processes that have utility facilitating social change that directly impacts inequitable health outcomes experienced by populations at the focus of the research. To support this goal, research should produce practical, social-justice oriented applications that challenge existing social and structural factors that influence health disparities (Mill & Caine, 2016).

The goal of the research was to center community voices in determining what factors may be unique to implementing and accessing drug checking in a smaller urban community. The findings will be applied to the scale-up of drug checking services in the identified smaller urban communities to offer programming that is relevant and accessible to service users. Because onsite drug checking is primarily offered in larger urban centers in Canada, the scale-up of Substance may create more equitable access to drug checking services and provide greater opportunity for individuals to gain information about the substances they are consuming, sharing, manufacturing, and distributing. Transferrable findings will further support implementation of drug checking in smaller urban communities, outside of the Substance scale up.

Emancipation and Empowerment. CBR frames the processes of research to be value-laden rather than value-neutral. Of the values that are closely linked with CBR as an approach to research, emancipation and empowerment are central in that research objectives should include both knowledge generation and practical knowledge application oriented to social justice through the empowerment of populations experiencing social and systemic oppression (Iphofen & Tolich, 2018; Jupp, 2006; Mayan & Daum, 2014). Emancipatory research seeks to examine and challenge the assumed reality of structures that impact the social experience of populations and individuals, namely structures that produce and perpetuate inequality, injustice, marginalization, and oppression (Whitmore, 2001). In the context of public health, research based in

emancipation seeks to empower individuals and communities to influence determinants of health by challenging unjust and oppressive structures to experience more equitable health outcomes (Mayan & Daum, 2014).

Values of emancipation and empowerment in this research are reflected in the central positioning of prospective service user and implementer perspectives in knowledge generation. This has a practical application for the development and implementation of community-centered and context specific drug checking services in smaller urban communities. Further, the goal of pairing research activities with onsite pop-up drug checking services was to provide a foundation for supporting individual and community agency through building knowledge, capacity, resources, skill, networks, and collaborative opportunity. For the populations at the identified research sites, the long term trajectory of knowledge generation, knowledge sharing and collaborative capacity building is the implementation of relevant drug checking services in communities that experience intersecting factors of harm reduction resource scarcity, elevated rates of opioid overdose, and context-specific factors related to smaller urban geographic location.

Research Methods

Study Participants

The study populations were identified in alignment with the CBR perspective that community is shaped amongst individuals with commonalities in contextual factors such as experiences or circumstances (Mayan & Daum, 2014; Mill & Caine, 2016). The target population was defined as follows: people who anticipated accessing drug checking services within the small and rural serving communities of Campbell River, Courtenay, Port Alberni, and

Duncan. This target population reflects environments surrounding the four identified Vancouver Island communities.

Unit of Analysis

The unit of analysis for this study is smaller urban communities on Vancouver Island, as a collective. These communities range in population but have smaller population sizes than large urban centres on Vancouver Island and have commonality in that they serve as hubs for the smaller and rural communities surrounding them. This study focuses on identifying the contextual factors in these smaller urban communities that are relevant to implementation of drug checking. As part of interpretation, these contextual factors are considered relative to those identified in prior research in a large urban centre on Vancouver Island (Victoria, BC).

Participant Recruitment

Recruitment Process

Recruitment was linked to scale-up activities. Substance connected with various harm reduction service agencies in the identified smaller urban communities by phone and email to begin the process of scaling up services with an introductory on-site drug checking pop-up. During these initial conversations, the point of contact employees at each site were introduced to the research project and invited to participate over the phone or in-person during the pop-up by recruitment email. The email included a poster with description of study focus, compensation amount, and contact information of the researcher.

The point of contact individuals recruited within their professional networks and invited participation from coworkers who would also be involved in future drug checking program implementation. Recruitment of prospective service users was also linked to the on-site pop-up drug checking services. As service users engaged with the on-site pop-up drug checking services

at the 4 locations, they were made aware of the study happening concurrently and some of these individuals elected to participate. Service users who became aware of the study through the on-site pop-up began to spread the word within their social networks and additional service users came to engage with the services and participate in the study. All recruitment and data collection occurred during pop-up drug checking planning and events, from October – December 2021.

For in person interviews the participant was given \$25 cash, and for phone interviews the participant was sent \$25 via e-transfer. The consent form was a document from the initial Substance qualitative research. Minor edits were made for relevancy to this research project. The consent form covers key factors about participating in the study that should be considered by the participant prior to their consent, including: the purpose of the research; requirements of participant; possible risks and benefits of participating; rights of participant during the interview; compensation; confidentiality surrounding personal information; how the data will be used; and how to follow up for more information. For individuals participating in the face-to-face interviews, the consent form was reviewed together to support informed consent as the first step of the interview process, and participants were offered a copy for themselves. Individuals participating over the phone received a copy over email which we reviewed together to ensure informed consent. It was then emailed back with their signature. It was made clear that the interview could be stopped at any time the participant wished. The consent form is the same for the target populations. See the full consent form in (Appendix A).

Participant Selection

Recruitment through engagement with the on-site pop-up activities and further recruitment through service user and implementer social networks was a form of snowball sampling. This is a method of sampling in that that sampling is not randomized but rather based

on existing networks of the researcher or participants, and not all members of a population have equal probability to be selected to participate in the research (Parker et al., 2019; Naderifar et al., 2017). Snowball sampling brings unique benefits and challenges. This method of sampling can support recruitment with populations that have experienced stigma, marginalization or structural oppression and may have reservations about engaging in research activities (Noy, 2008). In this scenario, this element was helpful because Substance had not previously had the opportunity to offer services within these communities and build relationships with people accessing services. Because people who use drugs often experience numerous barriers when accessing health and social services, it is possible that prospective service users in the smaller urban communities may have had some apprehension about a harm reduction service they have never interacted with, run by people they have never met. In addition, due to the nature of the research, some research questions pertain to substances and substance use which some may find uncomfortable to discuss with someone they have no relationship with. However, linking to recruitment activities through the on-site pop-up in a familiar service location or through a social network could bridge possible discomfort. All selected participants had to be 19 years of age or older, according to the approved ethics protocol.

Within our participant selection, we aimed to have diversity in demographic representation of participants at each of the four locations where recruitment occurred. The goal of sampling was to recruit enough participants from each target population to provide a rich and thick description of the contextual factors that are expected to impact the implementation and accessibility of drug checking services within the identified smaller urban communities. As both Creswell (2013) and Geertz (1973) describe, thick data provide a richly descriptive, nuanced, and contextual understanding of the phenomenon of interest through robust detail and description.

We felt that this was achieved within the data collection phase when participants had been at each recruitment location with some demographic diversity, when thematic elements of the interview guide adequately explored, and when newly recruited participants offered knowledge and experiences that had been presented previously within data collection – what Lincoln and Guba (1985) refer to as informational redundancy (Saunders et al., 2018). This point was reached after 39 participants were interviewed at which time sampling was concluded.

The sample breakdown was: 24 prospective service users, 9 prospective service implementers, and 6 individuals who were both a prospective service user and service implementer. The total sample was 39. Demographic information was collected for each research participant via a questionnaire developed and utilized for ongoing research with Substance and previously approved by Health Research Ethics Board at the Island Health Authority. The demographics collected served to demonstrate the characteristics of participants and to identify the demographics both captured and not captured through recruitment. The demographics were compiled and presented in Table 1. No further demographic analysis was conducted. To view the demographic instrument for prospective service users, see Appendix B. To view the demographic instrument for prospective service implementers, see Appendix C.

Table 1: Characteristics of the sample (n=39)	
Characteristic	Number
Population	
Service user	24
Service Implementer	9
Service user & Service Implementer	6
Gender	
Woman	16
Man	20
Other (gender queer, non binary)	2
Age in years	
19-24	2
25-29	6

30-44	18
45-60	11
>60	1
Identify as Indigenous (First nations, Métis, Inuk)	
Yes	20
No	18

Recruitment Email and Handbill

The recruitment email was sent out to the point of contact individuals at each agency as the on-site pop-up drug checking was coordinated. The email was slightly modified from the recruitment email used in the initial qualitative research conducted at the implementation of drug checking through Substance in Victoria. The email included handbill that point of contact individuals can provide possible participants in their respondent-driven sampling efforts. See the full recruitment email and handbill in (Appendix D).

Data Collection

Data were collected through semi-structured interviews to allow for flexible conversation that responds to the interests, experiences, and comfortability of the research participants. Semi-structured interviewing was chosen for the emphasis on facilitating a personalized interaction as a foundation of the data collection process (DeJonckheere & Vaughn, 2019; Josselson, 2013). The relational element of semi-structured interviewing centers the experience of the participant, which is imperative when discussing topics that may be challenging to talk about (DeJonckheere & Vaughn, 2019). Because the interview may lead to many topics that can be difficult to discuss - such as substance use, overdose, unregulated criminalized supply, stigma, and scarcity of supports, to name a few - it was important that the interview process is responsive to the needs of the interviewee. In further support of selecting semi-structured interviewing, flexibility in the data collection process can support the ontological underpinnings of the research that views

reality as diverse and subjective. A flexible interview process that is responsive to the experiential knowledge of participants is better equipped to support robust discussions of the individualized realities of participants than a rigidly structured approach to interviewing.

Due to the subject matter of accessing and implementing services related to criminalized substances, which continue to be criminalized and stigmatized, it was of utmost importance that I committed to maintaining confidentiality and privacy throughout the research process. I obtained informed consent from participants, ensuring they had a clear understanding of the purpose, potential risks, and benefits of their involvement. In the transcribing process, measures were taken to anonymize interviews to protect participant identities and ensure their safety.

Interview Guide

There are two versions of the interview guide, one for each target population. The guide for prospective service implementers was designed to generate discussion about experiences related to program implementation and include questions about the logistics of integrating drug checking into the existing service model of the agency, including funding for technology and staffing (see Appendix E). The guide for the prospective service users was designed to generate conversation related to participant perceptions of accessing drug checking as a service and the outcome that is desired (see Appendix F). While the two interview guides have slight differences in focus, they are generally quite similar and follow a similar format.

To support a semi-structured interview process, the interview guides served as a general structure to facilitate discussion through open-ended questions with corresponding prompts. Open-ended questions invite the participants to give personal meaning to the question and frame it within the context of their own experience (Creswell, 2013). The prompts were meant to

encourage further thought and discussion that reflects the participants' interest, experience and knowledge that is revealed throughout the interview process (Olsen, 2012).

