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RESEARCH ARTICLE

Supervised Injection Facility Utilization Patterns: A Prospective Cohort Study in Vancouver, Canada

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Introduction: Although the health and community benefits of supervised injection facilities are well documented, little is known about long-term patterns of utilization of this form of health service. The present study seeks to longitudinally characterize discontinuation of use of a supervised injection facility in Vancouver, Canada.

Methods: Data were drawn from 2 community-recruited prospective cohorts of people who inject drugs between December 2005 and December 2016. In 2018, extended Cox regression for recurrent events was used to examine factors associated with time to cessation of supervised injection facility use during periods of active injection.

Results: Of 1,336 people who inject drugs that were followed for a median of 50 months, 847 (63.4%) participants reported 1,663 6-month periods of supervised injection facility use cessation while actively injecting drugs (incidence density of 26.6 events per 100 person-years). An additional 2,282 (57.8%) of the total 3,945 6-month periods of supervised injection facility use cessation occurred during periods of injection cessation. In multivariable analyses, enrollment in methadone maintenance therapy (adjusted hazard ratio=1.41) and HIV seropositivity (adjusted hazard ratio=1.23) were positively associated with supervised injection facility use cessation during periods of active injection, whereas homelessness (adjusted hazard ratio=0.59), at least daily heroin injection (adjusted hazard ratio=0.70), binge injection (adjusted hazard ratio=0.68), public injection (adjusted hazard ratio=0.67), nonfatal overdose (adjusted hazard ratio=0.73), difficulty accessing addiction treatment (adjusted hazard ratio=0.69), and incarceration (adjusted hazard ratio=0.70) were inversely associated with this outcome (all $p<0.05$). The most commonly reported reasons for supervised injection facility use cessation were injection drug use cessation (42.3%) and a preference for injecting at home (30.7%).

Conclusions: These findings suggest that this supervised injection facility successfully retains people who inject drugs at elevated risk of drug-related harms and indicate that many supervised injection facility clients neither use this service nor inject drugs perpetually.

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INTRODUCTION

A growing number of cities worldwide have implemented supervised injection facilities (SIFs) in response to health and social concerns arising from injection drug use.[1,2] SIFs provide regulated environments in which individuals can inject preobtained illicit drugs with sterile injection equipment under the supervision of trained professionals.[2] These services primarily aim to engage higher-risk, socially

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marginalized people who inject drugs (PWID), mitigate overdose-related harms and infectious disease transmission, facilitate connections with addiction treatment and other health services, and decrease public order concerns related to injection drug use.[2]

North America's first legally sanctioned SIF, Insite, has been operating in the Downtown Eastside (DTES) neighborhood of Vancouver, Canada, since 2003.[3,4] Since established, Insite has been found to have attained all of the aforementioned objectives of SIFs without producing unintended adverse impacts.[2] Specifically, studies have demonstrated that Insite effectively attracts PWID at elevated risk of drug-related harms, including structurally vulnerable subpopulations who might otherwise inject drugs in public settings.[5,6] The establishment of Insite was also associated with reductions in overdose deaths and improvements in public order in the surrounding neighborhood of the facility without increasing crime.[7–9] Further, regular use of the SIF has been associated with declines in injection-related infectious disease risk behaviors,[10] as well as increased enrollment in addiction treatment and subsequent injection cessation.[11–14] Similar findings concerning SIFs have been documented in studies conducted in Australia and Europe.[2,15,16]

Despite the established benefits of SIFs, these facilities remain controversial in some settings.[4,17–19] For example, in recent years, public health and elected officials have developed proposals to establish SIFs in several cities in the U.S., including Philadelphia, San Francisco, Seattle, New York City, Baltimore, and Denver.[17,20] However, policymakers and authorities at various levels of government have thus far prevented these efforts and a legal SIF has yet to be implemented in the U.S.,[17,20,21] despite the ongoing overdose crisis in North America.[22,23] Much of the opposition to SIFs appears to be rooted in concerns regarding the potential adverse consequences of these programs, including that these may promote perpetual drug injection and use of these services.[16,24–26] Indeed, such concerns have been cited by high-ranking government officials in the U.S. as a key reason not to support the implementation of this intervention.[24,25] However, previous studies of SIF use and client characteristics have been limited to those with cross-sectional designs or short-term follow-up durations.[5,6,27–29] As such, little is known about long-term SIF utilization patterns among PWID, including discontinued use of these services.

