

“People Knew They Could Come Here to Get Help”: An Ethnographic Study of Assisted Injection Practices at a Peer-Run ‘Unsanctioned’ Supervised Drug Consumption Room in a Canadian Setting

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Abstract People who require help injecting are disproportionately vulnerable to drug-related harm, including HIV transmission. North America’s only sanctioned SIF operates in Vancouver, Canada under an exemption to federal drug laws, which imposes operating regulations prohibiting assisted injections. In response, the Vancouver Area Network of Drug Users (VANDU) launched a peer-run unsanctioned SIF in which trained peer volunteers provide assisted injections to increase the coverage of supervised injection services and minimize drug-related harm. We undertook qualitative interviews ($n = 23$) and ethnographic observation (50 h) to explore how this facility shaped assisted injection practices. Findings indicated that VANDU reshaped the social, structural, and spatial contexts of assisted injection practices in a manner that minimized HIV and other health risks, while allowing people who require help injecting to escape drug scene violence. Findings underscore the need for changes to

regulatory frameworks governing SIFs to ensure that they accommodate people who require help injecting.

Keywords Drug users · Harm reduction · HIV risk behaviors · Supervised injecting facilities · Peer-based interventions · Risk environments · Ethnography

Introduction

In Canada and internationally, injection drug use is associated with high levels of preventable morbidity and mortality [1–3], and in particular is a major driver of the global HIV/AIDS and hepatitis C (HCV) epidemics [4, 5]. Over the past decade, increased attention to social determinants of health has led to a greater recognition that these health harms are produced by social, structural, and environmental factors [6–9]. In this regard, people who use drugs may be understood to be structurally vulnerable to drug-related harm [10], in that the social arrangements embedded in the organization of our society render them vulnerable to harm [11]. Central to the emerging social ecology of injection drug use has been the development of the “risk environment” framework as a heuristic for delineating the social-structural production of vulnerability among people who inject drugs (IDU) [6–8].

In the broadest sense, risk environments are conceived as social or physical spaces in which all factors exogenous to the individual (i.e., social situations, structures, and places) interact to produce or reduce drug and health harms [7, 8]. The risk environment framework conceptualizes risk and harm as the product of the *interplay* between types of environments (i.e., social, physical, economic, and political) operating at differing levels of environmental influence (i.e., micro-, meso- and macro-environmental levels) [6–8].

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While the accompanying heuristic is useful in unpacking how intersecting social, structural, and environmental factors produce drug and health harms, it was intended less as a system of categorization than a means to give primacy to the recognition that contextual forces shape risks and harm [12, 13]. In so doing, the risk environment framework resists prevailing models of public health governance characterized by neoliberal governmentality by emphasizing the need for safer environmental interventions—that is, interventions that seek to alter social, structural, and environmental determinants of risk [14].

The distribution of harm within injection drug-using populations varies in accordance with population characteristics and the unique social, structural, and spatial factors that shape injection drug use in any given locale [7, 15, 16]. Within this context, risk may be understood to be variegated, in that specific injection drug-using populations are more or less vulnerable to harm, often as a result of where they inject [17–19], how and with whom they inject [20–23], and contexts within which they exchange sex [24, 25]. An understanding that risk is variegated underscores the heterogeneity within the injection drug-using population and, subsequent to that, draws attention to how drug-related risks vary across the diverse subject positions occupied by IDU. Given these inequities in the distribution of harm, there is a need for increased attention to how social, structural, and spatial factors render specific subpopulations of IDU vulnerable to drug-related harm.

Over the past decade, considerable evidence has mounted demonstrating that people who require help injecting (i.e., those who are injected by another person) are one such subpopulation that is disproportionately vulnerable to drug-related harms [26, 27]. Requiring help injecting is associated with HIV and HCV infection [26–30], with epidemiological data suggesting that people who require assistance injecting are approximately twice as likely to acquire HIV and HCV in comparison to those who self-inject [26, 29]. In addition, a range of health and social harms have been documented among people who require help injecting, including elevated rates of syringe-sharing [28, 31–33], injection-related infections [34, 35], overdose [36, 37], and violence [38].

Ethnographic and qualitative research has drawn attention to how these assisted injection practices are shaped by social, structural, and environmental factors and, in turn, how these factors reflect larger material inequities which in turn shape the distribution of harm among injection drug-using populations. Given that women are disproportionately represented among those who require help injecting [27, 33, 34], researchers have largely concentrated on how assisted injection practices are shaped by gendered power relations within intimate partnerships and drug scene milieus. For example, Bourgois et al. [21] found that assisted injection experiences among young women

entering the drug scene in San Francisco's Haight-Ashbury neighbourhood were shaped by everyday violence—that is, normalized violence within the drug scene that is rendered invisible due to its pervasiveness [21, 39]. Older male injectors competed with one another to control these young women, notably by initiating them to injection drug use. Male injectors then assumed control over the resources that the women generated (typically via street-based sex work) and the injection process, often forbidding women from self-injecting or being injected by anyone else under the threat of physical violence [21]. Accordingly, these women were especially vulnerable to HCV and HIV given that the prevailing cultural logics of these partnerships held that the men injected themselves first before injecting their female partners with the same syringe [21]. Studies undertaken in the United Kingdom [40, 41], Canada [22, 42], and elsewhere in the United States [43] have documented similar gender dynamics surrounding assisted injection practices.

To date, few interventions have been developed to reduce risks among drug users who require help injecting. In many regards, existing legal frameworks constitute a barrier to the development of interventions for this population. In Canada, legal experts have noted that provisions in the Canadian Criminal Code may expose individuals administering injections to criminal liability [44] and it is likely that many other jurisdictions impose similar liabilities. Specifically, those administering injections may face several charges, including: (i) possession of a controlled substance (i.e., for possessing the drug prior to the injection); (ii) administering a noxious substance with the potential to cause harm (i.e., administering the injection); and, (iii) assault, manslaughter, or murder in the event of injury or death [44].

Accordingly, existing interventions for individuals who require help injecting are primarily oriented toward teaching them to self-inject [45–48]. These interventions have primarily encouraged individual-level changes in risk behaviours by promoting messages designed to facilitate improved venous access during the injection process, such as 'tie off to find a vein'. Some safer injecting education campaigns have included in situ demonstrations of injecting techniques (i.e., showing how to inject during the injection process but stopping short of administering the injection) and have been shown to increase the capacity to self-inject [45–48]. However, such individually-focused safer injecting education programs cannot always overcome barriers to self-injecting, underscoring the need for safer environment interventions responsive to these barriers.

Vancouver, Canada has a longstanding injection drug use epidemic, which is heavily concentrated in the city's Downtown Eastside neighbourhood. This approximately

ten-block neighbourhood has been characterized in media and public discourses as a metonym for urban disorder [49] and is the home to one of North America's largest open drug scenes [50–52]. Approximately 5,000 IDU live in this neighbourhood [51] and it is estimated that roughly 40 % of this population sometimes requires help injecting [26]. Assisted injections are commonly administered in outdoor drug scene venues by 'doctors' (i.e., individuals who administer injections, typically in exchange for money or drugs [53]). In 2003, North America's only sanctioned supervised injection facility (SIF) opened in the Downtown Eastside in response to overlapping HIV, HCV, and overdose epidemics among the local injection drug-using population [54]. While this safer environment intervention has been shown to reduce an array of harms, notably HIV risk behaviours [55, 56] and overdose deaths [57, 58], it operates under an exemption to the Canadian Controlled Drugs and Substances Act (CDSA) that imposes operating regulations stipulating that clients must self-inject [59]. Accordingly, this regulation is situated within the broader legal interpretation of peer injecting, and has been cited as a significant barrier to safer injecting for this population [22, 56, 59, 60].

