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Research paper

A micro-environmental intervention to reduce the harms associated with drug-related overdose: Evidence from the evaluation of Vancouver's safer injection facility

Thomas Kerr^{a,b,*}, Will Small^a, David Moore^c, Evan Wood^{a,b}^a British Columbia Centre for Excellence in HIV/AIDS, St. Paul's Hospital, Vancouver, Canada^b Department of Medicine, University of British Columbia, Vancouver, Canada^c National Drug Research Institute, Curtin University of Technology, Perth, Australia

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Abstract

Background: Conventional drug overdose prevention strategies have been criticised for failing to address the macro- and micro-environmental factors that shape drug injecting practices and compromise individual ability to reduce the risks associated with drug-related overdose. This in turn has led to calls for interventions that address overdose risks by modifying the drug-using environment, including the social dynamics within them. Safer injection facilities (SIFs) constitute one such intervention, although little is known about the impact of such facilities on factors that mediate risk for overdose.

Methods: Semi-structured qualitative interviews were conducted with fifty individuals recruited from a cohort of SIF users in Vancouver, the Scientific Evaluation Of Supervised Injecting (SEOSI). Audio recorded interviews elicited injection drug users' (IDU) accounts of overdoses as well as perspectives regarding the impact of SIF use on overdose risk and experiences of overdose. Interviews were transcribed verbatim and a thematic analysis was conducted.

Results: Fifty IDU, including 21 women, participated in this study. The perspectives of participants suggest that the Vancouver SIF plays an important role in mediating various risks associated with overdose. In particular, the SIF addresses many of the unique contextual risks associated with injection in public spaces, including the need to rush injections due to fear of arrest. Further, SIF use appears to enable overdose prevention by simultaneously offsetting potential social risks associated with injecting alone and injecting in the presence of strangers. The immediate emergency response offered by nurses at the SIF was also valued highly, especially when injecting adulterated drugs and drugs of unknown purity and composition.

Conclusion: The perspectives of IDU participating in this study suggest that SIFs can address many of the micro-environmental factors that drive overdose risk and limit individual ability to employ overdose prevention practices. Although challenges related to coverage remain in many settings, SIFs may play a unique role in managing overdoses, particularly those occurring within street-based drug scenes.

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Introduction

Drug-related overdose continues to be a major source of morbidity and mortality among injection drug users (IDU)

(Davidson et al., 2003). In many countries, fatal overdose is a leading cause of death among IDU (Darke and Hall, 2003; Tyndall et al., 2001), and the harms resulting from non-fatal overdose are often severe and disabling, and include aspiration pneumonia, hypoxic brain injury, rhabdomyolysis and renal failure (Tyndall et al., 2001; Warner-Smith, Darke, & Day, 2002).

In response to the problem of overdose, a variety of overdose prevention initiatives have been developed and

* Corresponding author at: BC Centre for Excellence in HIV/AIDS, 608-1081 Burrard Street, Vancouver, BC V6Z 1Y6, Canada.

Tel.: +1 604 806 9116; fax: +1 604 806 9044.

E-mail address: tkerr@cfenet.ubc.ca (T. Kerr).

implemented (Sporer, 2003). In most settings, educational messages, based on findings from epidemiological studies of overdose, form the basis of overdose prevention efforts (Darke & Hall, 2003). Common messages include: (1) do not use drugs alone; (2) do not mix alcohol and other central nervous system depressants with opiates; (3) call for emergency assistance in the event of an overdose; (4) beware of using drugs following periods of abstinence or reduced use; (5) sample or 'taste' your drugs before injecting (Dietze, Jolley, Fry, Bammer, & Moore, 2006; Moore, 2004).