Characterizing SIF use discontinuation may help to address concerns regarding potential ongoing use of these services among PWID, and thus could provide important information to guide policy recommendations concerning the implementation of these facilities in the U.S. and elsewhere. Further, such information could inform the optimization of existing SIF programming, including how such services could be tailored to the needs of subpopulations of clients with distinct SIF utilization patterns. Therefore, the present study aims to longitudinally characterize cessation of use of the Insite SIF among a community-recruited prospective cohort of PWID in Vancouver, Canada.

METHODS

Study Sample

Data were derived from the Vancouver Injection Drug Users Study (VIDUS) and AIDS Care Cohort to evaluate Exposure to Survival Services (ACCESS), 2 concurrent prospective cohort studies of people who use drugs in Vancouver. As described elsewhere,[30,31] participants have been recruited through street outreach and self-referral since May 1996. VIDUS enrolls HIV-negative individuals who have injected drugs in the previous month at baseline. ACCESS enrolls HIV-positive individuals who have used illicit drugs other than cannabis in the previous month at baseline. At baseline and semiannually thereafter, participants complete an interviewer-administered questionnaire that elicits information regarding sociodemographic characteristics, drug use behaviors, social-structural exposures, and health service utilization. Participants also provide blood samples for testing. Each participant receives a Can$30 honorarium per study visit. The studies have been approved by the University of British Columbia/Providence Health Care Research Ethics Board. All participants enrolled between December 1, 2005 and November 30, 2016 who reported using the Insite SIF in the previous 6 months at baseline or in a follow-up interview and had at least one subsequent follow-up visit were included in the present study.

Measures

As past research has characterized injection drug use cessation among SIF clients in this setting,[11] and SIFs are programs designed for people engaged in active injection drug use, the authors were primarily interested in examining SIF use cessation independent of the influence of injection cessation. Thus, the primary outcome of interest was SIF use cessation during periods of active injection drug use, which was defined in response to the questions: *In the past six months, have you used a needle to chip, fix, or muscle even once?* and *Have you fixed at the Insite SIF in the last six months?* An event was defined as any instance of concurrently responding *yes* to the former question and *no* to the latter question. A range of individual and contextual factors, selected based on existing research examining use of harm reduction services among PWID,[6,32–36] were considered as explanatory variables, including age (per year older), sex (male versus female), ethnicity (white versus nonwhite), and use of injection heroin, cocaine, and crystal methamphetamine (all daily or more frequently versus less often than daily injection). Other assessed variables included DTES residency, homelessness, employment, HIV seropositivity, public injection, binge injection, require help injecting, nonfatal overdose, syringe sharing, enrollment in methadone maintenance therapy (MMT), difficulty accessing addiction treatment, experienced violence, sex work involvement, and

incarceration (all yes versus no). Binge injection was defined in response to the following question: *In the past six months, did you go on runs or binges (that is, when you used drugs more than usual)?* Unless otherwise indicated, all variables referred to experiences or activities in the previous 6 months and were treated as time-updated based on semiannual follow-up data.

Statistical Analysis

First, Pearson's chi-squared test for categorical variables and the Mann–Whitney *U* test for continuous variables were used to compare the baseline characteristics of those who did and did not report at least one 6-month period of SIF use cessation while actively injecting drugs during follow-up. Next, SIF use cessation events that co-occurred with injection cessation (defined as concurrently self-reporting having not injected drugs and having not used the SIF during the same 6-month period) were examined descriptively. The incidence densities of SIF use cessation during periods of active injection and injection cessation, respectively, were then calculated using the Poisson distribution.

During the study period, some participants reported more than one SIF use cessation event while actively injecting drugs. Therefore, an extended Cox model for recurrent events was constructed to examine the relationship between explanatory variables and the (repeated) outcome of interest. This model incorporated information on all SIF use cessation events that occurred during periods of active injection over the duration of the study period. In this model, a counting process framework was specified to define time to repeated events, such that individuals were considered eligible for the outcome from Time 0 (date of first reported use of the SIF) to the first event, from the date of resumption of SIF use to the second event, and so forth. Cox analyses were restricted to observations in which participants reported past 6-month injection drug use. During follow-up, participants who did not cease using the SIF while actively injecting were right censored at the date of their latest interview or November 30, 2016, whichever came first.