Consolidated Framework for Implementation Research. The interview guide utilizes the Consolidated Framework for Implementation Research (CFIR), which seeks to explore numerous intersecting factors that may impact health intervention implementation (Damschroder et al., 2009). CFIR is a conceptual framework that guides systematic assessment of the factors that influence implementation. The application of CFIR during implementation is commonly practiced as a method of identifying challenges to program impact, relevancy, and sustainability (Kirk et al., 2015). The CFIR and associated tools are positioned well to guide pre-implementation investigation related to the scale-up of drug checking services to smaller urban communities and can be adapted to create interview guides that explore perceptions of both those positioned as implementers and those accessing services.

The framework identifies 39 theoretical constructs considered to be essential factors that have potential to impact implementation success, as identified by Damschroder through systematic review of implementation studies and theories (Keith et al., 2017). These constructs are grouped into five interconnected core domains. The first domain is the characteristics of individuals receiving and delivering the intervention. This domain looks at individual level factors of those involved with implementation (either as program participants or program stakeholders), which includes beliefs and attitudes about the implementing organization and about the intervention. The second domain is characteristics of the intervention. This domain explores the relation of the program to the implementing organization and adaptability potential of the program. The third domain - the program implementation - looks at individual and organizational strategies and actions for implementation. The fourth domain - the inner setting

- considers features of the organization leading implementation, including the structure, climate and policy that informs organization functions. The fifth and final domain is the outer setting which pertains to the context in which the implementing organization is situated, including economic, political, and social climates (Damschroder et al., 2009).

With CFIR, there was opportunity for the formal core domains and corresponding constructs to guide investigation that focuses on factors that shape individual social experience and the processes of knowledge construction. The framework constructs are compiled from various existing implementation theories with an objective of shifting implementation inquiry from simply finding out what works to also exploring where it works, why it works and how it works (Damschroder et al., 2009).

Creation of the interview guide was informed by the CFIR Constructs, the CFIR Guide to Interview Questions, and the CFIR Detailed Rationale for Constructs as part of the complete framework (Damschroder et al., 2009). The interview guide touched on all five core domains, with greatest emphasis on the outer setting. A primary focus of this investigation is the contextual factors of smaller urban settings that may facilitate or hinder drug checking implementation and access. In considering these points, the outer setting core domain provided a relevant focal point for guiding the interview guide.

Interview Format

Extending the relational approach beyond just the interview process, prior arrangements for interview participation were made that centered the experience of the interview participant within the research environment. All of the interviews with prospective service users were conducted face-to-face in private spaces at the host harm reduction agencies. This was likely a location that the prospective service users were familiar with as a place where they access

services. Because this may have been a familiar space for individuals, it was important to clarify that participating or not participating in the interview would not impact their experience accessing services at the site in the future and that the interviewer was not affiliated with the agency in any capacity. For the service implementers, an option was offered to participate in an interview face-to-face at the same time as the pop-up, on-site drug checking was taking place or over the phone at a time that was convenient for them. The option of a phone interview offered an alternative if their availability was limited during work hours or if they did not feel comfortable answering questions related to their place of work while on-site.

There were three interviewers, all who were members of the Substance team. All interviews conducted were one-on-one with one interviewer and one participant. Length of interviews ranged from 10 minutes to 70 minutes with an average of 34 minutes. For service implementers, questions asked in the interview related to expected experiences when implementing drug checking services in the future within their smaller urban community. For service users, questions asked in the interview related to expected experiences accessing future drug checking services within their smaller urban community. Interviews were audio recorded. To support anonymity, participants were given an anonymized and random code identifier. Interviews were then transcribed. During the transcription process, any personal or identifying information was removed and de-identified before the analysis process.

Ethics

Previous qualitative research conducted with Substance has ethics approval from the Health Research Ethics Board at the Island Health Authority (J2018-069). As this research project was conducted as part of the ongoing research, existing ethics were applicable, and an amendment were submitted to reflect the following proposed changes:

1. Revised target population to include service implementers in addition to service users.
2. Created two new interview guides – one for service implementers and one for potential service users to focus on smaller urban geographic location
3. Utilize vignettes as an interview instrument to illustrate different service model options.
4. Increase interview stipend from \$20 to \$25.

All of the existing ethics practices and protocols are relevant and were followed for this research.

Analysis

Data was analyzed following thematic analysis principles, which analysis as a method of exploring commonalities in values, experiences, ideas and meanings as they occur across a data sets (Braun & Clarke, 2012). Braun and Clarke (2006; 2012) outline a six phase approach to thematic analysis, which was followed for the analysis process. In sequential order, these steps include: familiarizing yourself with the data; generating initial codes; searching for themes; reviewing potential themes; defining and naming themes; producing the report (2006; 2012). Thematic analysis supports flexibility in analytical methods, which was practical for the needs of this study as analysis used a combination of inductive and deductive approaches (Braun & Clarke, 2012). The outer setting domain and related constructs of the CFIR presented sensitizing concepts on which the coding framework was developed, to bring familiarity of the research aim into the data coding and analysis processes (Bowen, 2019). From there, we worked inductively with thematic analysis to identify overarching themes, each with connecting subthemes to capture nuanced and diverse experiences of participants, which demonstrated important elements of the full data set, related to the accessing and implementing drug checking services within the smaller urban communities (Braun & Clark, 2006). The full transcript of each interview was transcribed, coded, and analysed. Coding and analysis was fully completed by the primary

research and NVivo coding software was used. Throughout the analysis process, quotes that illustrated emergent themes and sub-themes were identified to be presented in findings. The use of quotes is to center participant experiences, ground evidence, support the description of findings, and support analytic transparency (Moravcsik, 2019).

Trustworthiness

To establish qualitative rigour centered in validation and authenticity within the research findings, we looked to the Lincoln and Guba (1985) model of trustworthiness. This model identifies four criteria for both the researcher and the reader to evaluate the overall trustworthiness of a study wherein the quality, credibility, truth, and authenticity of research design, methods, and findings are considered (Creswell 2013; Cypress, 2017; Lincoln & Guba, 1985; Lincoln & Guba, 1986). These criteria include: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). When considering credibility, we sought to develop research design that would capture an accurate depiction of the knowledge and experiences offered by research participants.

For establishing transferability, we revisit goals of sampling and the approach to presenting findings. To goal of sampling strategies was to produce a study participant group that was both sufficiently large enough and with demographic diversity representation to be able to provide thick, rich data from a range of perspectives (Lincoln & Guba, 1986; Creswell 2013). To further establish transferability within the study, findings were supported with direct quotes from participants. These quotes, rich with detail and description directly from participant voices, were meant to support the reader to envision transferring the findings into another setting that may have similarities in context (Creswell 2013; Cypress, 2017).

Efforts to support the reader in evaluating dependability were guided by the description of an “audit trail” (Lincoln & Guba, 1986). To inform reader judgements on dependability, the audit trail provided our justification and intentions as researchers when developing the study design and research mobilization. We presented our motivations when identifying the study purpose, the identification of study populations, and in sampling (Thomas & Magilvy, 2011). In presenting this decision making process with transparency, the reader may make their own decisions on the appropriateness of chosen methods.

Lincoln and Guba (1985;1985) describe that to evaluate confirmability, the reader must be sufficiently guided through the establishment of the three previous criteria. The reader will make judgement on how the data have been interpreted to lead to conclusions. Within this study, strategies such as description of the audit train, as well as the pursuit and presentation of thick data were employed to support trustworthiness in the study.

Chapter 3: Findings

This chapter describes findings from the thematic analysis of the data, which are six overarching contextual factors that were described to be important for accessing and implementing drug checking services in the participating smaller urban communities. These factors include: community and political climate; lack of anonymity and experiences of stigma; social groups and personal relationships; resource availability; geographic profile; and criminalization. For each of these contextual factors, supporting thematic subcategories are presented which illustrate the ways in which these factors are experienced by the study populations.

“I don’t think it’s going to be an easy sell to change the community attitudes”:

Heterogeneous Community and Political Climate

There was robust discussion from service users and service implementers on the ways that individuals within the participating small and rural serving communities would react to drug checking and how that may impact the implementation and accessibility of services. Participants expected a diverse range of individual and community responses and opinions that would inform the overall social climate that drug checking services would be implemented within. In addition to the social climate of the participating communities, participants anticipated that the politics and directives of local policy makers, such as town councils, municipal governments, regional health authorities, and host organizations, would also be important for the implementation of services. The following section will cover four subthemes that demonstrate the expected heterogeneity of the social and political climates within smaller urban communities.

Resistant or Unwelcoming

Many participants expected some resistance from people within their town related to drug checking services being introduced. The expectation for opposition was often linked to experiences of community resistance to the existing harm reduction services. One service user describes their anticipation of community resistance as being rooted in the judgement they have experienced from the community when accessing other harm reduction services within their town, saying:

I think there is going to be resistance to [drug checking]. It's going to be awhile before they feel good about this place even being here... I watch people's reactions a lot of the time. It's hard for people not to be judgmental. They don't have to tell you they are judgmental. You can read it in their face, right? Even some of the doctors here. (Service user 2 from community 4)

Some participants described an unwelcoming social climate to be linked to ideas held by individuals within their small and rural serving community that harm reduction services enable substance use and are responsible for health and social outcomes that they perceive to be negative. One service implementer observed:

There's a community attitude that thinks we shouldn't exist. And whatever is happening related to the street and homeless people who are sleeping outside. None of it should exist. Of course, that's not realistic. They are going to be here, whether we have the drug testing or not. (Implementer 1 from community 1)

Another service implementer describes how they have witnessed this ideology be adopted by local influential groups, which gives the impression that it is held as a dominant opinion within the community. In an example given, the service implementer discusses how the town's Business Improvement Association - a group of local businesses with municipal support who

seek to enhance economic development and consumer experiences - has vocally opposed harm reduction programming within the community and would likely oppose drug checking services.