While educational approaches to overdose prevention prevail, ethnographic perspectives suggest that these approaches are based on implicit constructions of IDU as independent rational actors with considerable self-regulating capacities operating in relatively stable social contexts (Moore, 2004). It has been argued that educational approaches fail to acknowledge the macro- and micro-environmental factors that constrain individual ability to practise overdose prevention (Dietze et al., 2006; Rhodes, 2002). Recognition of the limitations of individually focused models of health and risk has prompted the development of broader conceptualisations of risk, such as Rhodes' risk environment framework, which include a focus on elements in the physical and social environment that influence the production of risk (Rhodes, 2002; Rhodes, Singer, Bourgois, Friedman, & Strathdee, 2005). This in turn has led to calls for structural and social interventions that alter aspects of the environment in which injecting occurs and by consequence facilitate the reduction of harm (Des Jarlais, 2000; Rhodes, 2002). A risk environment is a space in which physical, social, economic and policy factors intersect at two levels to increase the chances of drug-related harm: the micro (or, in other ecological approaches, the 'proximal', 'direct' or 'local') level, which includes group norms, rules and values; social networks; peer influences; the immediate social settings of drug use; the local neighbourhood; the macro (or the 'distal', 'indirect' or 'structural') level, which includes the public and legal/policy context; economic, gender and ethnic inequalities; the political economy of health.

One micro-environmental intervention that has been implemented, in part to address the harms of overdose, is safer injection facilities (SIFs) (Broadhead, Kerr, Grund, & Altice, 2002; Kimber, Dolan, van Beek, Hedrich, & Zurhold, 2003). Although SIFs vary greatly in design and operation, they generally allow IDU to inject pre-obtained illegal drugs under the supervision of nurses or other individuals trained to provide an emergency response in the event of overdose (Broadhead et al., 2002). The response to overdoses within SIFs differ somewhat, although most facilities provide oxygen and many have staff trained to administer naloxone (i.e., Narcan, an opiate antagonist) in the event of an overdose (Broadhead et al., 2002). As well, most SIFs will call for support from ambulance personnel when more severe overdoses occur. These facilities also seek to promote safer injecting and aim to refer IDU to other health and social services. Although a small number of quantitative studies

suggest that SIFs can play a role in managing overdose events and reducing the associated harms (Poschade, Höger, & Schnitzler, 2003; Van Beek, Dakin, & Kimber, 2004), there have been few, if any, studies that have sought to examine the potential impact of SIFs on the contextual factors that mediate overdose and undermine individual ability to practise overdose prevention, including those social processes which perpetuate overdose risk at the micro-level. Therefore, we sought to explore the potential impact of SIFs on the social contexts of overdose through qualitative research with IDU.

Methods

This article presents analyses of data from qualitative interviews with Vancouver IDU regarding their experiences of overdose and the impacts of SIF use upon overdose. Vancouver's SIF, known locally as "Insite", opened in September 2003 after years of community activism and political struggles related to the epidemics of HIV and overdose occurring in Vancouver's troubled Downtown Eastside (Small, Palepu, & Tyndall, 2006; Tyndall et al., 2006). The SIF was approved as a pilot study by the Canadian government, and operates under strict regulations, including regulations that require participant registration and also prohibit the sharing of drugs and assisted injection. Insite is open 18 hours a day, 7 days a week, and includes 12 individual spaces for injection (Tyndall et al., 2006). On average there are approximately 600 injections supervised there each day (Tyndall et al., 2006). To date, over 5000 unique IDU have used the facility. The staff team includes nurses who work primarily in the injecting room and provide safer injecting education and emergency response in the event of overdose, as well as peer workers who work in the post-injection "chill out" room.

We draw upon data from 50 in-depth qualitative interviews conducted from November 2005 to February 2006. Interviewees were recruited from the Scientific Evaluation Of Supervised Injecting (SEOSI) cohort, which is composed of over 1000 randomly selected SIF users in Vancouver (Wood, Kerr, Lloyd-Smith et al., 2004; Wood, Kerr, Montaner et al., 2004). Interview participants were selected [by WS] on a daily basis from among persons attending the research office for quantitative cohort interviews. Recruiting efforts intentionally created a sample composed of individuals with differing levels of SIF utilisation that was also representative of the local injecting population in terms of gender, age, ethnicity and drug of choice. Interviews were undertaken by three trained interviewers (two male and one female) and facilitated through the use of a topic guide encouraging discussion of SIF use, including the impact of SIF use upon overdose.

Interviews lasted between 30 and 60 minutes, were tape-recorded, and were later transcribed verbatim. The research team discussed the content of the interviews throughout

the data collection process, thus informing the focus and direction of subsequent interviews (e.g., through the addition of new questions and probes) as well as developing a coding scheme for partitioning the data categorically. All transcripts were coded using ATLAS.TI version 5.0 (ATLAS.TI, Berlin), a computer program designed to assist in the management of unstructured qualitative data. The thematic content of transcribed interviews was catalogued by one team member [WS] using a coding framework specific to overdose experiences, and our analysis explores themes that emerged in relation to overdose and the potential impact of SIF use on the experience and context of overdose at the micro-level.