First, crude hazard ratios were computed to estimate the bivariable association between each explanatory variable and SIF use cessation during periods of active injection. An a priori–defined model-building approach was then applied by fitting a multivariable model that included all variables that were significantly associated with the outcome at $p<0.20$ in bivariable analyses. All remaining variables were then subjected to a backward selection procedure based on the Akaike information criterion and Type III *p*-values.[37]

Finally, as a subanalysis, responses to the following open-ended question were descriptively examined: *If you have fixed at Insite only once or have stopped fixing there, why have you not gone back?* As this question was only included in the study questionnaire between June 1, 2010 and November 30, 2012, this analysis was limited to participants who responded to this question at their first report of SIF use cessation during this time period (regardless of whether the SIF use cessation event co-occurred with active injection or injection cessation). Response options, which were not read aloud to participants, included the following: *Don't like the DTES*; *already have a safe place in which to inject*; *prefer to inject at home*; *too far from where I score drugs*; *have to wait too long to inject*; *need help injecting*; *can't split deals*; *entrance is too public*; *don't want to register to use the site*; *too many police near the site*; *prefer to keep drug use private*; *prefer to inject alone*; *quit fixing*; *moved away*; *in jail*; *don't want to inject with strangers*; *poor treatment by Insite staff*; *just wanted to check it out*; *poor treatment by other users*; *banned/barred*; and *other (specify)*. Participants could provide more than one response. All analyses were conducted in 2018 with SAS, version 9.4.

RESULTS

Of the 2,189 participants recruited into VIDUS and ACCESS during the study period, 1,336 PWID were eligible and included in the present analyses. At baseline, individuals included in this study were less likely to be HIV-seropositive than those excluded, and were more likely to be younger, reside in the DTES, be homeless, inject in public, binge inject, participate in MMT, engage in sex work, share syringes, require help injecting, have experienced violence, have recently overdosed, have recently been incarcerated, and to report at least daily injection of heroin, cocaine, and crystal methamphetamine (all $p<0.05$; data not shown). No statistically significant differences were observed between excluded and included individuals in terms of other characteristics listed in Table 1.

The median age of study participants at baseline was 41 years (IQR=34–47), 467 (35.0%) were women, and 846 (63.6%) were white. Table 1 presents the baseline characteristics of participants, stratified by reporting at least one 6-month period of SIF use cessation while actively injecting drugs during follow-up.

During the study period, participants contributed 6,254 person-years of observation time (median=50.1 person-months, IQR=17.9–93.9). In total, 847 (63.4%) individuals reported 1,663 6-month periods of SIF use cessation while actively injecting drugs, yielding an incidence density of 26.6 events per 100 person-years (95% CI=25.3, 27.9). An additional 2,282 6-month SIF use cessation events occurred during periods of injection cessation (incidence density of 36.5 events per 100 person-years [95% CI=35.0, 38.0]). These latter events accounted for 57.8% of the total 3,945 SIF use cessation events that occurred among 1,030 (77.1%) participants during periods of either active or inactive injection.

Table 2 shows that 398 (47.0%) of 847 individuals who reported at least one 6-month period of SIF use cessation while actively injecting drugs reported a single SIF use cessation event and 449 (53.0%) reported 2 or more cessation events. Of the 576 individuals who reported at least one SIF use cessation event while not injecting drugs, 211 (36.6%) reported a single event and 365 (63.4%) reported 2 or more events.

Results of the bivariable and multivariable extended Cox analyses are presented in Table 3. In multivariable

Table 1. Baseline Characteristics of SIF Clients Stratified by Ceasing SIF Use While Actively Injecting During Follow-up