In recognition of the continued harm experienced by people who require help injecting, the Vancouver Area Network of Drug Users (VANDU), a drug user-led organization in the Downtown Eastside made up of more than 1,000 current and former drug users, has undertaken efforts to facilitate safer injecting among this population. Over the past decade, this organization has launched several harm reduction programs with the goal of driving changes in drug and health policy [47, 61, 62]. From 2005 to 2009, the organization operated a pilot outreach initiative, the Injection Support Team, through which trained peer volunteers patrolled the Downtown Eastside and provided education, support, and, in some cases, assisted injections to people who require help injecting [47]. In this regard, the organization and peer volunteers considered the potential criminal liabilities of administering assisted injections against the harms associated with not providing this service (e.g., HIV and HCV transmission, violence, etc.), and determined that this action was needed to alleviate social suffering.

After the cancellation of this program due to a lack of funding, VANDU opened an 'unsanctioned' supervised drug consumption room (DCR) that accommodated people who require help injecting (services have since been expanded to accommodate anyone who injects drugs). Assisted injections are administered by peer volunteers (i.e., experienced injectors who have completed training in CPR and overdose response) and in accordance with a strict harm reduction policy. This policy prohibits the sharing of drugs and injection paraphernalia (e.g., cookers,

cottons, and syringes) and mandates peer volunteers to adopt universal precautions (e.g., wear latex gloves, disinfect the injection site, and discard syringes in sharps containers). It is recommended that, in the event that the person has recently abstained from using or drugs are from a new or unfamiliar source, peer volunteers inject them with a smaller dosage of drugs. In addition, peer volunteers are prohibited from receiving compensation for providing assistance injecting.

While individuals may receive assisted injections at supervised injection facilities in Geneva (peer administered) and Barcelona (nurse administered) [63], the impact of providing assisted injections within a supervised drug consumption facility has yet to be studied. Given the prevalence of assisted injection practices in Vancouver and elsewhere, and the fact that this population is disproportionately vulnerable to harm, there is an urgent need to identify strategies that have the potential to mitigate these harms [61]. We undertook this study to explore how people who require help injecting experience assisted injection support within this unsanctioned DCR, with an emphasis on how these assisted injections differed from those received within the street-based drug scene. In this regard, we were concerned with how this safer environment intervention reshapes the social, structural, and spatial contexts of assisted injection practices, and thus how it affects experiences of structural and everyday violence. Finally, we sought to situate this intervention within the larger context of the local drug scene, while linking our micro-level observations to meso- and macro-level policy and practice recommendations.

Methods

This study is based upon ethnographic fieldwork conducted at VANDU from September to December 2011. Members of our research team have collaborated with VANDU over the course of the past decade [46, 60]. We maintained close communication with the organization's Board of Directors over the course of this project, although the study was conducted in an arm's length manner and participants were assured that their participation was confidential. We obtained approval from the Providence Healthcare/University of British Columbia research ethics board prior to commencing this research.

The lead author (RM) conducted more than 50 h of observational work at VANDU to document the operation of the unsanctioned SIF, including the observation of assisted injections as well as 23 formal interviews and numerous informal interviews over the course of this study. Because community drug use patterns vary over the course of the month, typically intensifying in the days following

the disbursement of social assistance payments [59, 64], observation sessions were conducted on varying days of the month. Observation sessions lasted 2–3 h in length and brief fieldnotes were recorded in a research log during the course of observation sessions and later elaborated. Informal interviews were conducted with people at VANDU during the course of participant-observation and notes regarding these conversations were likewise recorded in a research log. Verbal consent was obtained prior to informal interviews using an approved consent script.

Formal, semi-structured interviews were undertaken with VANDU members by two interviewers (RM & WS). We aimed to recruit participants with varying levels of use of and exposure to VANDU's supervised drug consumption services, including peer volunteers. In recognition of the disproportionate drug and health harms experienced by women in the local drug scene, we aimed to oversample women relative to their representation among the VANDU membership by ensuring that approximately half of semi-structured interview participants were women. Interview participants were initially recruited through referral via a VANDU staff member so as to identify individuals who had long-term experience using at the unsanctioned SIF, with the remaining participants recruited through the course of observational activities. Most interviews were conducted at a research office located less than a block away from VANDU, while the remaining interviews were conducted in private spaces at VANDU. All participants provided informed consent prior to their interview and received a \$20 CDN honorarium for participating in semi-structured interviews.

We used an interview topic guide to facilitate discussion regarding the social, structural, and spatial factors that shaped assisted injections at this supervised DCR. This interview guide addressed a range of topics, including but not limited to: (a) factors that shaped assisted injection practices within the local drug scene; (b) how the unsanctioned DCR shaped assisted injection practices, particularly in comparison to other injection settings; and, (c) the social context of assisted injections performed within this unsanctioned DCR. Additional lines of inquiry were informed by participant-observation and informal interviews with VANDU members. Importantly, observation of and informal interviews with many interview participants were conducted prior to their semi-structured interview and helped to facilitate discussion of specific factors that shaped their drug use practices. Interviews were audio recorded and ranged from 25 to 75 min, although the majority were approximately 45 min in length. Interviews were transcribed verbatim and reviewed for accuracy.

Our analysis focused on how providing help injecting in a regulated environment and in accordance with harm reduction practices shaped drug and health harms by exploring the contrast between assisted injections administered at VANDU

and those in other drug scene venues. The overall goal was to situate this intervention within the larger context of the local drug scene, with an emphasis on how restructuring the social, structural, and spatial contexts of assisted injection practices affects everyday violence and structural vulnerability. We began analysis while conducting fieldwork, with team members meeting regularly to discuss data collection and emergent themes. We developed a preliminary coding framework by drawing on our discussions and extracting a priori categories from the interview topic guide and fieldnotes. We imported data into NVivo qualitative analysis software [65] to facilitate data management and analysis. Data were analyzed thematically using an inductive and iterative process, and we revised the coding framework during subsequent team meetings. We also drew upon the risk environment framework and concepts of everyday violence and structural vulnerability when interpreting our findings to advance beyond thematic descriptions. We presented preliminary findings to the VANDU Board of Directors to obtain feedback and enhance our study's interpretive validity.

Results

Sample Characteristics

We conducted semi-structured interviews with 23 participants, including 11 women and 12 men. Participants were an average of 40 years of age (range 27–59 years), with 35 % self-identifying as a member of a visible minority (i.e., Aboriginal, African-Canadian, or Indo-Canadian). Seventeen participants reported that they had injected drugs within the past thirty days, with the most frequently injected drugs being heroin [12], hydromorphone [8], and cocaine [6]. Fifteen of these participants (11 women, 4 men) reported that they regularly required help injecting, including 8 who always required help injecting (6 women, 2 men). Eight participants (3 women, 5 men) worked as peer volunteers at VANDU and regularly provided manual assistance injecting. Peer volunteers quoted in this paper are identified as such, while all other participants quoted are service recipients. We did not collect demographic information on people observed or informally interviewed, although, with the exception of the larger proportion of women, we believe that our interview sample corresponds to the demographics of those observed using the unsanctioned SIF.