All participants in the qualitative study provided informed consent to participate, and the study was undertaken with appropriate ethical approval granted by the St. Paul's Hospital/University of British Columbia Research Ethics Board. There were no refusals of the offer to participate in the interview and no drop-outs during the interview process.

Results

The sample of qualitative interview participants was composed of 21 women, 28 men and one trans-gendered individual. The age of participants ranged from 25 to 60 years. All IDU interviewed through this current study had previously used Insite. Excerpts from the qualitative interviews are presented in order to illustrate some of the central themes that emerged in the analysis, with considerable overlap observed across thematic areas.

Rapid response

The rapid response to overdose by SIF staff was a primary narrative articulated by study participants, in particular by those who had overdosed at the SIF and those who had witnessed an overdose in the facility. The immediacy of the response, and the availability of equipment and other resources such as Narcan (naloxone), were described by interviewees as important and unique features of this drug-using micro-environment. The quality of this type of rapid and well-equipped response within the SIF was frequently contrasted to overdose responses occurring in other settings, including those venues (e.g., public injecting settings) where responses to overdose are slow or non-existent:

R: This man I know overdosed, and like, they were on it. They were quick. They didn't waste any time. They were prompt, and... they were experienced. They knew what they were doing. Yeah. They came and Narcaned him, and 911 – the ambulance – came and took the guy out. Like, they were right on it... the guy was going to die, and I think they were really good. They're experienced, in other words, in that type of thing. (Female Participant #30)

R: Once, at Insite. I stopped... my breathing was very low. And at one point my breathing stopped. They called an ambulance. They Narcaned me... and they do half the amount of Narcan that the paramedics would. So when I woke up – the paramedics woke me up – they had a rig of Narcan ready to put into me, and I stopped them from doing that, 'cause Narcan is just gross. Yeah, so I stopped them from doing that, and so they made me sign a consent form... after that I went to the chill-out room.

I: Okay. How do you think things would have been different if you'd been somewhere else when you overdosed that day?

R: I probably would have died because... nobody else would have helped... It's not like everybody's got a rig [needle and syringe] full of Narcan on them. (Male Participant #13)

R: It's [the SIF's] good. They're really good. They know what they're doing... on the street it takes forever for someone to recognise – and to call an ambulance because everybody else is getting high right? Usually there's that one serious person that usually does something, but who knows how long they take to notice... with the Insite it's like right away... boom-boom. (Female Participant #46)

Taking time

Numerous participants contrasted their experiences of overdose in the SIF with their experiences of overdose in public settings. Several participants noted various environmental features of local public injecting settings that exacerbate risk for overdose (e.g., policing). Some of these features were said to prompt rushing during the injection process, which in turn limited individual ability to "taste" drugs for strength prior to injection. Some participants also noted that when injecting at the SIF they are able to take the extra time needed to implement common overdose prevention strategies. In particular, the practice of injecting slowly, and monitoring one's dose was seen as unique to injecting at the SIF:

R: I think they're a lot more careful at the Insite than they would be outside of the site. Like I said, you're in a big hurry [when injecting outside] and you're wondering, so you do everything really quick so you're not as careful in the alley as you would [be] at the Insite. (Female Participant #7)

I: Okay, so, do you think that using Insite makes people more or less likely to have an overdose...?

R: I don't think so. Like I said, I think probably less likely because... people will take the time. Not be rushed. So that goes with measuring your dope and stuff. They have the time to do it. (Male Participant #48)

I: Okay. So then... maybe you could tell me how the injection site's different?

R: Well... I can take my time and... in the alley I would just pour it in the rig, shake it up, and throw [inject] it. Get it into me. Just as quick as I can... That's another thing I... ever since I've been going there [the SIF]... I practice safe — Yeah, I've started practicing a lot safer and cleaner... for sure. Now I stop and think, right? It's like, "Well, I don't have to rush."... In the alley, you just don't have time to do that. (Male Participant #40)

Potential confrontations with police in public injecting settings were seen as a major factor that prompted rushed injection. In some instances, participants reported that they were more likely to consume all the drugs in their possession, in one fix, out of fear of arrest or having their drugs confiscated:

R: ...when I was fixing outside, I would do my fix and it would feel like too much... Because I had nowhere to put my dope! [Yeah] 'Cause they search you, right? [Yeah]. They search you.