The service implementer describes the organization's opposition to harm reduction, saying:

Historically [small and rural serving town] is quite conservative... Our agency has somewhat of a stigmatized reputation in town through the local Business Improvement Agency. A lot of really stigmatized language around enabling and that kind of thing. Like, there wouldn't be a drug problem if it weren't for [harm reduction organization]... I think we all know that is not the real world and that's not how things work. (Implementer 1 from community 3)

Despite the anticipation of resistance from the community, this same service provider describes why this opposition wouldn't necessarily present a barrier for implementing drug checking, as it is something that harm reduction service providers have grown accustomed to navigating:

I don't think it's going to be an easy sell to change the community attitudes. But everybody's been dealing with that situation for a long time now. So I'd say it's not a hurdle that we don't know about. (Implementer 1 from community 1)

Other participants expected community opposition related to the proximity of drug checking services to other community resources and businesses. Because of the smaller geographic region occupied by small and rural serving communities, resources were often described as being centralized in one area of town. As a result, harm reduction services were sometimes located within close proximity to other community resources and businesses, such as schools, playgrounds, and grocery stores. The proximal location of harm reduction supports and

other community resource often prompted community apprehension and resistance, which was also expected with drug checking implementation. A participant described this, saying:

I think there'd probably be some hesitation [about drug checking services]. People likely wouldn't want it in their neighbourhood. They just don't want it in their own backyard. They don't want it near the schools. They don't want it, like near their stores, whatever, right? (Service user/implementer 2 from community 2)

Lack of Understanding, Agreement, or Interest

A social climate that was anticipated to be resistant or unwelcoming to drug checking services within the participating small and rural serving communities was sometimes attributed to a general lack of understanding about substance use. One service implementer described this, saying:

In every town, or outback little country town... even in the big cities, people still don't understand that people just didn't wake up realizing: "Oh, I'm going to be a drug addict for the rest of my life now." You know? They just think it's so wrong. (Implementer 2 from community 1)

Similarly, service users and implementers both discussed a connection between the anticipated community resistance to drug checking and a lack of understanding of or agreement with harm reduction principles and objectives. One service user discussed this, saying:

I think the community here didn't really want [harm reduction services] here... they just didn't understand what they're trying to provide. Because it does help and it kind of brings down crime and like, there's always going to be crime... they just need to understand more. Instead of just degrading us. They just need to know [about drug

checking]. And, it's hard to spread the word when people don't want to hear about it.

(Service user 5 from community 1)

A service implementer also describes an overall lack of understanding of harm reduction and substance use, saying:

I don't want to say the general community here, but there are, there are a lot of people who, in our community, have no interest in widening their knowledge on addiction or harm reduction. It's hard to say what it might be like in a different community. But I feel like those that want to learn have learned, and those who don't have any interest in learning aren't going to. (Implementer 3 from community 1)

In some cases, the lack of understanding and interest from the greater community was perceived as being a possible benefit when implementing drug checking services. A lack of interest was thought to possibly present a more neutral social climate for introducing a new service like drug checking, compared to an oppositional environment. One implementer explains:

I don't think that [drug checking] would impact the community in any capacity due to the fact that unless they were educated that it was happening here they probably wouldn't even know about it. It would just be included in the services we already provide. Most of them kind of turn a blind eye towards organizations like this. They like to see them in the community but they don't like to admit that they like to see them in the community. They don't really get too involved with us unless it becomes something political. That being said, like I said, I don't think that they would even invest the time to find out what our services were... (Implementer 2 from community 3)

Welcoming

Participants also considered that their small and rural serving communities may welcome drug checking services. A welcoming social climate was often discussed as a response to the wide reaching effects of the unregulated drug supply and the numerous losses that people within these communities have experienced. An implementer reflected on this, saying:

You know, while there is a lot of prejudice, but I think that the heart of a lot of people, they do understand that the opiate crisis is really awful. And that if there are things we can do to make it less awful, I think people are open to it. People know someone who does drugs, one way or another. And I think people are thinking about those people...

(Implementer 2 from community 2)

An Indigenous service user discussed how they expected their small and rural serving Indigenous community would welcome drug checking services despite the fact that many individuals within the town had been strongly opposed to substance use within the community in the past. This anticipated shift in community attitude related to substance use and harm reduction was attributed to the significant losses the community has experienced due to the unregulated drug supply. The service user described this, saying:

The community has lost quite a bit of community members to doing drugs and alcohol. So I think they would be pretty accepting of [drug checking]. And, you know, it was a dry community before. Like, where no alcohol was allowed either. But I think they would be accepting of it there. I think all the reservations down that way would be because a lot of families are tired of losing family members due to drugs and alcohol. (Service user 6

from community 1)

Politics and Policy

In addition to the social climate of a community, participants expected that local politics, governing bodies and related policies would significantly impact the implementation and accessibility of drug checking within the participating small and rural serving communities. Implementers specifically discussed their concerns based on their experiences implementing other harm reduction programming within their local political environments and anticipated similar responses with the introduction of drug checking services. One implementer described their experience with their local government, stating:

The City is trying to implement a bylaw amendment so that [harm reduction] services can't expand. That's what city hall is like. That's what we're working with. For us, these are basic human rights. They're not even providing that here. (Implementer 2 from community 2)

Later in the interview, this service implementer continued to describe challenges they experienced with local government when implementing harm reduction programming in their community:

The community is fucked. City hall is a piece of shit. It just wears you out. And it's just like, nobody cares. City hall is purposely making it harder for us to work. Until that changes, our jobs will always be hard. People will continue to die. (Implementer 2 from community 2)

Another implementer recognized the important role that local governments can play in raising public awareness and informing public perception. Their experience was rooted in navigating implementation barriers related to their local government's lack of support for harm reduction programming in their community. However, the implementer saw the potential for

local governments to influence public acceptability of drug checking services with their support for the programming, saying:

I know that the current Mayor of [small and rural serving community] is against drug use... I think that town councils, or city councils, can definitely make a difference in the acceptance of things like [drug checking] if they actually put their mind to it.

(Implementer 2 from community 3)

Some implementers cited the utility of supporting policies external to their local government so that implementation of drug checking and other harm reduction programming was not contingent on the support of the community's governing bodies. Specifically, implementers referenced Health Canada's exemption to the Controlled Drugs and Substances Act to establish Urgent Public Health Need Sites. This exemption was introduced within the context of the dual public health emergencies of COVID-19 and overdose related to the unregulated drug market to support the implementation and operations of diverse harm reduction programming, including supervised consumption sites and drug checking services (Sage et al., 2022). An implementer describes how drug checking implementation can be supported by external supporting policies when local governments may have opposition to the services:

As I understand, the exemptions come federally. I was worried that we would have a push back from our local government. Town council... could have whatever moral opinions they would have, but if we had an exemption, there's nothing you can do about it. So I feel good about that, I suppose. (Implementer 1 from community 3)

Regardless of the barriers and facilitators to implementing and accessing drug checking introduced by the positions of local governments, participants identified that the implementation of harm reduction initiatives is not always contingent on government support. Historically, harm

reduction has often been implemented in unsanctioned ways prior to government sanctioning (McNeil et al., 2014; McNeil et al., 2015). This was thought to be the eventual trajectory for drug checking within small and rural communities if local governments were steadfast in not supporting the services. One service user describes this, saying:

These [harm reduction] services are here as mandated by the government of BC. I mean, eventually one way or another [drug checking services] would've popped up even if they were not officially stamped by the government... due to the fact that there was a requirement for them in the community. The same as the way they popped up over in Vancouver with [drug user organization]... before there was officially sanctioned OPS's over there. (Service user 4 from community 3).

“It's such a small community, everyone knows each other”: Lack of Anonymity and Experiences of Stigma

Lack of anonymity in their small and rural serving community was the most commonly anticipated factor, discussed by prospective drug checking service users and by service implementers. Participants discussed personal experiences accessing and implementing various harm reduction services within the context of limited anonymity, and what implications that may have for the prospective access and implementation of drug checking services within the participating communities. The following section discusses three subthemes related to anonymity and stigma that research participants found to be important considerations for the implementation of accessible and relevant drug checking services within their small and rural serving community.

Within the Context of “Everyone Knows Everyone”

People had often grown up within their communities and, as a result, had expansive networks of acquaintances, friends and family. Additionally, participants who had moved into the small and rural serving communities, rather than growing up there, described being quickly identified as a newcomer and feeling surveilled by the community. In either scenario, a lack of anonymity was a common experience for participants. The phrase “everybody knows everybody” was frequently used to describe the social dynamics of living in a small and rural serving community and was an important consideration when discussing implementing and accessing drug checking services. In describing the history of relationships that one may develop in a small community, one service user described:

Well in this town everybody knows everybody, right? ... They know me personally. I grew up in this town since I was little. I know everyone. And so it's hard to be an addict in this town and hide it. You can't hide it. Because everybody knows everybody, right? It's tough. (Service user 3 from community 1)

A service implementer also discussed the network of relationships, saying,
People know people in town. It's a small community. You have people who've grown up here for generations, right? Like you've got family, you got friends. People want their drug use to be kept hush, hush. (Implementer 1 from community 2)

The extensive history of relationships that individuals develop in a small and rural serving community was also considered to be a factor that may impact the implementation and access of drug checking services. People working in service implementation roles described sometimes having pre-existing personal relationships with service users which results in an intersection of personal and professional relationships. An Indigenous service implementer discussed this, saying

It's unique in a difficult way for us here. It's very difficult for us to connect as harm reduction workers because a lot of the people we work with are our own family members. It's such a small community, everyone knows each other. I try and reach out to people all the time and they don't talk to people who work for [harm reduction organization] because we're all closely related here. (Implementer 1 from community 4)

Social Media and Sigma

Many participants discussed how social media was used by people in their small and rural serving community as a platform to have stigmatizing and judgemental conversations about substance use, people who use substances and harm reduction services. There was concern that these conversations would follow the introduction of drug checking services as they had other harm reduction services within the community. A service user discussed this, saying:

In a smaller area I feel like - I'm generalizing - but you might have more closed minded people as general public perhaps, compared to [large urban center]. Here, it's quite a small town, and any mention of, say, safe supply, OPS, always is a big debate on Facebook and chat rooms. I think maybe just in an urban center, there's more awareness and education around it. (Service user/implementer 2 from community 1)

Participants described how these public conversations sometimes target specific individuals or include identifying photographs of people, further perpetuating stigma and eliminating anonymity for people accessing harm reduction sites. Because these conversations had followed other harm reduction services within the participating communities, participants considered that public social media conversation could also threaten anonymity for those accessing drug checking services. A service user described their previous experiences with these scenarios, saying:

Stigma is attached to it a hundred percent and, and unfortunately we do see the downfall from that on a daily basis whether it's people driving by and just staring or people posting stuff on the internet. (Service user 5 from community 1)