Characteristic	Total, *n* (%) (N=1,336)	Cease SIF use while actively injecting at least once during follow-up: Yes, *n* (%) (*n*=847)	Cease SIF use while actively injecting at least once during follow-up: No, *n* (%) (*n*=489)	*p*-value
Age[a] (median, IQR; per year older)	41 (34–48)	41 (34–47)	40 (33–48)	0.348
Sex (male vs female)	868 (65.0)	552 (65.2)	316 (64.8)	0.878
Ethnicity (white vs nonwhite)	846 (63.6)	530 (63.0)	316 (64.8)	0.508
Downtown Eastside residence[a] (yes vs no)	1,035 (77.5)	662 (78.2)	373 (76.3)	0.429
Employment[a] (yes vs no)	277 (20.7)	162 (19.1)	115 (23.5)	0.057
Homeless[a] (yes vs no)	566 (42.6)	339 (40.2)	227 (46.6)	**0.023**
HIV status[a] (positive vs negative serology)	447 (33.5)	294 (34.7)	153 (31.3)	0.202
Heroin injection[a] (≥daily vs <daily)	512 (38.3)	298 (35.2)	214 (43.8)	**0.002**
Cocaine injection[a] (≥daily vs <daily)	178 (13.4)	112 (13.3)	66 (13.5)	0.907
Crystal methamphetamine injection[a] (≥daily vs <daily)	103 (7.7)	51 (6.1)	52 (10.7)	**0.002**
Public injection[a] (yes vs no)	690 (51.8)	413 (48.8)	277 (56.9)	**0.005**
Binge injection[a] (yes vs no)	430 (32.2)	261 (30.9)	169 (34.6)	0.167
Require help injecting[a] (yes vs no)	353 (26.6)	198 (23.5)	155 (31.8)	**<0.001**
Nonfatal overdose[a] (yes vs no)	136 (10.2)	69 (8.2)	67 (13.7)	**0.001**
Syringe sharing[a] (yes vs no)	157 (11.8)	83 (9.9)	74 (15.2)	**0.004**
Experience violence[a] (yes vs no)	368 (27.9)	231 (27.6)	137 (28.3)	0.792
Enrollment in MMT[a] (yes vs no)	613 (46.2)	406 (48.3)	207 (42.6)	**0.043**
Difficulty accessing addiction treatment[a] (yes vs no)	87 (6.6)	55 (6.6)	32 (6.6)	0.985
Sex work involvement[a] (yes vs no)	253 (19.0)	163 (19.3)	90 (18.5)	0.730
Incarceration[a] (yes vs no)	263 (19.8)	160 (19.0)	103 (21.2)	0.325

Note: Boldface indicates statistical significance ($p<0.05$).
[a]Refers to activities and experiences in the previous 6 months.
MMT, methadone maintenance therapy; SIF, supervised injection facility.

analyses, enrollment in MMT (adjusted hazard ratio [AHR]=1.41, 95% CI=1.21, 1.63) and HIV seropositivity (AHR=1.23, 95% CI=1.05, 1.44) remained positively associated with SIF use cessation during periods of active injection. Factors that remained inversely associated with this outcome in adjusted analyses included the following: homelessness (AHR=0.59, 95% CI=0.50, 0.70), at least daily heroin injection (AHR=0.70, 95% CI=0.59, 0.82), public injection (AHR=0.67, 95% CI=0.58, 0.78), binge injection (AHR=0.68, 95% CI=0.59, 0.79), nonfatal overdose (AHR=0.73, 95% CI=0.55, 0.98), difficulty accessing addiction treatment

Table 2. SIF Use Cessation Events During Periods of Active and Inactive Injection Among SIF Clients

Number of events	SIF use cessation during periods of active injection, *n* (%) (*n*=847)[a]	SIF use cessation during periods of injection cessation, *n* (%) (*n*=576)[b]
1 event	398 (47.0)	211 (36.6)
2 events	223 (26.3)	79 (13.7)
3 events	129 (15.2)	64 (11.1)
4 events	59 (7.0)	47 (8.2)
5 events	33 (3.9)	35 (6.1)
6 events	4 (0.5)	27 (4.7)
≥7 events	1 (0.1)	113 (19.5)

SIF, supervised injection facility.
[a]1,663 events among 847 (63.4%) of 1,336 study participants.
[b]2,282 events among 576 (43.1%) of 1,336 study participants.