I: You're saying that you can kind of control how much you're using.

R: Yeah, and I can go back in [the SIF] and do another fix. In the alley you might do a bigger whack because it's like, well, I gotta use it, I might lose it if the cops come around. (Female Participants #46)

R: ...I'm sick and tired of getting... y'know, sitting in an alley and cops come by, and you gotta pull your dope out, or get hassled by somebody... (Male Participant #40)

Gettin' dug

Many participants noted that injecting at the SIF addressed their concerns regarding injecting in the presence of others in public injecting settings. When describing the possibility of having an overdose in such settings, participants spoke about fears of being robbed or simply ignored. As well, some participants spoke about fears of being arrested following an overdose due to having outstanding warrants. In light of these risks, the SIF was described as a safe and secure alternative to injecting in public settings. Given the well-known overdose risks associated with injecting opiates, some participants reported that they used the SIF in instances when they were injecting heroin but not when they were injecting cocaine:

That's one of the reasons I go to Insite... At least I know that, if you do sit in an alley somewhere, everyone's gonna watch you, but what are they gonna do? They're gonna wait 'til you drop and then go rifle your pockets, and leave

you there and that's that. But at least at Insite I feel like someone would dial 911 and know what to do. I get help, that's right, so that's why I use that for doing heroin. (Male Participant #8)

I: How do you think that overdose would have been different if it had happened somewhere else?

R: I think that person would have been on their own, shit out of luck, S.O.L. if not robbed. And they could've came out of it no problem, but then you know what? Everybody ends up getting robbed... as we refer to it, they'll get 'dug'. That means go through their pockets and rip them off. Oh yeah. They'll be dug. (Female Participant #4)

Injecting alone

Participants also spoke about the risks associated with injecting alone and noted that the presence of nurses at Insite offered safety without introducing the risks that accompany injecting in public. Some also noted that they liked injecting at the SIF because they were able to inject in the presence of others without having to share their drugs:

R: I think it's bad [injecting alone]. That's when people get into lots of trouble, eh? Dead people are found in their rooms. They are not found at Insite." (Female Participant #50)

R: It's [the SIF's] the only place, it's the only other place that I'll do it with other people. Any other place - I do it on my own. (Male Participant #6)

R: It's always safe to not fix alone. Okay? So Insite's very safe if you don't want to fix alone. Even if you don't have enough to share — people, they should understand: you don't want to OD and have nobody around. You have to have somebody there. And they've always been good that way. They can save your life within a minute. I've seen it happen. (Female Participant #4)

R: I can turn around, I can look in the mirror, I can see the nurse. They're watching, right? If anything goes wrong, I mean... you could yell. But if you are by yourself... you could yell if anything happened, nobody answers. Nobody listens. Nobody lifts a finger. Nobody. Y'know?

I: So, that's one of the reasons you don't fix alone, eh?

R: I'm not by myself.

I: Yeah. So that's, like, the reason you don't fix at home?

R: Yeah.

I: And that's why you go over there, eh?

R: Yeah. Absolutely... I'm not rushed... I can ask questions... the staff are watching over us... in case anything goes wrong

I: Yeah. So you like having the nurse there?

R: Yeah... [elsewhere] Well, there's no insurance that you're going to be okay. Your friends go do something else, they may not be watching you. And I've seen it happen. At a friend's place, somebody goes under and starts gurgling and you look over and it's like, "Whoa!" And I didn't even notice, [Yeah] until it's the point where you had to start doing something, right? (Female Participant #47)

Some participants also described how individuals overdosing within public injecting settings may be difficult for ambulance personnel to find, as these locations are often remote or hidden. As well, participants noted that in these locations, bystanders were often unlikely to stay in the event of an overdose or when an ambulance had been called in response to one:

R: I think when an ambulance is called to Insite, it's more quicker because they know exactly where they're going, and why. Someone calls it in the alleyway, they're gone. Someone goes down in the alleyway, they're gone. They're not sticking around for the ambulance, they don't want nothing to do with it, right? [Yeah]. So they gotta try to find the person. (Female Participant #12)

Problems with adulterated drugs or drugs of unknown purity or composition

Many participants spoke about overdose risks related to using drugs of unknown purity or composition, as well as adulterated drugs (often referred to as 'hot' locally). Because these types of drugs, in particular opiates, are recognised to be common within the local drug market, the SIF was seen as highly protective against these risks for overdose:

R: Like heroin always scared me, it just always does, 'cause I don't know what's in there. I don't know if I should do that little bit, or this much. (Male Participant #16)

R: Powdered methadone... it's very, very lethal. It can be very, very lethal, because it's so... like, it's absorbed so quick. Plus, the people who were putting it out didn't realise that it was methadone... it was five times as strong... So people who were shooting five points were, like, shooting twenty-five points. No wonder they were fucking dying! Fuck. Yeah. It's a wonder we didn't have like a hundred people die. It really is. I bet you fucking Insite saved about fifty lives, 'cause that ambulance was there all the time for those two weeks. [Yeah]. It was just fucking... three at one time, at one point. (Male Participant #6)

Some participants also stated that the nurses provided them with information on how to use certain drugs in less harmful ways:

R: Well, at one point I had this methadone powder... and I never even knew that's what it was. I almost over-amped on it. Almost. And they told me how to break it down and showed me how to properly filter it, and... how much of it to do as well. Whereas anybody else on the street, I couldn't ask. Nobody knew, they didn't have a fucking clue.

I: Okay, so, that sounds like it was pretty helpful.

R: Fuckin' A it was. I would've stuck more than that in. And probably been in the hospital or something... Something, yeah, worst case scenario. (Female Participant #47)

A small number of participants reported that they go to the SIF when trying new drugs or when injecting drugs from an unknown source:

I: Ok so why do you like to inject at the injection site?

R: Well, I'll put it this way. I came across some heroin that was... I don't know whatever it was... I OD'd on it twice. I found out later it was methadone... the powdered methadone. Yeah and when it hits, you don't know what's hitting you. That's the scary thing about it. Because you think I just fucking got ripped off. Boom, before you can even think twice you're out y'know? Well what I remember is I was sitting there [in the SIF] and I did my fix, all of a sudden I started feeling a little burn in my arm and all of a sudden my eyes started going and they came over and gave me a shake and I go "Yeah, I'm OK." At that moment I felt myself go backwards, y'know I'm waking up on the floor and I'm going "What the fuck is going on here?" and they go "Well, you just dropped there." Like they said I flat lined, I was like dead. And they hit me up with Narcan. And they wanted me to go to the hospital. And I said "No, I refuse to go to hospital" because they start doing all this kind of shit over at the hospital and I'm not into it. Like, yeah, I've had my fair share of overdoses. 15 to be exact.

I: So that's the reason why you go up there?

R: Yeah, just in case, yeah. If I'm trying new dope [heroin], I'll go there. But if I know the dope, I'll just smash [inject] it anywhere. (Male Participant #37)

Participants also described overdose events at the SIF involving individuals who had overdosed due to reduced tolerance following periods of abstinence or reduced use following treatment or incarceration.

R: Yeah actually, a friend of mine... did [overdose] there [the SIF] two weeks ago. Yeah, P. had just got out of jail,

and I guess he just got some of that strong heroin, with the methadone in it, or whatever it was that's going around. He did a fix, and I guess he went down. They got the ambulance there real quick and everything, and they had to shoot him up twice with that Narcan. Yeah, really, he was hurtin'. I was at home, but he came over to my place right after it happened, right? But I heard the ambulances pull up and everything. He just got out of jail the day before, so... yeah, he was in there for four months. So you don't keep doing the same size [a fix] as you did when you went in, right? Like, get with it. (Female Participant #12)

Saving lives

Although not directly related to the study objectives, the most common narrative offered by study participants was that the SIF was saving lives that would have otherwise been lost to overdose. In the case of the first example below, the participant had reported that she “felt in a great mood and... wanted to celebrate”, and that this prompted her to purchase a large amount of heroin. She added that she was on her way home to inject a large amount of heroin when she passed the SIF and made a spontaneous decision to inject it at the SIF:

R: It was about eleven o'clock at night, and I had gone in and I actually had gotten a huge amount of heroin... I decided to actually do all of it... And it was like – lights out. And it was like, um, someone just turned the lights off, and bang! It was all of a sudden, I come to – I'm laying on my back and I don't even know where I'm at. I'm very scared, I'm very alarmed, I'm very frightened. There's people around me – I'm not even really coherent. I can hear them talking – it's like they're hollering at me, but I don't even know what's going on. I didn't even realise that I had overdosed until afterwards, when, you know, things started calming down. But they had Narcaned me and... I just remember seeing the Insite lady talking to me, holding my hand, telling me that everything was gonna be okay. There was an officer there, and there was a paramedic there. Because I'm also epileptic too, they were also concerned about that. And they were asking me if I knew my name, if I knew where I was, if I knew what I was doing. And it was just like everything was kinda foggy. The only way I can explain it to people is like someone just shut the light off. It was so fast... I don't even remember pulling the rig out of my arm, I just remember doing it and I just remember that rush coming over me and I remember thinking this is pretty strong, but I never ever thought that I would actually, you know, that that would happen. I don't remember untying or anything like that I just remember looking at my eyes and they were slowly closing, and that's all I can remember thinking at that time. After I came to, they had an oxygen mask on me, and um, they were talking to me, you know, they were very communicative with me to make sure and to let me know that everything was going to be okay, and

that I was alright, and that, they kept telling me over and over that I had overdosed and that I had gone under and, you know... (Female Participant #2)

R: I have lost a lot of friends to overdoses. Lot of friends, and I know a lot of friends who have been saved from overdoses because of Insite. Specifically because of Insite... I know one specific woman who comes in there and just about every time she comes in, she overdoses, and I mean every time she goes in there. She's had at least ten overdoses in there. And they've saved her butt every time. I've watched her go blue, I've watched her stop breathing. If she'd been at home, she'd be dead. Plain and simple, she'd be dead. (Male Participant #27)

I: Have you ever seen any overdoses at Insite?

R: Yeah, I have. They did a real good job of bringing them back, too. The nurses are really good and calm.

I: Maybe you could tell me about the most recent one you saw?

R: Oh, God. It was a few weeks ago. Like, three weeks ago. It was a young guy, maybe two booths over from me, and he was doing heroin. He was just sitting there, and the next thing you know, he was on the ground and everybody gets up and starts freaking out. The nurse came in. I actually had to actually move a few people away and say, “The nurses know what they're doing. Let them do their job.” And they were so good. The nurses were calm. Y'know... I was a bit surprised.

I: And so, what happened when they went to work on the guy?

R: Oh, they had oxygen tanks. Y'know, I don't know the procedure, but they kept them alive, and that's final.

I: What do you think would've happened if that guy was somewhere else?

R: He would've been dead. (Male Participant #40)

Limits on the ability of the SIF to mediate OD risks

Although the interview extracts cited above suggest that the SIF addressed many of the micro-contextual factors producing overdose risk, some participants also noted that its operating procedures and regulations may, in some cases, discourage attendance. For example, having to wait to enter the SIF was identified as one potential barrier to use, particularly when one is ‘dopesick’:

I: What about the line-up? Is that one a problem for you sometimes?

R: It has been, but that's only because I was ill at the time. Y'know, when you're sick, like, sometimes. . . I've got a pretty good tolerance. Pretty big habit.

I: So you get pretty sick, eh?

R: Like, if I sleep too long, like, sometimes I'll be up for days, and I'll sleep – when I see, I sleep a long time. When I wake up, I'm sick. Y'know, fifteen minutes is too long. (Male Participant #40)

Other SIF users noted that they might not always use the facility, particularly when they desired the heavy intoxication known as 'copping a nod':

I: Tell me about the times that you're injecting at other places – at home – like, why you don't use it for some injections.