Lack of Anonymity and Implications

Because participants were familiar both with extensive personal relationships and with experiences of stigma related to substance use within their small and rural serving communities, anonymity was described as an important factor when considering the implementation and access of drug checking services. For service users who valued anonymity related to their use of substances, there were anticipated limiting factors to accessing drug checking services within their community in a way that maintained their privacy. The locations slated to host drug checking services in each community were described as being widely recognized within the town as harm reduction service points. This widespread recognition brought reluctance for people to be seen at the site for fear of breaching their desire for privacy and anonymity. In addition, service users feared stigmatization if publicly recognized to be accessing harm reduction and drug checking sites. Some service user concerns related to anonymity were described as follows

I have a sister - I can't see her accessing drug checking. She won't come in here let alone get anything tested. She doesn't want to be seen in here by her friends. (Service user 8 from community 1)

Once you're seen here, people are judgmental. If they see you [drug checking]... I can guarantee you if I'm seen down the road later on somewhere or maybe they own a business... they treat you totally different than they treat the next person. (Service user 1 from community 2)

Service implementers also anticipated barriers for drug checking service users related to anonymity, based on previous experiences implementing harm reduction programming within their small and rural serving communities. As discussed previously, service implementers sometimes have pre-existing social or family relationships with service users, which eliminates the opportunity for service users to access services anonymously. Despite measures in place for maintaining confidentiality at service sites, this was still described as a deterrent to access for some service users at existing harm reduction sites and was expected to impact drug checking services as well. One service implementer describes how lack of anonymity in service implementer-service user relationships can result in hesitation among service users to access resources for fear that their families and friends would find out, particularly when there were differences of social and cultural values held around substance use.

It's just like really looked down on for people who are using substances, or drinking, or anything like that. Part of it is our cultural backgrounds. If I did meet up with someone in person they'd ask it to be very secretive. Like, put all the supplies in a different bag because they don't want their family members seeing what I'm giving them... Everyone knows I'm a harm reduction worker. So, some people are like "Oh everyone knows you're a harm reduction worker, we don't want to be seen getting stuff from you". People are so secretive about it and don't want their business being shared or their families finding out. (Implementer 1 from community 4)

In addition to anticipated stigmatization and desire to maintain privacy, there were numerous reasons why anonymity was important for service users in small and rural serving communities when accessing drug checking. Having personal substance use be more publicly known in a small and rural serving community where "everyone knows everyone" could

significantly threaten factors of daily life. Criminalization, housing insecurity, job insecurity, child apprehension and fragmented family and social relationships were all described as risks when anonymity is not protected. A service user described this, saying:

In a small town there's less [harm reduction] spots. I find it's designated three spots, so there's more traffic at those spots... If you're not someone that wants to even really be known as a drug user....it's hard to hide it. It's hard to remain anonymous if that's what you want. Which could lead to discrimination for getting rentals and jobs and stuff.

(Service user 4 from community 1)

Service implementers also discussed the importance of anonymity for people who access drug checking services in a small and rural serving community, saying:

People want to be known as people, not as people who use substances. Anonymity is quite important. It can also affect their livelihood, right? If certain people were to find out that other people were using substances it could affect their ability to get hired onto a job, which affects their financial stability, which affects the possibility of them being able to rent or buy a home. All kinds of factors here, the stigma behind it can be quite detrimental to a person's wellbeing. So, anonymity is extremely important. (Implementer

1 from community 4)

Discretion is important because people have their own jobs, or family. Maybe they're dealing with family issues like the Ministry. People who deal with the Ministry and stuff like that, like they don't want to come into our site because they're afraid. (Implementer

3 from community 2)

***“Here, the drug community is like one big tight knit family community”*: Benefits and Limitations of Close Social Groups and Personal Relationships**

While participants described the challenges of interconnected relationships and lack of anonymity that often comes with living in a small or rural serving community, these factors were also viewed to be beneficial. Some participants discussed how the social environments of small and rural serving communities were conducive to developing a tight-knit social circle and an extensive support network. Service users considered what these close personal relationships could mean for the implementation and accessibility of drug checking services within their communities.

Tight-Knit Social Communities and Implications

Service users described that living in smaller communities supported building close personal relationships and tight-knit circles that provided social connection, support and community.

It seems more like family here in [small town]. You know. We know each other more.

Everybody knows each other by name. (Service user 1 from community 4)

In a small town - even in a big town, but in a small town even more so, it's more noticeable if: “Hey, I didn't see this person for two days.” You know? And you clue in to some of that a bit quicker. It's a little more personable and closer. (Service user 7 from community 2)

The limited availability of harm reduction supports within small and rural serving communities was often discussed by participants. Related to personal relationships, service users observed that the restricted options for harm reduction services had an unexpected effect of

supporting social connection. When accessing harm reduction service points, individuals described frequently running into the same people who were also accessing services. These regular encounters supported developing personal relationships and strengthening social networks. Because harm reduction service points facilitated relationship and connection, they were often described to function as social gathering spaces in addition to service provision locations.

What goes through my mind when I come to this place is, I come here, number one, to socialize. Everybody's got their clique, their own circle... So I come here to socialize and see everybody. Here, the drug community is like one big tight knit family community that we have. (Service user 7 from community 1)

The tight-knit social groups in small and rural serving communities were perceived to be a factor that could support access to drug checking services. Like other harm reduction service points within their communities, drug checking services were recognized for their potential function as sites to socialize, build community and strengthen social relationships. Some service users reflected on the ways in which their position within a social network had previously facilitated access to drug checking and harm reduction services - both for themselves and for others within their circle.

It's easy to access [drug checking] here. A lot more, I would say, than a big city. Not everybody knows where to go in those big cities, right? Not everybody knows everybody. There has actually been quite a bit of new faces here, but they were warmly welcomed into the group. So they knew where to go and where not to go, kinda thing. (Service user 6 from community 1)

I find you end up coming here and - this is so cliché - but you become a little family... I would just come here because I didn't really know where to go. When I first moved here, I didn't know anybody... but everyone totally helped with finding everything from drug testing, to clothes, to getting on welfare and all that kind of stuff. (Service user 1 from community 1)

For some participants, the close social networks within their small and rural serving communities were also seen to present potential challenges when accessing drug checking services. Because the social groups within the communities were described as being tight-knit and like family, and the harm reduction points were seen as platforms for social connection, service users observed that it would be challenging to access the service if one is hoping to avoid social interaction or interpersonal conflict.

It's very cliquy. Right? In small towns, everybody's cliquy. Sometimes people won't even be able to come in the door because there's a beef going on and, you know, or so and so's in there... (Service user/implementer 1 from community 1)

“Everything kind of slows down here”: Limitations of Resource Scarcity

When considering accessing and implementing drug checking within their communities, the availability of resources to support the service was a common concern amongst prospective drug checking service users and implementers. Service user concerns were founded in lived experiences of navigating barriers related to limited resources at existing harm reduction services within their small and rural serving communities. The following section outlines three subthemes related to resource availability and the implications this has for service users and service implementers.

Being Deprioritized and Feeling Like an Afterthought

Participants discussed feeling as if their communities were an afterthought in the development and implementation of harm reduction services, and as a result, are often not offered the same services and resources that larger urban centers receive. A sequential timeline often described by participants was that innovations in harm reduction programming and service delivery, including drug checking, often begin in large urban centers and eventually, over time, make it to smaller communities. One service implementer described:

In smaller communities we see that things have a little bit longer time to come into effect than they do in larger communities. (Implementer 2 from community 3)

When comparing how they witnessed differences in service implementation in a large urban center where they previously resided to smaller urban center where they are currently located, one service user observed:

Everything kind of slows down here. Everything is sped up in cities... It really, really slows down here. (Service user 8 from community 2)

Larger urban centers were viewed as being prioritized as host sites for concentrated harm reduction programming and drug checking services due to their larger populations, while smaller communities were viewed as being deprioritized due to smaller populations. One service implementer stated:

I think that our community members should be valued enough that a service like [drug checking] is offered to them. It's shitty that smaller communities are often not given that opportunity. We see the lack of support and how it affects a person over the years. And, if we can improve on that it's just a win, win – for the client and us as an agency...

(Implementer 1 from community 3)

Resource Scarcity

Service users described resource scarcity at many of the harm reduction services locations that were slated to be hosting drug checking, a factor which was anticipated to present barriers to service accessibility once implemented. Experiences included witnessing sites operating at maximum capacity with limited operational resources, scaled back programming, and limited service provider availability. However, the most commonly cited concern related to resource scarcity was the limited hours of operation that many service sites offered, which was anticipated to impact the availability and accessibility of drug checking services. Service users described this concern, saying:

I haven't had any barriers stopping me from accessing the drug stuff that I need. Like the pipes or whatever... But through hard times I haven't been able to because they're closed... They almost need more places open longer, maybe. That's what I'd say for anybody who is doing [drug checking], to have places open longer. (Service user/implementer 1 from community 3)

Here, the OPS is closed at eight o'clock due to staffing, or whatever the case may be. Once the doors lock, that's it, we're on our own. We are on the street. (Service user 7 from community 1)

They aren't really open at nighttime. You know a lot of people work in the day. Like, I would always work till five. (Service user 2 from community 1)

Service providers sampled across all small and rural serving communities also expressed concerns about implementing drug checking services in environments that are already navigating

limited resources related to funding, physical space, and balancing numerous intersecting priorities. Additionally, numerous service implementers described personally operating at maximum capacity with teams that were overextended with little availability for additional responsibilities. One participant offered insights on envisioning drug checking implementation while juggling numerous significant priorities, saying:

Drug checking is obviously very important, but it's a new thing so they're kind of probably like, prioritizing it. Housing and COVID go higher than mailing in a sample of drugs. Right now, at least. Or, even how short everyone is for workers too. You want to balance it, but you also don't want to put more stress on one worker and potentially lose them, and then not be able to hire another worker. Or, having more staff, who knows if you're going to get more staff if you put a job posting. Like it's really, really hard right now. (Service user/implementer 2 from community 1)

Lack of Relevant Programming

Some participants discussed the lack of culturally safe programming for Indigenous service users at harm reduction sites within the small and rural serving communities. The lack of relevant programming was identified as a factor that would impact the way that some service users would access drug checking at the service sites. It was identified that relevant and culturally safe programming should be prioritized when implementing drug checking services to ensure equitable access for diverse demographics. When asked what should be considered when bringing drug checking into small and rural serving communities, one Indigenous participant who was both a service user and implementer commented:

I think definitely Indigenous perspective, because for a lot of us that need is not getting met. The city looked into this place last year and they and one of the suggestion was it needs more Indigenous specific services. (Service user/implementer 1 from community 1)

Later in the interview, the participant continued in discussing a lack of relevant programming, saying:

Especially the Indigenous specific stuff. A super huge amount of our clients are Indigenous and they're not getting any services of any kind... It's the same stuff as trauma informed services, really. But we're not informed. Nobody has skills to be doing the work here. How to make it more welcoming for us to use the drug testing. (Service user/implementer 1 from community 1)

One participating Indigenous service implementer held an Indigenous specific harm reduction role and hoped to integrate drug checking as part of the services being offered. The service implementer discussed the historic lack of harm reduction programming in the community and how it has recently begun to change:

We didn't really have a harm reduction team when I first started. We didn't have Naloxone at our office until... not too long ago. We really had to fight for it because we weren't offering that. We were never a [harm reduction] team. My position was only created this year. (Implementer 1 from community 4)

“A small community doesn’t necessarily mean less space. It could be widespread...in fields, and in the country”: **The Geographic Profile of Small and Rural Serving Communities**

Many participants identified that the geographic profile (such as geographic location, regional landscape, distance to travel to services, and availability of transportation) of their small and rural serving community and surrounding area was important to consider when

implementing drug checking services within their town. The geographic location of the drug checking services in proximity to the surrounding areas and availability of transportation to and from the site was anticipated to be an important factor in ensuring equitable access for those located in the small communities and any surrounding rural areas. The following section further explores three subthemes related to regional geography to be considered for the implementation of context specific drug checking services.

Areas of Concentrated Services

Within the participating communities, participants often described that harm reduction services, social supports and health services were located within close proximity to each other in a central location in the town. Because drug checking was proposed to be embedded within existing harm reduction service organizations in each community, drug checking services would also often be located within the concentrated service area. For some participants, the close location of services in a core area supported their access to services. One service user explained:

I find it's a lot easier to access services here. It's just convenient. You've got [harm reduction organization] here, and you got that place there... everything is close together. Just within a five block radius there's three or four places. (Service user 4 from community 3)

The concentration of drug checking and other harm reduction services to one central area was seen to present a barrier for those that lived outside of the town core, as many of the communities were described to be geographically expansive with surrounding rural areas. When considering challenges of accessing drug checking, one service user described previous experiences accessing harm reduction services in their small and rural serving community, saying:

A small community doesn't necessarily mean less space. It could be widespread...in fields, and in the country. A six kilometer gravel road, for instance, is what I had to go for a harm reduction kit. And that was in forty nine degrees this summer. So, I'm using the same needle I've been using for three weeks. It was barely going through. It's going to break off... It's hard sometimes. It's hard to access. (Service user 8 from community 1)

Connection to Rural and Remote Communities

Beyond the geographic location of drug checking within the participating towns, the profile of the areas surrounding the small and rural serving communities was frequently discussed as a factor that would be important for the implementation and access of drug checking. The communities in which drug checking services were to be implemented were described as being situated within networks of surrounding rural and remote communities where populations were less densely concentrated and dispersed widely across geographic regions. An individual's rural and remote location presented limiting factors to accessing harm reduction services and was anticipated to also present limiting factors to access to drug checking. One service user described:

You're going to have to keep [drug checking] within the town limits, right? It wouldn't be available to a rural community then, you know? A lot of people aren't going to ride their mountain bike for let's say, six miles from [rural area] to here, just to test their stuff.

(Service user 7 from community 1)

Despite the distance and geographic barriers, the participating small and rural serving communities were described to act as service hubs to rural and remote communities. It was common for individuals in surrounding rural and remote communities to travel into larger towns

where to access goods and services including harm reduction gear and programming. Because a commute for services was a common factor of living in rural and remote regions, participants expected that, when possible, individuals would travel to access drug checking services as well. Two service users described the way that small and rural serving communities act as service hubs to rural and remote communities, saying:

Back home in [rural community] ... there was like one harm reduction place at the time... So you had all the surrounding communities, like twelve or fourteen other communities... and everyone had to drive in every day. (Service user 1 from community 2)

You've got to remember [rural community], they come this way, right? A lot of people come from [rural community] to get dope and, and supplies. (Service user 2 from community 4)

An Indigenous service user described their own experience travelling from a rural Indigenous community to a smaller town to access harm reduction services otherwise unavailable to them:

Because before here, I lived in [rural Indigenous community]. When I came to town, I still came to [harm reduction site] during weekends. So, it kind of sucked that there wasn't something like this at that reservation. It was kind of hard to reach a place like this because there wasn't any near home. (Service user 6 from community 1)

Individuals travelling from rural and remote communities would access harm reduction sites both for themselves and to more widely distribute resources amongst their rural and remote community with less access to services. One service implementer described this scenario and what it could mean to extend the reach of drug checking:

We have a couple of [rural communities] where people come in from. They don't have access to harm reduction or any kind of testing, so they come in once a month, once every two months... and they do kind of a bulk pick up. They're kind of like secondary distributors for us actually. If they're in town and they're picking up a bunch of stuff, they can potentially have their substances checked while they're here getting supplies and they can bring that information back to wherever they're from. (Implementer 2 from community 3)

Transportation

Though commuting to harm reduction service hubs was viewed to be a common factor of living in rural and remote communities, individuals often described limited options for adequate transportation which presented challenges to accessing services. Participants who lived close to the service site described having diverse options for transportation, including walking, biking, and public transportation. However, those who lived outside of the central service area experienced an intersection of greater geographic distance from the service site and fewer transportation resources. Outside of the central service hub, public transportation was less available, walking and biking was less feasible, and there was an increased reliance on driving to access services. However, driving was often a limited option depending on one's possession of a drivers license and vehicle, or regular access to someone willing to give a ride. As a result, transportation was anticipated to be a barrier to accessing drug checking inequitably experienced by those within the expansive areas surrounding small and rural serving communities and those located in rural and remote areas. A service user described the anticipated challenges of transportation to access drug checking services:

[Smaller urban community] is spread out lots, right? And most of us don't... have a driver's license or a vehicle. It is a hefty walk. I've done it lots... because you don't really see many services over on the other side of town. (Service user 5 from community 2)

Though transportation was anticipated as a limiting factor for accessing drug checking, service users described their personal strategies for navigating transportation barriers to reach harm reduction sites in small and rural serving communities. Individuals were sometimes able to reach out within their social and familial network to arrange transportation, although these arrangements were sometimes seen as unsustainable, unreliable or infrequently available. Two service users describe these strategies, saying:

I never really lived on the reserve, but recently I have moved there... For some people, especially when using hard drugs, it's hard for them to come all the way [to harm reduction site] just to go back. It's a long walk. There's buses, or maybe another family member would drive them in while they're coming into town for groceries, or something. (Service user 5 from community 1)

I used to walk down here and home and down and home like twice a day. Now, I can't even make it one way. I actually tried to walk down today and I had to phone one of the neighbours and say, "Hey, I'll give you a point if you come and drive me over." And she said, "Oh fuck, I could really use a point. Sure, I'll be right there." (Service user 2 from community 4)

Recognizing the way that geographic distance and availability of adequate transportation options may present barriers to accessing drug checking, participants identified that strategies

could be integrated into the implementation of drug checking services to increase access and reach of services. These strategies included both bringing service users to the physical drug checking site by coordinating methods of transportation or bringing drug checking to individual service users through outreach strategies. One Indigenous service user commented on the experience of people living in small, rural and remote Indigenous communities having to travel for harm reduction services and a possible method to address geographic distance when implementing drug checking services:

There are users on the reserve as well and they have to travel all the way here just to get all the supplies and everything... Outreach would be a good thing to have to the reserve.

(Service user 5 from community 1)

Some harm reduction organizations that were projected to be hosting drug checking had already implemented strategies to offer their services more equitably to individuals experiencing limitations of geographic distance and restricted options for transportation. Participants discussed how these strategies would function to facilitate greater reach of drug checking services within the rural and remote communities:

Between the [two smaller urban communities] there is a number of smaller communities.

We see people coming from those communities to access harm reduction services...

[harm reduction organization] has outreach teams and I know that they also provide

harm reduction in [rural and remote communities] as well. (Implementer 2 from

community 3)

“I think they’d probably feel afraid to have drugs on them because of the police”: Impacts of Criminalization

The ongoing criminalization of drug use and people who use drugs was anticipated to be an important contextual factor for the access and implementation of drug checking within the participating small and rural serving communities. This reflects ongoing discussions about the significant harms that criminalization has caused for people who use drugs, including creating considerable challenges to accessing health and social support services and harm reduction programming (Ford & Bressan, 2014; Park et al., 2020). Service users commented on this:

I think they'd probably feel afraid to have [drugs] on them because of the police... Seeing police officers... or even somebody walking behind them could be a police officer, so that might stop them from wanting to come to these places to get their drugs tested, or go anywhere for that matter. (Service user 3 from community 2)

A service implementer also reflected on the way that criminalization may be a deterrent for some people to access drug checking services, saying:

Drug use is criminalized. So if you have drugs, anything you're doing with it is criminalized... People can't lose their jobs. They can't lose their licenses. They're not going to take risks that are going to do that. (Implementer 2 from community 2)

Chapter 4: Discussion

Drug checking has been explored as a resource to support individual autonomy and personal drug consumption practices, a tool for knowledge building and circulation, a method of community care, and resource for market level quality control interventions (Betsos et al., 2021; Larndner et al., 2021; Wallace, van Roode, et al., 2021). However, much of the research related to drug checking implementation and accessibility pertains to experiences within larger urban centers where drug checking resources are often more concentrated. This reflects an overall trend of harm reduction research, program development, and resource concentration that is centered around larger urban centers with limited relevancy for smaller urban setting, resulting in reduced opportunity for accessible and relevant harm reduction resources outside of larger urban regions (Lancaster et al., 2018; RIOAE, 2019). There have been ongoing calls from drug user organizations, coalitions, advocates, and service providers for greater availability of context-specific harm reduction services in smaller urban communities (Bardwell & Lappalainen, 2021; Canadian Drug Policy Coalition, n.d; Jozaghi & Marsh, 2017; RIOAE, 2019; Strike et al., 2015; Thomas & Scruton, 2014). In alignment with these calls, this research investigates the contextual factors that prospective drug checking service users and implementers experience within their smaller urban communities.