'You're Probably Excluding 25 % of the Population': Social and Structural Barriers to Safer Injecting

Participant accounts highlighted how the legal framework governing the operations of the sanctioned SIF, which

prohibits assisted injections due to the potential for criminal or civil liabilities [44], served as a structural-environmental barrier that constrained access to that facility and produced inequities in access to harm reduction services. We found that highly vulnerable drug users, and in particular women and people with disabilities, were disproportionately represented among those who required help injecting. A primary feature of participant narratives was that barriers to self-injecting were *embodied* and *intersubjective*. Many participants reported that they were unable to self-inject due to poor venous access (e.g., “faint”, “shot” or “shitty” veins) or physical impairments (e.g., being “shaky” or “paralysed”), which they attributed to their gender, disability, and long-term injection drug use.

I have to use this one [motions to vein in left arm] but because I'm left handed it's very hard for me. I take this one drug [for Parkinson's disease] to try to steady [myself] 'cause I'm shaking so much. [Participant #9, Male, Caucasian]

My veins are really shitty, okay, from years of using. Like, I used in the eighties and it was heroin and the proper cocaine. I used to shoot up right and then, later, it was just that my veins are so shitty. [Participant #14, Female, Aboriginal]

Several women reported that they were primarily injected by ‘boyfriends’ (i.e., intimate partners who controlled the money and drugs that they generated through sex work). It was evident that, as noted elsewhere [21, 23], these assisted injection practices were shaped by gendered power relations that subordinated women, restricted agency, and produced harm. These women stated that they did not know how to self-inject, were unable to, or liked feeling ‘close’ to their ‘boyfriends’, although their controlling ‘boyfriends’ ultimately determined when, how, and with whom they injected. One of these women, matter-of-factly, described how injecting at the sanctioned SIF was not an option due to this policy:

If you can't inject yourself, you can't use [at Insite]. You have to inject yourself and I can't inject myself because I have... my veins are very faint. I need my boyfriend [to inject me]. [Participant #4, Female, Caucasian]

Formal and informal interviews with this woman’s ‘boyfriend’ emphasized how he controlled the injection process and restricted her agency, underscoring how rules prohibiting assisted injections at the sanctioned SIF unintentionally reinforce the subordination of women within the local drug scene.

Me and my wife, we stick together. We get high together and Insite don't allow that. I'm the only one

who shoots my wife up. She can't shoot herself and she won't let no one else shoot her up. Actually, I won't either because this is our little thing...She brings in the money and I take care of keeping the drugs. [Participant #18, Male, Caucasian]

Many participants expressed that they were “angry” or “upset” that this policy excluded people who cannot self-inject. Several of these participants characterized this policy as discriminatory. These participant accounts illustrate how the legal framework governing the sanctioned SIF inscribed a neoliberal subjectivity on that facility by requiring that clients be autonomous, independent drug users capable of self-injecting [66]. Given that the resulting operating procedures assumed such a neoliberal drug-using subject, it was felt that this rule overlooked the above-mentioned physical and intersubjective factors that prevented self-injecting. Accordingly, many participant accounts emphasized those who were denied access to this facility due to their subject position. For example, one participant with paralysis on his left side explained:

They won't assist me and I told them about that. I said, You're probably excluding 25 percent of the [injection drug-using] population here with that rule. Oh, I'll assist you. We'll show you how to do it. Well, what about a blind person? How do you assist them? [Participant #8, Male, Caucasian]

‘God, Why Can’t You Just Do this For Me?’: Limits of Safer Injecting Education

Approximately half of our participants reported at least one attempt to self-inject at the sanctioned SIF in an effort to exercise greater control over the injection process or “get off the street”, especially those participants who did not have a reliable ‘doctor’ or were homeless or marginally housed. Nurses at that facility provided safer injecting education, including, as one participant described, “pointing the needle on the vein” (i.e., aligning the syringe with a vein so that an individual only has to register the vein and depress the plunger) in an effort to facilitate self-injecting. However, participants articulated how the effectiveness of individually-focused education was constrained by physical barriers to self-injecting, such as disabilities or active opiate withdrawal. Participants variously described unsuccessful attempts to self-inject at the sanctioned SIF as “frustrating” and “annoying”. One participant explained:

When you're sick and you have to fiddle around, you're not getting it [the vein]. You're frustrated, so then it's making it harder. I'm getting the nurse, you know, kind of...frustrated. Frustrated both of us because I can't get it and I'm like, God, why can't

you just do this for me? [Participant #16, Female, Caucasian]

These unsuccessful attempts to self-inject at this facility led participants to leave in search of a ‘doctor’ elsewhere or to generate income to replace drugs that had coagulated and could no longer be injected. For example:

If I’m really dopesick [experiencing opiate withdrawal] and I can’t hit myself, I need the help or I can’t get better. I’ll sit there [at the sanctioned SIF] and cry for hours and hours...I end up throwing out my dope and having to go back to work [i.e., sex work]. [Participant #20, Female, Caucasian]

‘In the Alleyways There’s Treacherous People’: The Everyday Violence of Assisted Injection Practices

The vast majority of participants described experiences of being injected by ‘doctors’ in street and off-street settings when attempts to self-inject failed. Some participants reported that they had an established relationship with a ‘doctor’, while other participants reported that they would ask “a friend” or “somebody that they don’t know” to inject them. In either case, participants reported that they were at the mercy of ‘doctors’, particularly when ‘dope-sickness’ (i.e., opiate withdrawal) increased their urgency to inject so as to alleviate withdrawal symptoms and thus reduced their capacity to assess risks. Our analysis of participant accounts revealed an overarching narrative of everyday violence that underscored how assisted injection practices were shaped by intersecting social and structural factors that increased vulnerability to violence, exploitation, and infectious diseases. Three key themes emerged from our analysis of these accounts.

First, requests for payment (i.e., money or drugs) by ‘doctors’ exploited the desperation of participants, especially those experiencing ‘dopesickness’. The latter were especially vulnerable given the urgency to alleviate the extreme physical discomfort associated with opiate withdrawal. Given the precariousness of work opportunities (most participants generated income through exchange of sex for money or drugs to sustain their drug habit and low-level drug dealing), this was an ongoing source of anxiety and led some participants to take additional risks to generate the necessary income (e.g., less control over the conditions of sexual transactions due to the immediate need to alleviate withdrawal symptoms and sustain drug habit). One participant described the unequal power relations between ‘doctors’ and injectees:

[Providing] part of your drugs or you have to pay them...If I have it, I don’t care but, if I don’t, then obviously it’s a little bit upsetting because they won’t

do it without it...The guy just wanted me to give him five bucks and I didn’t have it so then they wouldn’t do it. [Participant #7, Female, Caucasian]