R: Um? Why I use my home? Oh, because it's my base and nobody's going to bother me there [Okay]. And, it's probably if, well, hopefully I'm going to cop a nod sometimes. Get high on the heroin [Yeah] and it's nice to be at home [Right] in that situation. You're safe there. (Male Participant #17)

Experiencing heavy intoxication in a home environment was, for some participants, negatively contrasted with SIF procedures whereby clients enjoying a 'nod' are checked and sometimes roused by staff in order to prevent overdosing at the site:

Same thing when you're on the nod, and you're sitting there enjoying your high, and all of a sudden you've got some nurse, "Hey! You okay? You alright?" Shaking you and shit like that. Like, a lot of people take offence to that, right? [Yeah]. "Yeah, fuck, I'm alright. . . can't I even enjoy my fucking high? (Male Participant #22)

Discussion

The results of this analysis suggest that the Vancouver SIF is playing a role in addressing the ongoing problem of drug-related overdoses. The perspectives of IDU suggest that in addition to saving lives that would otherwise be lost to overdose, the SIF, despite some reservations about its procedures and regulations, is a unique micro-environmental intervention that addresses many contextual factors and social processes that shape injecting practices and mediate overdose risk. Specifically, the sanctioned and supervised micro-environment of the SIF was described as: providing a rapid and well-equipped response to overdose; serving as an alternative to public injection settings and thereby decreasing the need to rush during the injection process; simultaneously addressing the risks associated with injecting alone

and injecting in the presence of strangers and acquaintances; as mediating the risks associated with injecting adulterated drugs or drugs of unknown purity or composition.

The prevention of drug-related overdose has proved challenging in many settings (Dietze et al., 2006; Wood, Kerr, Lloyd-Smith et al., 2004; Wood, Kerr, Montaner et al., 2004). This has led to critical analyses of common individually focused overdose prevention approaches (Dietze et al., 2006; Moore, 2004), including those that seek to educate IDU regarding the behavioural practices that exacerbate or reduce risk for overdose. It has been argued that such approaches fail to address the broader sets of risks IDU commonly face, as well as the socio-cultural context that encourages ongoing engagement in practices that put them at heightened risk for overdose. SIFs represent one micro-environmental intervention with potential to overcome some of the limitations of these conventional approaches (Broadhead et al., 2002).

The perspectives of IDU participating in this study suggest that the SIF is a unique drug-consuming micro-environment due to the presence of staff who provide a rapid and well-equipped response to overdose. These contextual features of the SIF were frequently contrasted with the characteristics of other injecting settings, such as public injecting settings (e.g., alleyways), which were described as highly unsafe in the event of overdose for various reasons. First, consistent with previous work which has described IDU acquaintances within street injecting environments as "associates" who will at times "seek to exploit others" (Moore, 2004), participants in this study reported that individuals present within street injecting settings are likely to either ignore or rob a person who has overdosed, and in either instance will be unlikely to call for help. Although it was said that the rare associate will call for help, most participants felt that such a person would still be unlikely to stay at the scene to ensure the arrival of ambulance or to ensure that the person overdosing remains alive in the interim. Also consistent with reports from other settings (Darke, Ross, & Hall, 1996; McGregor, Darke, Ali, & Christie, 1998; Strang, Best, Man, Noble, & Gossop, 2000), some participants, particularly those with outstanding warrants, described fears regarding the possibility of being arrested following an overdose. In light of these many dynamics, the SIF was seen as simultaneously addressing the need for camouflage from police and street predators, as well as fears of abandonment, robbery, and arrest that are associated with overdosing in public injecting micro-environments.

Several participants also spoke about the well-described risks associated with injecting alone (Dovey, Fitzgerald, & Choi, 2001), and the role the SIF plays in relieving the tension between the desire for privacy and the desire for the presence of others who can respond in the event of an overdose. The SIF appears to relieve this social tension by providing a space with "responsible others" who can respond to overdose but who do not demand that drugs be shared in return for the safety they offer.

Although previous studies have suggested that prevention messages regarding careful and slow injection (i.e., tasting

drugs for strength) run counter to the common desire for intense intoxication (Moore, 2004), several IDU in this study reported that the SIF afforded them time to inject slowly. In this way, the SIF appears to be acting as an “enabling environment” for the reduction of drug-related harm by facilitating the utilisation of prevention strategies (Moore & Dietze, 2005; Rhodes, 2002). When describing the enabling qualities of the facility, participants again contrasted the facility with public injecting micro-environments where the fears related to police confrontations, which potentially result in the confiscation of one’s drugs, prompt injection of larger amounts of drugs in a hurried fashion.