This analysis identified six core contextual factors were important to experiences of accessing and implementing drug checking services within smaller urban settings: community and political climate; lack of anonymity and experiences of stigma; social groups and personal relationships; resource availability; geographic profile; and criminalization. Earlier implementation research in the larger urban center of Victoria, BC on Vancouver Island found that many of these factors were significant to experiences within their communities as well

(Wallace et al., 2020; Wallace, van Roode, et al., 2021; Wallace, van Roode, Burek, Pauly, et al., 2022). This research does not seek to present an analysis of the similarities and differences between the two regions. Rather, it seeks to examine how these factors were experienced within the participating communities.

Most commonly discussed, the social and political climate of a community was anticipated to be a primary factor in the sustainability and accessibility of services. Participants anticipated that lack of support for harm reduction services from local policy makers and community members would result in limited public acceptability, resistance to, and stigmatization of the drug checking service. This finding aligns with previous research that has identified social and political resistance to harm reduction services to be an important factor for operating harm reduction services within a smaller urban setting (Mema et al., 2019). Further related to social context, service users frequently identified lack of anonymity within their communities where everybody knows everybody. Preservation of anonymity when accessing drug checking was also found to be an important consideration for drug checking services in the larger urban center of Victoria, BC, as some service users did not want friends, parents, or family to know about their drug use (Wallace et al., 2020; Wallace, van Roode, Burek, Pauly, et al., 2022). While this was also desired by service users in the smaller urban communities, it was further complicated by smaller community size where “everybody knows everybody”. There were various examples that participants described where there was hesitancy and even avoidance of accessing harm reduction services due to pre-existing familial or social relationships with the people in service delivery roles, which would jeopardize their desire to stay anonymous. As a result of the interplay of these social and political factors, service users described reluctance to be recognized accessing drug checking services for fear it could threaten factors of daily safety

and security, such as housing, employment, and personal relationships. These findings are consistent with previous research that describes reduced opportunity for harm reduction access and engagement in a smaller urban community with a harm-reduction adverse policy environment and limited anonymity (Bardwell et al., 2022; Greene et al., 2023). Though there were concerns about service accessibility within the context of these social and political factors, service users hoped that programs could be tailored to be responsive to these circumstances to support secure engagement, with examples of strategies that local harm-reduction services have implemented.

Limited availability of resources was a common consideration by both prospective drug checking service users and implementers. Participants described that for services to be accessible, hours should be extensive to meet a range of service user preferences and needs. This reflected findings of Wallace et al., (2020) from the larger urban center of Victoria, BC where individuals described preference for a wide range of operating hours to meet the diverse needs of service users. However, service users and service implementers from the participating smaller urban communities indicated that restricted resources would limit the way that services could operate. Participants described reduced hours of operation, lack of staffing, and lack of sustainable funding at existing harm reduction sites within the participating small and rural serving communities.

Within the participating smaller urban centers, restricted resources also limited the availability of demographic specific services, such Indigenous and youth programming. Service users and implementers anticipated that their previous experiences of limited resource availability at existing harm reduction sites within their communities could similarly impact the implementation of new drug checking services. Research has previously identified resource

scarcity to limit opportunities for people who use drugs to engage with harm reduction programming (McCutcheon & Morrison, 2012; Parker et al., 2012). While resource scarcity has commonly been described by service users and implementers across various geographic regions, the intersection with other factors related to smaller urban geographic location present circumstances unique to the smaller urban experience. For example, the geographic profile of small and rural serving communities was an important consideration for prospective drug checking service users and implementers. Participants discussed challenges related to travelling expansive geographic distances to access drug checking and harm reduction sites, with limited options for transportation. This, combined with limited or irregular hours of service hours due to restricted staff availability or funding, was anticipated to limit access to drug checking services.

While the identified contextual factors were often discussed in terms of how they present barriers to access or challenges to implementation, participants also described the ways that they may be important for supporting access. Health and harm reduction supports were often concentrated in one area in smaller urban geographic regions, and the projected sites for drug checking services in the participating communities followed this pattern. While this presented challenges to some, this also facilitated access for individuals that were located near the service hub or were already accessing co-located services with some regularity. Service users also described the tight-knit social networks that developed through accessing harm reduction service points, which was anticipated to support access to drug checking services as these spaces would feel like spaces for socialization as well as a harm reduction service. This finding aligns with earlier research which has identified social networks as a supporting factor for harm reduction service accessibility in smaller urban communities (McCutcheon & Morrison, 2014;).

This research highlighted that navigating contextual factors related to smaller urban geographic location were central to the experiences of those both accessing and implementing drug checking services. Implementation science theories and frameworks commonly position investigations of context as integral for understanding implementation outcomes (Nilsen, 2020). In the past, smaller urban harm reduction program implementation has often taken programming that is conceptualized and developed in large urban settings and directly transferred it into smaller urban settings without considerations for contextual adaptation (Green et al., 2023). Existing evidence has shown that health and harm reduction programming with limited contextual relevancy to service user needs results in service avoidance and reduced engagement by service users (Bardwell et al., 2022; Greer et al., 2019; Muncan et al., 2020). Smaller urban harm reduction and drug checking services that are contextually relevant are responsive to the diverse experiences, needs, and values to service users within the service region. Previous research has demonstrated that those with intimate experiential knowledge of living, using substances, accessing services, and implementing services in smaller urban locations can support the development and adaptation of responsive harm reduction services and specialized strategies to support access (Childs et al., 2021; Stewart et al., 2012). The external factors anticipated to be important for the accessibility and implementation of drug checking services within smaller urban communities, as identified by this research, can support services that are responsive to the values and experiences of those within the service areas. Participants described seeing this adaptation with other harm reduction services within their communities, such as outreach efforts or transportation for people who had to travel a great distance they access services.

Specific focus on the factors that influence drug checking accessibility and implementation is important as these services grow and expand to smaller urban communities.

Provincially, drug checking has been positioned as one element of a range of public health strategies to respond to the unregulated drug supply, though supporting policy for long-term, sustained services is currently limited (Hutchison et al., 2023; Sage et al., 2022). The number of drug checking services across North America has grown in response to the continuing unregulated market and elevated rates of overdose fatalities. In just one year (2022), BC saw an increase of nearly 33% in the number of organizations offering drug checking services, with most of these new organizations located outside of large urban areas (Hutchison et al., 2023).

While scale-up and of drug checking services is necessary for equitable opportunity to access services, the inclusion of the service within public health policy strategies risks effects of formalization and institutionalization that various other community based harm reduction initiatives have experienced (Campbell, 2016). For example, both Russell et al (2020) and Watson et al (2020) describe bureaucratic barriers related to the institutionalization of overdose prevention sites and supervised consumption sites that resulted in operational challenges and limited capacity to offer programming that was dynamic and responsive to the diverse range of service user needs and experiences. The research findings presented demonstrate the important role that contextual factors played in conceptions of drug checking accessibility and program implementation processes, based on lived experiences navigating these factors to access various harm reduction resources within smaller urban geographic regions. Within the environment of scale-up activities for drug checking services, program implementation that is responsive to these factors can root experiences of smaller urban service users and implementers and facilitate “enabling places” for drug checking. Duff (2011) describes that the value of a harm reduction material resources, such as drug checking instruments, “is less a property of the resources themselves and more a function of the diverse ways such resources are used” (pp. 342). In

relation to scale, Duff (2011) suggests that elements of enabling environments are not fixed and that scaling of these spaces is a process that involves consideration to contextual characteristics of environments. Drug checking programming that is dynamic in response to contextual factors present in smaller urban environments shifts focus beyond universal availability of drug checking technologies to the ways in which these technologies can be presented to support access to individuals with diverse experiences and needs across geographic regions.

The findings exploring the experiences of smaller urban drug checking service users and implementers also respond to previous research calling for equity-oriented approaches for responding to the unregulated market (Wallace, MacKinnon et al., 2021; Wallace, van Roode, Burek, Hore, et al., 2022). Though rates of overdose fatalities are proportionately similar across large and smaller urban areas in the province, the risk of fatality in the event of an overdose increases with smaller urban location (BC Coroners Service, 2022; Hu et al., 2022). Despite this, harm reduction resources are frequently concentrated in larger urban areas with limited availability of relevant and accessible services in smaller urban environments (McCutcheon & Morrison, 2014; RIOAE, 2019). Hu et al. (2022) proposes that inequitable access to harm reduction support services within smaller urban locations contributes to the disproportionate risk of fatality in overdose for those in smaller urban settings. To address barriers to accessing drug checking services, proportionate universalism has been proposed as a guiding equity-oriented implementation framework (Wallace, MacKinnon et al., 2021; Wallace, van Roode, Burek, Hore, et al., 2022). Under this framework, models of service delivery are adapted to be responsive to the unique needs of diverse populations to support widespread access (Wallace, MacKinnon et al., 2021; Wallace, van Roode, Burek, Hore, et al., 2022). As a route of mobilizing an equity-oriented implementation framework such as proportionate universalism,

this research highlights the contextual factors that were important to considerations of accessible and contextually relevant drug checking services within smaller urban settings. It should be noted, however, that contextual factors inform one domain of an individual's experience, and equity-oriented approaches to implementing drug checking services should additionally be responsive to individual identities as they are experienced in smaller urban locations.

With 20 of the 39 participants reporting Indigenous identity, concepts of service accessibility and implementation related to Indigenous identity as it intersects with smaller urban location was often discussed. The availability of specific Indigenous programming varied from community to community, but a common experience was that Indigenous harm reduction programming was limited or non-existent. Within these environments, there were considerations amongst participants that drug checking services introduced at the participating harm reduction sites may lack the support of culturally specific elements of implementation and operation. In addition to this, some Indigenous participants discussed how the proposed model of implementation would have limited reach to rural Indigenous communities and offered possible strategies to address this limitation, such as outreach teams or a mobile service that can travel to these communities. One Indigenous implementer discussed challenges of delivering harm reduction services within a smaller urban community where they have people with personal social and familial relationships with some people trying to access services, causing hesitation from these potential service users to engage due to lack of anonymity. The availability of culturally appropriate, relevant, and accessible drug checking and other harm reduction services is significant because Indigenous populations are disproportionately impacted by the harms of existing drug policy, the unregulated criminalized drug market and criminalization of substances and substance use. While First Nations represent 3% of BCs population, 14.7% of all overdose

fatalities in BC in 2020 occurred amongst First Nations individuals (First Nations Health Authority [FNHA], 2021a; FNHA, 2021b). This sets the overdose mortality rate among First Nations populations at 5.3 times the rate of non-First Nations populations in BC in 2020 (FNHA, 2021a; FNHA, 2021b). Further, 64.5% of the Indigenous population of BC lives outside of a large urban population center (RIOAE, 2019; Statistics Canada, 2016). A limitation of this research does not provide a specific analysis of Indigenous experiences within the participating communities and further research should be done with this focus to additionally support culturally appropriate and equity-oriented approaches to drug checking.