Second, participants described how receiving an assisted injection within the local drug scene, as one participant explained, “can be life and death”. Participants variously described how they had been “grinded” (i.e., coerced for drugs), “robbed”, “beaten” and “raped” when seeking assistance injecting, particularly when those encounters took place in alleyways or other marginal spaces. It was evident within participant accounts that women were especially vulnerable to violence because of overriding social norms (e.g., gendered power relations) that view women’s position in street-based drug markets as a means to generate resources (i.e., via sex work) but otherwise subject them to high levels of interpersonal violence and exploitation. Participants frequently described the violence directed toward women:

One member of ours was blind and her husband ended up in jail. He used to always fix [inject] her. She was getting beat up, you know, drugs taken off of her... She needed someone to help [her inject] and in the alleyways there’s treacherous people. [Participant #13, Female, Caucasian, Peer Volunteer]

Finally, participant narratives demonstrated how assisted injection practices within the local drug scene occurred within social and environmental contexts that increased vulnerability to infectious diseases (e.g., receptive syringe sharing, injecting in unhygienic conditions, etc.). In many cases, participants did not carry harm reduction paraphernalia and relied on ‘doctors’ to provide these materials, thereby increasing the likelihood that they would be injected with a previously used syringe. Several participants also described how ‘doctors’ would “switch rigs” when administering an injection (i.e., replacing syringes with potentially used ones with lesser amounts of drugs, drugs of unknown purity, or other substances, such as water).

They would go and ask somebody [to inject them on the street]. That person would either outright rip them off or switch their rigs on them and they would end up being infected [with HIV or HCV]. [Participant #19, Male, African-Canadian, Peer Volunteer]

Several participants reported that they were injected in unsanitary conditions, such as alleyways or behind dumpsters, and that ‘doctors’ did not take the precautions necessary to minimize the risk of contracting an injection-related infection (e.g., clean the injection site with alcohol prior to administering the injection).

“It’s Safer for People”: Establishing Safer Injecting Routines

Our findings illustrate how, by removing structural-environmental barriers to constrain access to the local SIF (i.e., rules prohibiting assisted injections), VANDU mediated access to supervised injection services for people who require help injecting and, in turn, was critical in establishing safer injecting routines. Several participants, including some who had previously received assistance from the Injection Support Team, had regularly received help injecting since this service was launched and had integrated it into their regular injecting routines. These participants arrived at VANDU at regular intervals to receive the injections necessary to ward off dopesickness. During observation sessions, many people were observed visiting this facility for the first time. Although VANDU did not openly publicize that they were providing these services, information regarding this facility circulated within drug user peer networks.

The majority of participants described how it was “easy” or “convenient” to receive assistance injecting at VANDU because the peer volunteers were trained and readily available. Someone wishing to receive “an assist” generally checked in at the front desk upon entering the facility and, once a space in the injection room was available (up to four people are permitted in the room at a time), would proceed to the room along with a peer volunteer. Some participants reported that they continued to receive assistance injecting in other settings because of situational factors (i.e., proximity to where drugs were purchased, need to alleviate dopesickness, etc.) but VANDU was generally identified as a “preferred” injection setting.

Participants reported that they were able to exercise increased control over resources and the injection process because peer volunteers were available to help them inject. In this regard, VANDU reshaped social relationships characterized by unequal power relations by decreasing dependence upon ‘boyfriends’ and ‘doctors’. For example, several women who were typically injected by their ‘boyfriends’ were observed receiving assistance injecting from peer volunteers, which increased their individual agency and control of resources and the injection process.

‘People Knew they Could Come Here to Get Help’: A Legitimate Place for People Who Require Help Injecting

Our findings highlight how, beyond fostering safer injecting routines, VANDU served as a *legitimate place* for a population that was so often *out of place*. A prominent feature within participant narratives was that macro-social/

structural (e.g., poverty and homelessness, drug laws) and meso-social/structural factors (e.g., policing practices, rules governing the sanctioned SIF and emergency housing) restricted their access to safe indoor and outdoor environments. Especially among those who were homeless or marginally housed, participants lacked access to places that they could occupy without the risk of harassment or arrest for drug use. In contrast, VANDU served as an alternate environment that participants could occupy because it not only accommodated their diverse subject positions (e.g., as drug users, people who require assistance injecting, etc.), but also recognized them *as members*. Accordingly, participants variously emphasized that VANDU was a place “for drug users” and a place where they could turn to “for help”.

So many people were doing injections in the alley in our back parking lot and in front of VANDU...A lot of times, it was people that were getting injected by people. It’s not right... Insite, they can’t go there...People knew that they could come here to get help. [Participant #23, Female, Caucasian, Peer Volunteer]

In addition, participants articulated how having access to an indoor, off-street environment enabled them to escape the violence and exploitation that shaped the local drug scene, and in particular assisted injection practices. While assisted injection practices within the local drug scene were characterized by everyday violence, this intervention fostered a safer environment that mitigated these risks. Our findings demonstrate how, in spite of the fact that interpersonal conflicts sometimes occurred (several minor arguments were observed), prevailing social norms in this peer-run environment limited these disruptions, with peer volunteers frequently intervening to resolve disagreements. Furthermore, our observations indicate that acts of violence and exploitation associated with assisted injections within the local drug scene (e.g., “grinding”) did not occur within the unsanctioned SIF because injections were performed by peer volunteers and in accordance with the organization’s harm reduction policy. Accordingly, participants commonly reported that they “felt safe” at VANDU because, in the words of one participant, members “take care of their fellow man”.

They come here because it’s safe. They know they’re not gonna be ripped off. They know they’re not gonna be asked for money. [Participant #13, Female, Caucasian, Peer Volunteer]

It’s safer for them to come here and have somebody here [inject them] than to go in the alley or find somebody in the alley that could switch a rig and inject them with something else. [Participant #12, Male, Aboriginal]

Additionally, during observation sessions, it was evident that many participants frequented VANDU as part of an informal strategy to limit their overall exposure to the everyday violence of the street-based drug scene. Some participants seemed to leave only when opportunities to “score” drugs or generate income arose, or when the facility closed. For these participants, who generally occupied low status positions within the local drug scene, VANDU was a stable source of protection and support.

‘Keepin’ the Diseases from Being Spread’: Enabling Harm Reduction Practices

Our data highlight how the interplay between organizational policy (i.e., harm reduction policy), social relationships (i.e., peer volunteer support), and physical environment (i.e., ‘legitimate space’ to be injected) created a micro-injecting environment conducive to harm reduction practices. Of particular significance is that the harm reduction policy implemented by the organization, as well as the role of peer volunteers in reinforcing this policy, prevented VANDU from becoming a ‘shooting gallery’ (i.e., venues where IDU gather to inject, in many cases with the requirement that they pay the ‘gallery operator’ in money or drugs to gain entrance) [67]. On the contrary, participant accounts, as well as our observations, illustrated how assisted injections were administered in accordance with the organization’s harm reduction policy.