Much has been made of the association between overdose and poly-drug use (Darke & Hall, 2003; Sporer, 1999). The use of multiple types of drugs and use of drugs of unknown composition is common, and is often driven by a desire for intense intoxication, the unstructured nature of drug markets, and relationships with other users that result in unanticipated opportunities to consume drugs (Dietze et al., 2006; Moore, 2004). In this study, several IDU described instances in which adulterated drugs or drugs of unknown composition were injected at the SIF and resulted in an overdose. As well, participants spoke of obtaining information at the SIF on how to safely use drugs that are rarely injected, such as powdered methadone. The SIF was, in these instances, described as offering unique protection, particularly during 2005 when there were a large number of overdoses resulting from the injection of ‘hot heroin’ which contained powdered methadone (stolen from a local pharmacy) (Howell, 2005).

While the beneficial aspects of the SIF appear to be widely accepted by local IDU, there are limitations regarding the ability of the facility to mediate overdose risks among the local IDU population. Many of these limitations relate to the fact that the SIF itself is mediated by macro-contextual dynamics (e.g., laws, policy processes shaping the design and delivery of the SIF, public opinion). Problems relating to the scope and coverage of this facility, as well as regulations governing its operation, limit the proportion of local IDU that can utilise the facility to reduce their exposure to overdose risks (Kerr, Oleson, Tyndall, Montaner, & Wood, 2005; Kerr, Wood, Small, Palepu, & Tyndall, 2003). Given previous estimates of injecting in the neighbourhood where the SIF is located (Kerr et al., 2003), it is likely that the facility accommodates only 5–10 per cent of injections occurring locally. Further, the facility is currently unable to accommodate assisted injections, although this practice is common in the local injecting culture (Wood et al., 2003), and has been associated with elevated overdose risks in recent epidemiological analyses (Kerr et al., 2006).

While the results of this study suggest that the SIF serves to address many micro-contextual factors and social processes that shape injecting practices and overdose risks, some participants did express concerns about its procedures and regulations. This may mean that IDU are selective about when they use the facility, and may choose other settings for injection when they are dopesick, desire heavy intoxication or

prefer a home environment. Therefore, additional research on expanded SIF models is needed, as is further qualitative research examining the reasons why some IDU use the facility rarely or not at all. Still, even if the program is expanded, it is likely that this form of intervention would need to be supported by other programs and initiatives in order to more fully address the problems of overdose.

Additionally, our study has implications for the complex ethical and theoretical issues that surround many harm reduction interventions. SIFs, for example, have been characterised as an expression of ‘governmentality’ and “a technology for purifying public spaces of ‘disorderly’ drug users” (Fischer, Turnbull, Poland, & Haydon 2003) in contemporary neoliberal society, and it has been argued that the social control contained in harm reduction projects, like SIFs, may be viewed as a form of “symbolic violence” experienced by drug users (Bourgois, 2000, 2002). However, our current study illustrates that SIFs may hold multiple meanings, as many IDU participating in this study described the SIF as a micro-environmental intervention that “saves lives” and serves to reduce social suffering among local IDU. Although these meanings can co-exist on various levels without conflicting, our study also suggests that some efforts to regulate common social practices of IDU within SIFs may serve to limit the reach and coverage of this intervention.

Finally, our study has limitations that should also be noted. First, while an effort was made to ensure a sample representative of local IDU and SIF users, it may be that some perspectives were underrepresented. Further, this study presents preliminary data regarding overdose in SIFs, and future research could build upon this work by undertaking participant observation within SIFs.

Conclusion

In summary, the perspectives of IDU participating in this study suggest that the Vancouver SIF has, in their eyes, played an important role in reducing the harms associated with overdose. Our qualitative data indicate that this is due in part to the unique contextual features of the SIF, which mediate many of the micro-environmental factors that shape injecting behaviour in public places and produce overdose risks. There also needs to be recognition of the barriers to the effectiveness of SIFs in addressing overdose, particularly around the desire for heavy intoxication. Although the SIF has a role to play in reducing the harms associated with injection drug use, additional policy measures are needed to more fully address the macro-environmental issues affecting IDU, including unemployment, homelessness, and social inequalities.

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