Limitations

The transferability of the study had some limitations. Data were collected within a unique policy environment which will vary provincially and internationally. Currently in BC, sanctioned drug checking implementation occurs either under a Section 56 exemption to Canada's Controlled Drugs and Substances Act or with an Urgent Public Health Needs Site (UPHNS) class exemption (Sage et al., 2022). However, the UPHNS class exemption is temporary and not supported across all provinces and both of these options are contingent on further logistical, regional and policy barriers. Therefore, participant conceptions of experiences accessing or implementing drug checking services are held within a policy climate that is temporary and region-specific while simultaneously exploring experiences that are specific to their context within a smaller urban region (Sage et al., 2022). In addition, all smaller urban communities from which participants were sampled are located on Vancouver Island which may bring specific factors related geography, transportation, and climate. Finally, though efforts were made to sample for demographic diversity, participants with gender diverse or non-binary identities were under represented in the sample, as well as participants under the age of 24. This may further

impede transferability in that the range of experiences represented within the findings has some limitations.

Further limitations were related to the limited application of CBR principles to certain elements of the research rather than acting as an all encompassing lens for all elements of the study. Principles of CBR lead the objective and motivation of the study, as previously discussed. However, these principles were less present in the analysis and knowledge translation phase. For a more complete rooting in these values, there could have been greater support for engagement with both service providers and service users in decision making related to the generation of data collection instruments, in the interpretation and analysis, and in building knowledge translation strategies that were meaningful and practical for the participating communities. Though principles of CBR were limited in these ways for this particular research element of the project, relationships with the participating harm reduction organizations continue to collaborate on developing and delivering drug checking services in Campbell River, Courtenay, Port Alberni, and Duncan. In these ongoing relationships, there is a reciprocal exchange of knowledge and skill development which supports the tailoring of drug checking programming to suit the needs and preferences of the service users and implementers in all participating communities.

Conclusion

Currently, the criminalized market, both in British Columbia and in North America, is unregulated and substances are of unknown composition to the consumer. Drug checking services are increasingly being implemented as a harm reduction response to the unregulated market, both in larger and smaller urban settings. Our findings confirm that as these services continue to expand in smaller urban settings, services should be adapted to be responsive to these settings to facilitate access and reduce barriers. I found that both service users and service

implementers expect to navigate specific factors related to the context of smaller urban geographic location, including: community and political climate; lack of anonymity and experiences of stigma; social groups and personal relationships; resource availability; geographic profile; and criminalization. Consideration to these factors can guide equity-oriented drug checking implementation within smaller urban settings.

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Appendices

Appendix A: Consent Form



***Implementing Innovations in Drug Checking:
A Harm Reduction Pilot in Response to Illicit Drug Overdose***

PARTICIPANT INFORMATION & CONSENT FORM

PRINCIPAL INVESTIGATOR AND STUDY TEAM:

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Background and Purpose of the Study

The purpose of this study, a drug checking pilot project, is to better understand drug checking as a potential harm reduction response to the overdose crisis. You are being asked to participate because you have expressed interest in discussing drug checking, and are over 19 years of age. If you are interested, we now invite you to participate in an interview about your views on drug checking. Your participation must be free and voluntary. You are free to stop at any time.

Location of Research

This research study will be done at the pilot project sites in Victoria and other communities on Vancouver Island.

Number of Participants

While the study will provide hundreds of drug tests the project also includes more detailed interviews with about thirty interested individuals.

Project Funding

This project is being funded by Health Canada's Substance Use and Addictions Program as well as the Vancouver Foundation.

What is Required if I Participate?

If you decide to participate in this part of the study, you will be interviewed by the researcher about your views on how drug checking services should best be implemented and evaluated. The interview is expected to take less than an hour.

What are the Possible Risks or Inconveniences of Participating?

Due to the nature of the interview, there is potential for participation to cause you emotional discomfort, stress, or social risks such as loss of status or reputation. To prevent or to address these risks, you will be advised to only share what you are comfortable with sharing; you have the right to refuse to answer any question you do not want to answer without consequence.

What are the Possible Benefits of Participating?

We cannot promise any personal benefits. However, you may feel satisfied because you are taking part in research that will inform responses to overdoses and other harm reduction services.

Do I Have to Take Part?

You are free to choose to participate or not. If you decide not to participate, your access to the drug checking pilot project and any other services will not be affected in any way. By consenting, you have not waived any rights to legal recourse connected to research-related harm. If you decide to participate but change your mind during or after the interview, you can let the research team know. We will stop and you can withdraw without any consequences or explanation. If you do withdraw either during or after the interview, we will stop the interview and ask what you would like us to do with the information you shared, either 1) using what we already collected or 2) destroying what we collected.

Will I be Paid for Taking Part?

As a way to thank you for your time and participation, you will be given \$25 as a thank you. This is not meant to influence your decision to participate. You will be provided the compensation before we begin the interview. You will keep the compensation even if you choose skip answering some questions or withdraw before the completion of the interview.

Confidentiality & How my Personal Information will be Used

In order to protect your privacy, your name will not appear in any documents that come out of this research. Any potentially identifying features will be removed prior to data analysis. Interviews are totally separate from the drug checking service and research and interviews are not linked to drug checking data. With your permission the interview will be audio-recorded and hand-written notes will be taken and you have the option to be interviewed without being audio-recorded. These recordings and the information you share with us will be kept confidential. Only the research staff will have access to this information. You should only share whatever information you are comfortable sharing. Your data will be safely stored in a locked cabinet at the University of Victoria for five years following the study after which any consent forms and data will be destroyed. Data from this study can be used in journal articles, reports and presentations. Your consent to collect your information for the purpose of this research project will expire when you complete the study.

Disposal of Data

Your data from this study will be disposed of in the following manner:

Data Source	How Destroyed	When Destroyed
Interview Audiofiles	Deleted	Immediately following transcription.
Transcript files	Deleted	These will be retained for 5 years after study completion. This is required by my funding agency.

Sharing of Study Results

A summary of the study results will be provided to you upon request.

Who Should I Contact if I Need More Information or Help?

The contact information for the Principal Investigators is provided on the first page of this Informed Consent Form. For questions or concerns about your rights as a research participant, please contact the Island Health Research Ethics Office in Victoria at (250) 370-8620 or email: researchethics@viha.ca.

CONSENT

Your signature below indicates that:

1. All sections of this Consent form have been explained to your satisfaction
2. You understand the requirements, risks, potential and responsibilities of participating in the research project, and;
3. You understand how your information will be accessed, collected and used.
4. All of your questions have been fully answered by the researchers.

Name of Participant (print)	Signature	Date
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Name of Person Administering Informed Consent	Signature	Date
--	-----------	------

Role of Person Administering
Informed Consent

A copy of this consent form will be given to you, and a copy will be kept by the researcher.

Appendix B: Demographic Instrument for Prospective Service Users

Implementing Innovations in Drug Checking: A Harm Reduction Pilot in Response to Illicit Drug Overdose: Survey (July 21, 2021)

Date: Site:

This questionnaire is voluntary and anonymous- thank you for filling it out! We would like to ask you some questions about yourself, and get your feedback on this drug checking service. You will be able to skip any question you don't want to answer.

You must be at least 19 to do this survey. What is your age?: _____

Skip

What gender do you identify with?

Male

Female

Non-binary

Transgender

Other: (_____)

Don't know

Skip

What ethnic group or family background do you identify with? (Check all that apply)

Indigenous (that is, First Nations, Métis or Inuk (Inuit)?)

White

South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)

Chinese

Black

Filipino

Latin American

Arab

Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai, etc.)

West Asian (e.g., Iranian, Afghan, etc.)

Korean

Japanese

Other — specify

Don't know

Skip

Have you completed any of these? (check all that apply)

High school diploma

High school equivalency

Registered Apprenticeship, trades certificate or diploma

College, CEGEP or other non-university certificate or diploma

University certificate, diploma or degree

Currently a student (enrolled in a training, certificate, diploma, or degree program)
Other
Don't know
Skip

What community are you living in (Victoria, Campbell River, etc.)?
List: _____
Don't know
Skip

What best describes where you live?
Supportive or subsidized housing
Own house/condo/townhouse
Rent apartment/house/townhouse
Family or friends place
Hotel/motel
Rooming house or SRO (e.g., single room occupancy)
Shelter or hostel
Drug treatment facility
Public place, street, park etc.
Other: (_____)
Don't know
Skip

What is your main source of income?
Wages or Salary including from own business
Disability Benefits
Welfare/Income Assistance
Employment insurance, worker's compensation
Pension, old age security or guaranteed income supplement
Investments including retirement funds
Informal employment (e.g., drug trade, panhandling, binning, etc.)
No Income
Other: (_____)
Don't know
Skip

What was your total personal income last year? Please give your best guess.
Less than \$5000
\$5,000 to less than \$10,000
\$10,000 to less than \$15,000
\$15,000 to less than \$20,000
\$20,000 to less than \$40,000
\$40,000 to less than \$60,000
\$60,000 to less than \$80,000
\$80,000 to less than \$100,000

\$100,000 and over
Don't know
Skip

These next few questions are to find out what would work best for drug checking. You can skip any question.

Who should work there? (check all that apply)
People testing the drugs (Instrument technicians)
Peers
Harm reduction workers
Nurses
Counsellors
Social workers
Other: _____
Don't know
Skip

Have you accessed our in person drug checking service?
Yes
No

These first few questions are about drug use. You can skip any question.

How often do you use illicit/illegal drugs?
Daily (How many times per day usually?: _____)
Three or more times per week
Once or twice per week
Once in a while, not every week
Occasionally, not every month
Rarely, not every year
Never
Don't know
Skip
If never, skip questions on drug use.