I’ll wear gloves because I know they bleed a lot and they’re hard to hit... I might use two or three rigs ‘cause I’ll only stick a needle in somebody twice. If I miss on two pokes, I’ll put it in the new rig. [Interview #15, Male, Caucasian, Peer Volunteer]

Notably, participants stated that these harm reduction practices were critical to limiting injection-related infections and the spread of infectious diseases. For example:

You’re at someone’s mercy when you’re asking them to help fix you. A lot of people contracted diseases that way. As far as I know, this is the one and only place where you can get assistance and not have to worry about paying for it or getting your rigs switched...[VANDU is] definitely keepin’ the diseases from being spread. [Participant #5, Male, Caucasian, Peer Volunteer]

However, in spite of these advances in minimizing health risks, participants continued to engage in unsafe injection practices outside of VANDU’s operating hours (the facility is opened from 10 am to 8 pm on weekdays and 4 pm to 8 pm on weekends). In these cases, participants either relied on ‘doctors’ in the street-based drug scene or attempted to self-inject. In both cases, participants

were at an increased risk of violence, exploitation, or health complications. One participant described an injection event that ultimately led to an injection-related infection:

Two nights ago...That time I cried [laughter]...I was just in a lot of pain and I was really sick. I couldn’t find anybody to help me anywhere and it was like eight thirty at night. I was just frustrated and upset and I just burst into tears. You know, I’m supposed to be a grown up but I wasn’t apparently that night...I ended up muscling [i.e., injecting directly into the muscle]. [Interview #11, Female, Caucasian]

“I Would’ve Been Dead”: Overdose Prevention and Response

Whereas assisted injections are associated with increased overdose within the local drug scene, no overdoses were observed during the course of our fieldwork and, according to staff and peer volunteers, only two overdoses (both non-fatal) have occurred since this supervised DCR was launched. Interestingly, and consistent with local discourses on supervised injection services, overdose prevention and response were identified as primary goals of providing assisted injections. Several participants offered that this service reduced the risk of overdose:

It [receiving assistance injecting at VANDU] minimizes the overdose risk right away. You’re looking at probably, if not zero, very close to zero casualties. [Participant 11, Female, Caucasian]
If we overdose, there’s help. There’s countless benefits [of receiving assistance injecting at VANDU]. [Participant #20, Female, Caucasian]

Our findings indicate that this facility mitigated overdose risks and complications by intervening to reshape the local risk environment. Participant accounts, as well as our observations, underscored how assisted injections are social processes that are *negotiated between injector and injectee*. Accordingly, and in keeping with the organization’s harm reduction policy, these social processes reinforced key overdose prevention strategies, such as ‘halving your hit’ and ‘not using alone’. Whereas these overdose prevention strategies typically emphasize individual-level behaviour changes, participant accounts illustrate how, in the context of assisted injection practices, these strategies are relational and, in turn, may be supported by social-environmental interventions. For example, several participants reported that peer volunteers insisted that individuals ‘halve their hit’ (i.e., be injected with approximately half of the typical amount of drugs) to minimize “problems” (i.e., overdose risks).

A person wanted to shoot [be injected] and [the peer volunteer] was just like, “No, I don’t think so. That’s too much. I’m not going to assist you, if that’s what you’re going to do. If you want to cut it in half, I’d be more than happy to help you. But I’m not going to – that’s almost like a death sentence...You might as well be playing Russian roulette.” I think the person, because they wanted the shot so badly, agreed. [Participant #8, Male, Caucasian]

Furthermore, although overdoses were rare at VANDU, peer volunteers were trained to respond by contacting emergency medical personnel and, if necessary, administer naloxone. One participant described how this increased safety by contrasting overdose responses at VANDU with those in other injecting environments:

I’ve seen this happen so many times that somebody would go down [overdose]...Everyone’s pretending it’s a seizure. I’ve seen other people go through their pocket rather than do CPR on them. [The unsanctioned SIF] cleans up all that. [Participant #7, Female, Indo-Canadian]

We interviewed one woman who had experienced an overdose at VANDU, who reported that peer volunteers saved her from certain death:

They were on it. They guy ran and he got me help right away...I just remember looking up and having them all standing around me...[Had I not been at VANDU] I would’ve been dead...Hundred percent I would’ve died. [Participant #20, Female, Caucasian]

Discussion

In summary, our findings underscore how people who require assistance injecting, and especially women and people with disabilities, are vulnerable to an array of health harms due to intersecting social and structural factors that constrain access to the sanctioned SIF. We found that, by providing assisted injections in a regulated environment and in accordance with a harm reduction policy, this peer-run ‘unsanctioned’ supervised drug consumption facility mitigated these barriers, and in turn was functioning to establish safer injecting routines and provide an escape from everyday violence. Furthermore, our findings emphasize how VANDU disrupted social practices that produce HIV and HCV risks, while reinforcing overdose prevention messages.

Interventions targeting people who require help injecting have traditionally encouraged individual changes in risk behaviours, while overlooking social and structural

forces that produce risk behaviours [6–9]. In this regard, traditional interventions may be characterized as a manifestation of neoliberal governmentality, in that they emphasize individual responsibility while overlooking factors that constrain individual agency and thus the ability of individuals to adopt harm reduction measures [68]. Consistent with the risk environment framework [6], we found that rules prohibiting assisted injections were a structural-environmental barrier that constrained access to the sanctioned SIF. Our study builds upon the literature demonstrating that social, structural, and environmental factors restrict individual agency and limit the effectiveness of individually-focused harm reduction messages and programs [17, 42, 66, 68]. Importantly, while this rule prohibiting assisted injections has previously been identified as a structural-environmental barrier to the sanctioned SIF [22, 59, 69], our study more closely examined how this is intertwined with particular subject positions.

Our study suggests supervised injection services promulgate neoliberal subjects (i.e., autonomous, responsible individuals capable of self-injecting) to the detriment of alternate drug-using subjects (i.e., people who require help injecting). Accordingly, the distribution of harm within the injection drug-using population is uneven because of ideological assumptions embedded in the legal frameworks that govern supervised injection services. We found that specific subpopulations (i.e., women and people with disabilities) were vulnerable as a result of intersubjective injection practices (i.e., being injecting by a ‘boyfriend’) or embodied subjectivities (i.e., having poor venous access or difficulty injecting due to disability). While acknowledging that the potential of harm reduction programs to reinforce governmentality by regulating and controlling the bodies of drug users [70–72], greater attention is needed to how harm reduction programs emphasize *particular bodies* at the expense of others. Furthermore, given that drug use is shaped by social processes, it is critical to also consider how these affect access to harm reduction services.

In this context, our findings indicate that changes to supervised drug consumption facilities are urgently needed to accommodate a wider range of drug-using subjects, and thereby minimize structural vulnerabilities to drug-related harm. Specifically, there is a need for changes to the existing legal frameworks (e.g., the Canadian Criminal Code, and parameters of the CDSA exemption) and regulations governing the operations of supervised drug consumption facilities so that they are able to accommodate assisted injections. It may be argued that the current prohibition of assisted injections undermines the right to security of person for those who cannot self-inject. In Canada, while provisions within the Criminal Code currently prohibit assisted injections and potentially lead to criminal liabilities [44], reforms to these provisions may be

necessary to comply with national human rights law (i.e., Charter of Rights and Freedoms), which upholds the right to security of person. Given that the Supreme Court of Canada has upheld the right of the sanctioned SIF to operate on the basis that its closure would contravene this right to security of person [73], it would appear that assuring this right is paramount.