Table 3. Recurrent Event Survival Analyses of Factors Associated With Cessation of SIF Use While Actively Injecting

Characteristic	Unadjusted		Adjusted	
	Hazard ratio (95% CI)	*p*-value	Hazard ratio (95% CI)	*p*-value
Age[a] (per year older)	1.00 (0.99, 1.01)	0.667	—	—
Sex (male vs female)	0.84 (0.72, 0.98)	0.289	—	—
Ethnicity (white vs nonwhite)	0.91 (0.78, 1.07)	0.262	—	—
Downtown Eastside residence[a] (yes vs no)	0.95 (0.81, 1.10)	0.484	—	—
Employment[a] (yes vs no)	0.90 (0.76, 1.07)	0.223	—	—
Homeless[a] (yes vs no)	0.44 (0.37, 0.52)	**<0.001**	0.59 (0.50, 0.70)	**<0.001**
HIV status[a] (positive vs negative serology)	1.35 (1.15, 1.59)	**<0.001**	1.23 (1.05, 1.44)	**0.012**
Heroin injection[a] (≥daily vs <daily)	0.50 (0.43, 0.58)	**<0.001**	0.70 (0.59, 0.82)	**<0.001**
Cocaine injection[a] (≥daily vs <daily)	0.68 (0.54, 0.84)	**<0.001**	—	—
Crystal methamphetamine injection[a] (≥daily vs <daily)	0.75 (0.56, 0.99)	**0.041**	—	—
Public injection[a] (yes vs no)	0.46 (0.40, 0.53)	**<0.001**	0.67 (0.58, 0.78)	**<0.001**
Binge injection[a] (yes vs no)	0.60 (0.52, 0.70)	**<0.001**	0.68 (0.59, 0.79)	**<0.001**
Require help injecting[a] (yes vs no)	0.73 (0.61, 0.87)	**<0.001**	—	—
Nonfatal overdose[a] (yes vs no)	0.56 (0.43, 0.73)	**<0.001**	0.73 (0.55, 0.98)	**0.038**
Syringe sharing[a] (yes vs no)	0.65 (0.46, 0.91)	**0.012**	—	—
Experience violence[a] (yes vs no)	0.75 (0.63, 0.89)	**<0.001**	—	—
Enrollment in MMT[a] (yes vs no)	1.58 (1.37, 1.82)	**<0.001**	1.41 (1.21, 1.63)	**<0.001**
Difficulty accessing addiction treatment[a] (yes vs no)	0.57 (0.43, 0.77)	**<0.001**	0.69 (0.50, 0.95)	**0.021**
Sex work involvement[a] (yes vs no)	1.12 (0.91, 1.38)	0.274	—	—
Incarceration[a] (yes vs no)	0.53 (0.43, 0.65)	**<0.001**	0.70 (0.56, 0.87)	**0.002**

Note: Boldface indicates statistical significance ($p<0.05$).
[a]Refers to activities or experiences in the previous 6 months and treated as time-updated based on semiannual follow-up data.
MMT, methadone maintenance therapy; SIF, supervised injection facility.

(AHR=0.69, 95% CI=0.50, 0.95), and incarceration (AHR=0.70, 95% CI=0.56, 0.87).

Of the 493 participants who responded to the question regarding reasons for SIF use cessation, the most commonly reported reasons for doing so included the following: *quit fixing* (*n*=150, 42.3%); *prefer to inject at home* (*n*=109, 30.7%); *already have a safe place in which to inject* (*n*=57, 16.1%); *don't like the DTES* (*n*=14, 3.9%); and *moved* (*n*=14, 3.9%).

DISCUSSION

Although previous studies have identified correlates of short-term SIF use,[5,6,27–29,38,39] this study addresses gaps in current evidence concerning long-term SIF utilization patterns in that it is the first study, to the authors' knowledge, to longitudinally characterize discontinuation of SIF use among a community-recruited cohort of PWID. The study shows that most (77%) PWID discontinued using the Insite SIF over a median follow-up duration of 50 months, and that injection drug use cessation co-occurred with the majority (58%) of SIF use cessation events. Further, injection cessation was the most commonly reported reason for discontinuing use of this health service. Consistent with previous studies,[11,13] these findings challenge the contention that SIF clients may perpetually inject drugs and use this service. However, it should be noted that injection cessation was often not sustained, as almost two thirds (63%) of individuals who ceased using the SIF during periods of injection cessation had at least 2 such SIF use cessation events during follow-up. This finding aligns with existing knowledge indicating that PWID often experience repeated injection cessation and relapse events during their injection careers,[40–42] and points to the need for further research to better understand the potential role of SIFs in shaping diverse injection drug use trajectories over time.