Do you have a drug of choice? (List all responses. Refer to list and code)
-No
-Tobacco
-Alcohol
-Cannabis (including shatter or extracts)
-Crystal Meth ("Jib" "Side")
-Heroin
-Fentanyl

- Pharmaceutical opioids (Dilaudid (dillies), Oxycodone/Percocet, Morphine/MS, Contin, Codeine / T3's / T4's)
- Cocaine (powder) or crack (Rock)
- Prescription amphetamines (Dexedrine, Vyvanse, Ritalin etc)
- Ecstasy (MDMA/MDA/MDEA, "Molly" "M")
- GHB
- Psychedelics (LSD ["acid"], magic mushrooms, 2C-x)
- Dissociatives (ketamine, PCP)
- Solvents (sniffed glue, gasoline, etc)
- Methadone
- Benzos (eg. Xanax, Valium, Ativan, etizolam "Tizz", zopiclone)
- Other: (_____)
- Don't Know
- Skip

Have you used any of these in the past 12 months? (Check all that apply)

- Needle distribution program
- Methadone, suboxone, or other opioid substitution therapy
- Supervised injection or consumption site
- Treatment services for drug or alcohol use, such as long or short-term live-in treatment, outpatient treatment, group counselling, traditional healer or elder counselling.
- Other: _____
- Don't know
- Skip

Appendix C: Demographic Instrument for Prospective Service Implementers

Implementing Innovations in Drug Checking: A Harm Reduction Pilot in Response to Illicit Drug Overdose: Survey (July 21, 2021)

Date: Site:

This questionnaire is voluntary and anonymous- thank you for filling it out! We would like to ask you some questions about yourself, and get your feedback on this drug checking service. You will be able to skip any question you don't want to answer.

You must be at least 19 to do this survey. What is your age?: _____

Skip

What gender do you identify with?

Male

Female

Non-binary

Transgender

Other: (_____)

Don't know

Skip

What ethnic group or family background do you identify with? (Check all that apply)

Indigenous (that is, First Nations, Métis or Inuk (Inuit)?)

White

South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)

Chinese

Black

Filipino

Latin American

Arab

Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai, etc.)

West Asian (e.g., Iranian, Afghan, etc.)

Korean

Japanese

Other — specify

Don't know

Skip

Have you completed any of these? (check all that apply)

High school diploma

High school equivalency

Registered Apprenticeship, trades certificate or diploma

College, CEGEP or other non-university certificate or diploma

University certificate, diploma or degree

Currently a student (enrolled in a training, certificate, diploma, or degree program)
Other
Don't know
Skip

What community are you living in (Victoria, Campbell River, etc.)?
List: _____
Don't know
Skip

What best describes where you live?
Supportive or subsidized housing
Own house/condo/townhouse
Rent apartment/house/townhouse
Family or friends place
Hotel/motel
Rooming house or SRO (e.g., single room occupancy)
Shelter or hostel
Drug treatment facility
Public place, street, park etc.
Other: (_____)
Don't know
Skip

What is your main source of income?
Wages or Salary including from own business
Disability Benefits
Welfare/Income Assistance
Employment insurance, worker's compensation
Pension, old age security or guaranteed income supplement
Investments including retirement funds
Informal employment (e.g., drug trade, panhandling, binning, etc.)
No Income
Other: (_____)
Don't know
Skip

What was your total personal income last year? Please give your best guess.
Less than \$5000
\$5,000 to less than \$10,000
\$10,000 to less than \$15,000
\$15,000 to less than \$20,000
\$20,000 to less than \$40,000
\$40,000 to less than \$60,000
\$60,000 to less than \$80,000
\$80,000 to less than \$100,000

\$100,000 and over
Don't know
Skip

Appendix D: Recruitment Email and Handbill



Email invitation to Recruiters

We are part of a University of Victoria study evaluating drug checking services. **We are seeking to hear from people who access services and from people who work to offer services at your agency about their thoughts on drug checking.**

Interviews are open to anyone with thoughts on drug checking, including people who use/d substances, their family or friends, and/or people who make or distribute substances.

Participants will be provided \$25 to take part in a face-to-face interview which will last less than an hour.

Participants will be asked about their thoughts on drug checking services as well as their experiences with substances. Participants will be advised to only share what they are comfortable sharing and have the right to refuse any question(s) they do not want to answer, and/or to withdraw from the study at any time. Participation is confidential.

Being interviewed is voluntary and there is no obligation to participate.

We will provide you with recruitment handbills which you can distribute to any interested participants. **Interested participants can contact the researchers directly via information provided on the handbill.**

If you have any questions, please get in touch with the researchers:

Abby Hutchison, abbymhutchison@uvic.ca (250-893-3462)

Bruce Wallace, barclay@uvic.ca (250-721-6275)

CHECK IT OUT!

We are seeking to interview a small number of people about drug checking services. The interview will be conducted by the same researchers from the University of Victoria who are working with the drug checking project.

You will be provided \$25 to take part in the face-to-face interview which take about 45 minutes.

Interviews will take place at:

We will ask your thoughts about drug checking services as well as your experiences with substances. We advise you to only share what you are comfortable with sharing. You have the right to refuse to answer any question(s) you do not want to answer, and/or to withdraw from the study at any time. We'll keep your identity confidential.

Being interviewed is voluntary and you are under no obligation to participate. Also, services and relationships at this site and agency will not be affected in any way whether you choose to participate or not. If interested, please tell the researcher. Our contact information is below.

Bruce Wallace, barclay@uvic.ca (250-721-6275)
Abby Hutchison, abbymhutchison@uvic.ca (250-893-3462)



Appendix E: Interview Guide for Prospective Service Implementers

I would just like to remind you of your rights as a participant: Your participation must be free and voluntary, you can skip any question at any time, refuse to answer any question, or even end the interview or withdraw from the study at any time. In the final reporting no identifying information about you will be included; all data will be de-identified and reported in aggregate form that is expected to include direct quotes but these will have no identifiers attached to them.

1. Please describe the agency that you work at and your role at the site?
2. This interview is to ask people about their thoughts about drug checking, so maybe a good question to start with is to ask you how you would describe drug checking as a service? How would you describe drug checking to someone who has never heard of it? **(Do you have previous experience with drug checking?)** What do you think about drug checking?
3. Because drug checking is often offered in larger urban centers, we are interested in looking at factors that might support or present barriers to implementing drug checking in small or medium sized communities.
 - a) What circumstances might be unique trying to access or implement harm reduction services in a small or medium sized community? **(transportation or distance to site? Stigma? Anonymity?)**
 - b) In your experience, what are things that make implementing harm reduction supports in a small or medium sized community difficult? What are things that help?
 - c) What should be considered when implementing new harm reduction services in a small or medium sized community?
4. What does the host organization think of the drug checking services? What are some possible concerns or possible expectations?
5. Why is/will drug checking being offered at this site? In what ways do you think offering drug checking services will be successful or unsuccessful in this setting? **(In a shelter, in an OPS, etc.)**
 - What other sites or setting do you think drug checking could integrated in to successfully in this community? **(shelter, OPS, etc)**
6. Knowing the diverse range of drugs and people who use drugs:
 - a) Who do you see accessing the site? What about other populations surrounding people who use drugs? **(People who sell, manufacture, or distribute drugs? People who support people who use drugs such as friends or family?)**
 - i) **What about people who use drugs but don't access harm reduction supports?**
 - b) What barriers or facilitators would different people experience?
 - c) What are you hoping that people will gain from this service **(can you give some examples)?**

7. As one of our final questions, we are wondering about how larger context may impact this service and how it can work well or not.

- a. When you think about the overall context – outside of these walls - what do you think has impacts how the **service is implemented?** (**prompts: stigmatization and criminalization**)
- b. What about any facilitators that help? (**prompts: enabling policies such as exemptions**)
- c. What needs to be considered when implementing services such as this?
- d. Similarly, what do you think has impacts on how the **service is accessed by people?**
What are facilitators that help people access service?

Appendix F: Interview Guide for Prospective Service Users

I would just like to remind you of your rights as a participant: Your participation must be free and voluntary, you can skip any question at any time, refuse to answer any question, or even end the interview or withdraw from the study at any time. In the final reporting no identifying information about you will be included; codes will be used rather than names, all data will be de-identified and reported in aggregate form that is expected to include direct quotes but these will have no identifiers attached to them. Also, interviews are totally separate from the drug checking service and research and interviews are not linked to the drug checking service or data.

1. What organization will be offering drug checking services? What is your opinion of this organization?
2. This interview is to ask people about their thoughts about drug checking, so maybe a good question to start with is to ask you how you would describe drug checking as a service? How would you describe drug checking to someone who has never heard of it? **(Do you have previous experience with drug checking?)** What do you think about drug checking?
3. Because drug checking is often offered in larger urban centers, we are interested in looking at factors that might support or present barriers to accessing drug checking in small or medium sized communities.
 - a) What circumstances might be unique trying to access harm reduction services in a small or medium sized community? **(transportation, lack of anonymity in small community, stigma, hour of operation of services?)**
 - b) What are things that make accessing harm reduction supports in a small or medium sized community difficult? What are things that help?
 - c) What do service providers need to consider for people accessing services when implementing new harm reduction services in a small or medium sized community?
4. In this community, drug checking could be embedded within existing services **(OPS, shelter, etc.)**:
 - a) Why do you think drug checking will be offered at this site?
 - b) In what ways do you think offering drug checking services from within the existing service **(OPS, shelter, etc.)** will be successful or unsuccessful in this setting?
 - c) What are the ways that accessing drug checking at this site **(OPS, shelter, etc.)** presents challenges for you to access the service?
 - d) What are the ways that accessing drug checking at this site **(OPS, shelter, etc.)** supports your ability to access the service?
5. What are you hoping that you will gain from this service **(can you give some examples)**?
6. Knowing the diverse range of drugs and people who use drugs:
 - a) Who do you see accessing the site? What about other populations surrounding people who use drugs? **(People who sell, manufacture, or distribute drugs? People who**

support people who use drugs such as friends or family?) What barriers or facilitators would different people experience?

- b) What do you think that people will gain from this service (**can you give some examples**)?

7. As one of our final questions, we are wondering about how larger context may impact this service and how it can work well or not.

- e. When you think about the overall context – outside of these walls - what do you think has impacts how the **service is accessed?** (**prompts: stigmatization and criminalization**)
- f. What about any facilitators that help? (**prompts: enabling policies such as exemptions**)
- g. What needs to be considered when implementing services such as this?
- h. Similarly, what do you think has impacts on how the **service is accessed by people?** What are facilitators that help people access service?