In addition, our findings demonstrate that drug user-led organizations can play a central role in the delivery of harm reduction programs and may, in fact, be highly responsive to emerging trends within the drug user community. Over the past decade, VANDU has launched various harm reduction programs in an effort to increase harm reduction coverage [61, 62, 74], particularly for those who encounter structural and programmatic barriers to accessing mainstream services. Several ‘unsanctioned’ programs drove changes in public health policy that may not have otherwise been possible, including the opening of the sanctioned SIF [62, 74, 75] and expansion of syringe exchange programs [62, 76]. Although several programs were subsequently discontinued or reorganized (with the local health authority in some cases assuming greater control), our findings suggest that some IDU may be more receptive to peer-based service delivery models and the wider adoption of peer-based approaches should be considered. One possible explanation is that, in contrast to harm reduction programs operating under ‘provider-client’ models, whose power dynamics potentially attribute non-adherence to harm reduction practices as an individual failure [77], people who require help injecting may more readily respond to peer volunteers who share similar life experiences [78, 79].

Consistent with previous research [80], we found that this supervised drug consumption facility increased safety compared to street-based drug use settings, and thereby allowed this population to reduce exposure to everyday violence. Researchers have increasingly noted that, due to intersection of pervasive poverty and drug law enforcement, drug-using populations have been left without spaces that they can legitimately occupy [81–83]. Within this context, fixed site harm reduction initiatives, such as supervised drug consumption facilities and syringe exchange programs, have been variously identified as “refuges” or “safe havens” for injection drug-using population [80, 84–86]. In particular, Fairbairn and colleagues [80] have previously found that a SIF allows women to escape the male-dominated culture of the street-based drug scene, and thus minimize their risk of violence or exploitation when injecting. Our findings similarly emphasize how this supervised drug consumption facility served as a critical environmental support that, in many cases, created stability for participants. An increased appreciation of the importance of this micro-environment in minimizing a

range of harms, and not only unsafe injecting practices, underscores the importance of providing broader environmental support alongside supervised drug consumption services, including drop-in shelter services.

Finally, our findings demonstrate that drug-related risks were minimized when assisted injections were performed by trained peer volunteers and in accordance with a harm reduction policy. In this regard, our findings indicate that these risks are less produced by the assisted injections per se than by the social, structural, and environmental contexts that shape how they are administered. Whereas power imbalances shape assisted injections in drug scene venues, which in particular place women at an increased risk of violence and receptive syringe-sharing [21, 40, 41, 43], VANDU provided ready access to safer assisted injections and thus decreased dependence on ‘boyfriends’ and ‘doctors’, while also facilitating the establishment of safer injecting routines. Critical to the success of this intervention was the fostering of positive relationships between injectors and injectees that reinforced harm reduction practices. For example, peer volunteers reinforced overdose prevention messages by negotiating the amount of drugs injected, and thereby minimized overdose risks. Social relations have previously been identified as a potential site for intervention to promote harm reduction [14] and yet few peer-based harm reduction interventions have been evaluated. Following Rhodes and colleagues [14], our findings indicate that intervening within existing social relations to encourage collective “social responsibility” is effective in mitigating drug-related harms and future efforts would be wise to consider doing so through the adoption of peer-based approaches.

This study has several limitations that should be taken into consideration when interpreting its findings. First, our findings are not representative of the experiences of all those who require help injecting within the local drug scene, especially those who do not access this facility, and might therefore overlook important factors that shape access to this supervised DCR. Furthermore, people who use drugs may give socially desirable responses during research interviews; however, we believe that our observation sessions reduced the impact of this limitation. Finally, it is important to note that, because of the unique combination of social, structural, and spatial factors that shape injection drug use in any particular locale, our findings might not be transferable to supervised drug consumption facilities in all settings.

In spite of these limitations, we found that this ‘unsanctioned’ supervised drug consumption facility was critical to reducing drug-related harm among people who require help injecting, and thus overcame barriers that this population faces to safer injecting. Notwithstanding the continued need to expand supervised drug consumption

facilities, particularly in those areas with high levels of injection drug use, our findings indicate that the operating regulations of these facilities need to accommodate those who require assistance injecting. In this regard, individually-focused interventions alone are not enough to mitigate the harms associated with assisted injections and more comprehensive social, structural, and environmental supports that include the provision of assisted injections are urgently needed.

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References

- Degenhardt L, Bucello C, Mathers B, Briegleb C, Ali H, Hickman M, et al. Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies. *Addiction*. 2011;106(1):32–51.
- Degenhardt L, Singleton J, Calabria B, McLaren J, Kerr T, Mehta S, et al. Mortality among cocaine users: a systematic review of cohort studies. *Drug Alcohol Depend*. 2011;113(2–3):88–95.
- Wood E, Kerr T, Tyndall MW, Montaner JS. A review of barriers and facilitators of HIV treatment among injection drug users. *AIDS*. 2008;22(11):1247–56.
- Aceijas C, Rhodes T. Global estimates of prevalence of HCV infection among injecting drug users. *Int J Drug Pol*. 2007;18(5):352–8.
- Mathers BM, Degenhardt L, Phillips B, Wiessing L, Hickman M, Strathdee SA, et al. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet*. 2008;372(9651):1733–45.
- Rhodes T. Risk environments and drug harms: a social science for harm reduction approach. *Int J Drug Pol*. 2009;20(3):193–201.
- Rhodes T, Singer M, Bourgois P, Friedman SR, Strathdee SA. The social structural production of HIV risk among injecting drug users. *Soc Sci Med*. 2005;61(5):1026–44.
- Rhodes T. The 'risk environment': a framework for understanding and reducing drug-related harm. *Int J Drug Pol*. 2002;13(2):85–94.
- Strathdee SA, Hallett TB, Bobrova N, Rhodes T, Booth R, Abdool R, et al. HIV and risk environment for injecting drug users: the past, present, and future. *Lancet*. 2010;376(9737):268–84.
- Rhodes T, Wagner K, Strathdee SA, Shannon K, Davidson P, Bourgois P. Structural violence and structural vulnerability within the risk environment: theoretical and methodological perspectives for a social epidemiology of HIV risk among injection drug users and sex workers. In: O'Campo P, Dunn JR, editors. *Rethinking social epidemiology: towards a science of change*. New York: Springer; 2012. p. 205–30.
- Quesada J, Hart LK, Bourgois P. Structural vulnerability and health: latino migrant laborers in the United States. *Med Anthropol*. 2011;30(4):339–62.
- Richardson L, Wood E, Kerr T. The impact of social, structural and physical environmental factors on transitions into employment among people who inject drugs. *Soc Sci Med*. 2013;76:126–33.
- Goldenberg SM, Strathdee SA, Gallardo M, Nguyen L, Lozada R, Semple SJ, et al. How important are venue-based HIV risks among male clients of female sex workers? A mixed methods analysis of the risk environment in nightlife venues in Tijuana, Mexico. *Health Place*. 2011;17(3):748–56.
- Rhodes T, Kimber J, Small W, Fitzgerald J, Kerr T, Hickman M, et al. Public injecting and the need for 'safer environment interventions' in the reduction of drug-related harm. *Addiction*. 2006;101(10):1384–93.
- Fast D, Small W, Wood E, Kerr T. Coming 'down here': young people's reflections on becoming entrenched in a local drug scene. *Soc Sci Med*. 2009;69(8):1204–10.
- Cooper HL, Bossak BH, Tempalski B, Friedman SR, Des Jarlais DC. Temporal trends in spatial access to pharmacies that sell over-the-counter syringes in New York City health districts: relationship to local racial/ethnic composition and need. *J Urban Health*. 2009;86(6):929–45.
- Small W, Rhodes T, Wood E, Kerr T. Public injection settings in Vancouver: physical environment, social context and risk. *Int J Drug Pol*. 2007;18(1):27–36.
- Parkin S, Coomber R. Public injecting drug use and the social production of harmful practice in high-rise tower blocks (London, UK): a Lefebvrian analysis. *Health Place*. 2011;17(3):717–26.
- Rhodes T, Watts L, Davies S, Martin A, Smith J, Clark D, et al. Risk, shame and the public injector: a qualitative study of drug injecting in South Wales. *Soc Sci Med*. 2007;65(3):572–85.
- Bourgois P, Schonberg J. *Righteous dopefiend*. Berkeley: University of California Press; 2009.
- Bourgois P, Prince B, Moss A. The everyday violence of hepatitis C among young women who inject drugs in San Francisco. *Hum Organ*. 2004;63(3):253–64.
- Fairbairn N, Small W, Van Borek N, Wood E, Kerr T. Social structural factors that shape assisted injecting practices among injection drug users in Vancouver, Canada: a qualitative study. *Harm Reduct J*. 2010;7:20.
- Epele ME. Gender, violence and HIV: women's survival in the streets. *Cult Med Psychiatr*. 2002;26(1):33–54.
- Shannon K, Kerr T, Marshall BDL, Li K, Zhang R, Strathdee SA, et al. Survival sex work involvement as a primary risk factor for hepatitis C virus acquisition in drug-using youths in a Canadian setting. *Arch Pediatr Adol Med*. 2010;164(1):61–5.
- Shannon K, Rusch M, Shoveller J, Alexson D, Gibson K, Tyndall MW. Mapping violence and policing as an environmental-structural barrier to health service and syringe availability among substance-using women in street-level sex work. *Int J Drug Pol*. 2008;19(2):140–7.
- O'Connell JM, Kerr T, Li K, Tyndall MW, Hogg RS, Montaner JS, et al. Requiring help injecting independently predicts incident HIV infection among injection drug users. *J Acquir Immune Defic Syndr*. 2005;40(1):83–8.
- Wood E, Spittal PM, Kerr T, Small W, Tyndall MW, O'Shaughnessy MV, et al. Requiring help injecting as a risk factor for HIV infection in the Vancouver epidemic: implications for HIV prevention. *Can J Public Health*. 2003;94(5):355–9.
- Kral AH, Bluthenthal RN, Erringer EA, Lorvick J, Edlin BR. Risk factors among IDUs who give injections to or receive injections from other drug users. *Addiction*. 1999;94(5):675–83.
- Miller CL, Johnston C, Spittal PM, Li K, Laliberte N, Montaner JS, et al. Opportunities for prevention: hepatitis C prevalence and incidence in a cohort of young injection drug users. *Hepatology*. 2002;36(3):737–42.