The study also shows that PWID enrolled in MMT were more likely to discontinue SIF use while actively injecting drugs. Although it could be argued that this association may be due to MMT patients avoiding use of Insite out of concern that using the facility may alert MMT providers of their continued drug use, client use of the SIF is anonymous and confidential,[43] and this is therefore an unlikely explanation for this finding. Instead, this association is likely explained by a decreased need to use the SIF owing to reductions in

injection drug use after initiating MMT, as the link between engagement in MMT and decreased frequency of illicit opioid use has been well described.[44,45] Moreover, previous studies have found SIF use to be associated with increased uptake of addiction treatment, including MMT, and subsequent reductions in injection drug use and SIF use.[11–14,38] Together with these findings and past research demonstrating the role of opioid agonist therapies in reducing various harms among PWID,[46–48] the findings of this study highlight potential benefits of offering links to evidence-based addiction treatment modalities within SIFs. However, because SIF use cessation events examined in multivariable analyses occurred during periods of active injection, it is possible that some PWID on MMT (e.g., polysubstance users) who discontinued using the SIF may have transitioned to injecting drugs in other settings without decreasing their drug use. Additional research may help to further elucidate potential mechanisms underlying the observed association between MMT enrollment and SIF use cessation co-occurring with active injection. As well, the finding that difficulty accessing addiction treatment was associated with reduced likelihood of SIF use cessation during periods of active injection highlights the need for further research to better understand potential barriers to engaging with addiction treatment services among SIF clients.

Results from the multivariable analyses also indicate that PWID with established markers of structural vulnerability and drug-related risk, including homelessness, high-intensity heroin injection, public injection, binge injection, and nonfatal overdose, were less likely to cease using the SIF while actively injecting drugs. The finding that homeless PWID and public injectors were less likely to discontinue using the SIF corroborates with the descriptive findings indicating that some of the most common reasons for SIF use cessation were preferring to inject at home and already having a safe place in which to inject, as the alternative injection settings for marginally housed PWID may be particularly unsafe,[49–51] thus contributing to their sustained engagement with SIF services. Although previous studies have found that SIFs effectively attract their target population of PWID at elevated risk of health-related harms,[5,6,27–29] the present study builds on this work in demonstrating that highly marginalized and higher-risk subpopulations of PWID are also successfully retained in this health service over time while actively injecting drugs. This finding is encouraging given the established health benefits of SIFs, including reductions in drug-related harms and increased uptake of addiction treatment and other health services among PWID who often encounter considerable barriers in accessing such services.[2,16]

The finding that recently incarcerated PWID were less likely to cease using Insite during periods of active injection could partially be explained by the social and economic instability that often characterizes the immediate post-incarceration release period among PWID,[52–54] which might increase reliance on SIFs because of a lack of stable access to alternative safe environments in which to inject. Alternatively, it could be that sustained SIF users are simply more likely to contend with exposures (e.g., involvement in prohibited income-generation activities) that increase their vulnerability to criminalization.[5,6,38,55] However, these interpretations were not investigated in the present study and therefore further examination of potential explanations for this association is warranted.

Limitations

This study has several limitations. First, data were drawn from a nonrandom sample, and therefore the findings cannot be generalized to SIF clients in Vancouver or elsewhere. Second, this study is susceptible to reporting biases, including social desirability bias. In addition, it is possible that unmeasured factors may have influenced the associations observed herein. As well, defining SIF use as self-reported use of the Insite SIF at least once in the past 6 months may have resulted in the inclusion of observations in which this service was rarely used. Thus, future studies should seek to characterize SIF use cessation among clients with more intensive SIF utilization patterns. Additionally, as the present study examined short-term (i.e., past 6 month) SIF use cessation, more research is needed to characterize longer-term cessation of SIF use. Further, similar to past studies of injection drug use careers,[41,42] future research should seek to characterize heterogeneous longitudinal trajectories of SIF utilization (e.g., persistent infrequent or frequent use, frequent relapse) among PWID.

CONCLUSIONS

Periods of SIF use cessation were common among PWID in this setting and often co-occurred with injection cessation. PWID enrolled in MMT were more likely to cease using the SIF during periods of active injection, whereas PWID with markers of structural vulnerability and drug-related risk were less likely to do so. These findings challenge the contention that SIF clients may perpetually inject drugs and use this service, and suggest that higher-risk subpopulations of PWID are successfully retained in this form of programming while actively injecting drugs.

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SUPPLEMENTAL MATERIAL

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