30. Maher L, Jalaludin B, Chant KG, Jayasuriya R, Sladden T, Kaldor JM, et al. Incidence and risk factors for hepatitis C seroconversion in injecting drug users in Australia. *Addiction*. 2006;101(10):1499–508.
31. Wood E, Tyndall MW, Spittal PM, Li K, Kerr T, Hogg RS, et al. Unsafe injection practices in a cohort of injection drug users in Vancouver: could safer injecting rooms help? *CMAJ*. 2001;165(4):405–10.
32. Robertson AM, Vera AY, Gallardo M, Pollini RA, Patterson TL, Case P, et al. Correlates of seeking injection assistance among injection drug users in Tijuana, Mexico. *Am J Addict*. 2010;19(4):357–63.
33. Evans JL, Hahn JA, Page-Shafer K, Lum PJ, Stein ES, Davidson PJ, et al. Gender differences in sexual and injection risk behavior among active young injection drug users in San Francisco (the UFO Study). *J Urban Health*. 2003;80(1):137–46.
34. Lloyd-Smith E, Rachlis BS, Tobin D, Stone D, Li K, Small W, et al. Assisted injection in outdoor venues: an observational study of risks and implications for service delivery and harm reduction programming. *Harm Reduct J*. 2010;7:6–10.
35. Lloyd-Smith E, Wood E, Zhang R, Tyndall MW, Montaner JS, Kerr T. Risk factors for developing a cutaneous injection-related infection among injection drug users: a cohort study. *BMC Pub Health*. 2008;8:405.
36. Kerr T, Fairbairn N, Tyndall M, Marsh D, Li K, Montaner J, et al. Predictors of non-fatal overdose among a cohort of polysubstance-using injection drug users. *Drug Alcohol Depend*. 2007;87(1):39–45.
37. Milloy MJ, Kerr T, Mathias R, Zhang R, Montaner JS, Tyndall M, et al. Non-fatal overdose among a cohort of active injection drug users recruited from a supervised injection facility. *Am J Drug Alcohol Abuse*. 2008;34(4):499–509.
38. Marshall BDL, Fairbairn N, Li K, Wood E, Kerr T. Physical violence among a prospective cohort of injection drug users: a gender-focused approach. *Drug Alcohol Depend*. 2008;97(3):237–46.
39. Scheper-Hughes N. *Death without weeping: the violence of everyday life in Brazil*. Berkeley: University of California Press; 1992.
40. Wright NM, Tompkins CN, Sheard L. Is peer injecting a form of intimate partner abuse? A qualitative study of the experiences of women drug users. *Health Soc Care Community*. 2007;15(5):417–25.
41. Tompkins CN, Sheard L, Wright NM, Jones L, Howes N. Exchange, deceit, risk and harm: the consequences for women of receiving injections from other drug users. *Drugs Educ Prev Policy*. 2006;13(3):281–97.
42. Shannon K, Kerr T, Allinott S, Chettiar J, Shoveller J, Tyndall MW. Social and structural violence and power relations in mitigating HIV risk of drug-using women in survival sex work. *Soc Sci Med*. 2008;66(4):911–21.
43. Epele ME. Scars, harm and pain: about being injected among drug using Latina women. *J Ethn Subst Abuse*. 2001;1(1):47–69.
44. Pearshouse R, Elliott R, Canadian HIV/AIDS Legal Network. *A helping hand: legal issues related to assisted injection at supervised injection facilities*. Toronto: Canadian HIV/AIDS Legal Network; 2007.
45. Wood RA, Wood E, Lai C, Tyndall MW, Montaner JS, Kerr T. Nurse-delivered safer injection education among a cohort of injection drug users: evidence from the evaluation of Vancouver's supervised injection facility. *Int J Drug Policy*. 2008;19(3):183–8.
46. Fast D, Small W, Wood E, Kerr T. The perspectives of injection drug users regarding safer injecting education delivered through a supervised injecting facility. *Harm Reduct J*. 2008;5:32.
47. Small W, Wood E, Tobin D, Rikley J, Lapushinsky D, Kerr T. The injection support team: a peer-driven program to address unsafe injecting in a Canadian setting. *Subst Use Misuse*. 2012;47(5):491–501.
48. Wood E, Tyndall MW, Stoltz J, Small W, Zhang R, O'Connell J, et al. Safer injecting education for HIV prevention within a medically supervised safer injecting facility. *Int J Drug Pol*. 2005;16(4):281–4.
49. Woolford A. Tainted space: representations of injection drug-users and HIV/AIDS in Vancouver's Downtown Eastside. *BC Studies*. 2001;129:27–50.
50. Strathdee SA, Patrick DM, Currie SL, Cornelisse PGA, Rekart ML, Montaner JSG, et al. Needle exchange is not enough: lessons from the Vancouver injecting drug use study. *AIDS*. 1997;11(8):F59–65.
51. Wood E, Kerr T. What do you do when you hit rock bottom? Responding to drugs in the city of Vancouver. *Int J Drug Pol*. 2006;17(2):55–60.
52. Wood E, Spittal PM, Small W, Kerr T, Li K, Hogg RS, et al. Displacement of Canada's largest public illicit drug market in response to a police crackdown. *CMAJ*. 2004;170(10):1551–6.
53. Fairbairn N, Wood E, Small W, Stoltz JA, Li K, Kerr T. Risk profile of individuals who provide assistance with illicit drug injections. *Drug Alcohol Depend*. 2006;82(1):41–6.
54. Wood E, Kerr T, Lloyd-Smith E, Buchner C, Marsh DC, Montaner JS, et al. Methodology for evaluating insight: Canada's first medically supervised safer injection facility for injection drug users. *Harm Reduct J*. 2004;1:9.
55. Kerr T, Tyndall M, Li K, Montaner J, Wood E. Safer injection facility use and syringe sharing in injection drug users. *Lancet*. 2005;366(9482):316–8.
56. Wood E, Tyndall MW, Montaner JS, Kerr T. Summary of findings from the evaluation of a pilot medically supervised safer injecting facility. *Can Med Assoc J*. 2006;175(11):1399–404.
57. Marshall BD, Milloy MJ, Wood E, Montaner JS, Kerr T. Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *Lancet*. 2011;377(9775):1429–37.
58. Milloy MJ, Kerr T, Tyndall M, Montaner J, Wood E. Estimated drug overdose deaths averted by North America's first medically-supervised safer injection facility. *PLoS ONE*. 2008;3(10):e3351.
59. Small W, Shoveller J, Moore D, Tyndall M, Wood E, Kerr T. Injection drug users' access to a supervised injection facility in Vancouver, Canada: the influence of operating policies and local drug culture. *Qual Health Res*. 2011;21(6):743–56.
60. Small W, Ainsworth L, Wood E, Kerr T. IDU perspectives on the design and operation of North America's first medically supervised injection facility. *Subst Use Misuse*. 2011;46(5):561–8.
61. Kerr T, Oleson M, Tyndall MW, Montaner J, Wood E. A description of a peer-run supervised injection site for injection drug users. *J Urban Health*. 2005;82(2):267–75.
62. Wood E, Kerr T, Spittal PM, Small W, Tyndall MW, O'Shaughnessy MV, et al. An external evaluation of a peer-run "unsanctioned" syringe exchange program. *J Urban Health*. 2003;80(3):455–64.
63. Solai S, Dubois-Arber F, Benninghoff F, Benaroyo L. Ethical reflections emerging during the activity of a low threshold facility with supervised drug consumption room in Geneva, Switzerland. *Int J Drug Policy*. 2006;17(1):17–22.
64. Riddell C, Riddell R. Welfare checks, drug consumption, and health. *J Hum Resour*. 2006;XLI(1):138–61.
65. QSR International. *NVivo qualitative data analysis software*. 2008.
66. Moore D, Fraser S. Putting at risk what we know: reflecting on the drug-using subject in harm reduction and its political implications. *Soc Sci Med*. 2006;62(12):3035–47.
67. Ouellet LJ, Jimenez AD, Johnson WA, Wiebel WW. Shooting galleries and HIV disease: variations in places for injecting illicit drugs. *Crime Delinquency*. 1991;37(1):64–85.

68. Moore D. Governing street-based injecting drug users: a critique of heroin overdose prevention in Australia. *Soc Sci Med*. 2004;59(7):1547–57.
69. Kerr T, Wood E, Small D, Palepu A, Tyndall MW. Potential use of safer injecting facilities among injection drug users in Vancouver's Downtown Eastside. *Can Med Assoc J*. 2003;169(8):759–63.
70. Bourgois P. Disciplining addictions: the bio-politics of methadone and heroin in the United States. *Cult Med Psychiatr*. 2000;24(2):165–95.
71. Fischer B, Turnbull S, Poland B, Haydon E. Drug use, risk and urban order: examining supervised injection sites (SISs) as 'governmentality'. *Int J Drug Policy*. 2004;15(5–6):357–65.
72. McLean K. The biopolitics of needle exchange in the United States. *Crit Public Health*. 2011;21(1):71–9.
73. Supreme Court of Canada. *Canada (Attorney General) v. PHS Community Services Society*. 2011;SCC 44 33556.
74. Boyd SC, Osborn B, MacPherson D. *Raise shit! Social action saving lives*. Halifax: Fernwood; 2009.
75. Small D, Palepu A, Tyndall MW. The establishment of North America's first state sanctioned supervised injection facility: a case study in culture change. *Int J Drug Pol*. 2006;17(2):73–82.
76. Kerr T, Small W, Buchner C, Zhang R, Li K, Montaner J, et al. Syringe sharing and HIV incidence among injection drug users and increased access to sterile syringes. *Am J Public Health*. 2010;100(8):1449–53.
77. Moore D. 'Workers', 'clients' and the struggle over needs: understanding encounters between service providers and injecting drug users in an Australian city. *Soc Sci Med*. 2009;68(6):1161–8.
78. Sherman SG, Gann DS, Tobin KE, Latkin CA, Welsh C, Bielenson P. "The life they save may be mine": diffusion of overdose prevention information from a city sponsored programme. *Int J Drug Policy*. 2009;20(2):137–42.
79. Mackenzie S, Pearson C, Frye V, Gómez CA, Latka MH, Purcell DW, et al. Agents of change: peer mentorship as HIV prevention among HIV-positive injection drug users. *Subst Use Misuse*. 2012;47(5):522–34.
80. Fairbairn N, Small W, Shannon K, Wood E, Kerr T. Seeking refuge from violence in street-based drug scenes: women's experiences in North America's first supervised injection facility. *Soc Sci Med*. 2008;67(5):817–23.
81. Mitchell D. *The right to the city: social justice and the fight for public space*. New York: Guilford Press; 2003.
82. Beckett K, Herbert SK. *Banished: the new social control in urban America*. Oxford: Oxford University Press; 2010.
83. Cooper H, Moore L, Gruskin S, Krieger N. The impact of a police drug crackdown on drug injectors' ability to practice harm reduction: a qualitative study. *Soc Sci Med*. 2005;61(3):673–84.
84. MacNeil J, Pauly B. Needle exchange as a safe haven in an unsafe world. *Drug Alcohol Rev*. 2011;30(1):26–32.
85. McLean K. Needle exchange and the geography of survival in the South Bronx. *Int J Drug Policy*. 2012;23(4):295–302.
86. Parker J, Jackson L, Dykeman M, Gahagan J, Karabanow J. Access to harm reduction services in Atlantic Canada: implications for non-urban residents who inject drugs. *Health Place*. 2012;18(2):152–62.