

Acceptability of Supervised Injection Facilities Among Persons Who Inject Drugs in Upstate New York

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Short Report

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Abstract

Background

Supervised injection facilities (SIFs) provide spaces where persons who inject drugs (PWID) can inject under medical supervision and access harm reductions services. Though SIFs are not formally established in the US, such facilities are being considered for approval in several New York State (NYS) communities. No data exists from PWID in NYS, and little from outside major US urban centers, on willingness to use SIFs and associated factors.

Methods

This analysis included 285 PWID (mean age=38.7; 57.7% male; 72.3% non-Hispanic white) recruited for a study on hepatitis C prevalence among PWID in Upstate New York, where participants were recruited from syringe exchange programs (n=80) and able to refer other PWID from their injection networks (n=223). Participants completed an electronic questionnaire that included a brief description of SIFs and assessed willingness to use SIFs. We compared sociodemographic characteristics, drug use/harm reduction history, healthcare experience, and stigma between participants who were willing vs. unwilling to use such programs.

Results

Overall, 67.4% were willing to use SIFs, 18.3% unwilling, and 14.4% unsure. Among those reporting being willing or unwilling, we found higher willingness among those who were currently homeless (91.8% vs. 74.6%; $p=0.004$), who had interacted with police in the past 12 months (85.7% vs. 74.5%; $p=0.04$), and who were refused service within a healthcare setting (100% vs. 77.1%; $p=0.03$).

Conclusion

Our results support SIF acceptability in several Upstate New York PWID communities, particularly among those reporting feelings of marginalization. A large proportion reported being unsure about usage of SIFs, suggesting room for educating PWID on the potential benefits of this service. Our results support SIF acceptability in NYS and may facilitate reaching PWID subgroups that are most marginalized, should SIFs become available.

Background

Within the continuum of services for persons who inject drugs (PWID), there is an ongoing need for open minded, stigma-free medical programming in order to address adverse health outcomes associated with drug use, particularly overdose (1, 2). Supervised injection facilities (SIFs) provide safe, low-barrier

settings in which PWID may inject under medical supervision, as well as gain access to services that reduce drug related harm such as safe injection education, naloxone and overdose prevention, fentanyl test strips, and injection paraphernalia (3, 4). Furthermore, SIFs may provide referral services to clients interested in detox and substance use disorder treatment programs, as well as referral to other social, legal, and medical services (3).

The efficacy and safety of SIFs are supported by growing scientific evidence. In Australia, the first legal SIF opened in 2001 in Sydney, New South Wales, and in 2003, North America's first legal SIF was established in Vancouver, British Columbia. Since establishment of these programs, numerous independent studies in both locations have shown SIFs to be associated with decreases in overdose morbidity and mortality, decreases in injection-associated infections, uptake of detox services, decreases in public injecting, and decreases in HIV (Human Immunodeficiency Virus) infection (5–9). SIFs have been operational in a number of European countries for some time, including Switzerland, the Netherlands, Germany, and Norway.

Varying degrees of acceptance from policymakers and community members in the United States exist around SIFs. Some research in the US context has assessed acceptability of SIFs among PWID in urban areas such as Philadelphia, Baltimore, Providence, and San Francisco, finding an overwhelming majority of PWID willing to use a SIF (10–13). Yet apart from one study conducted in West Virginia, no data outside of major urban areas exist on SIF acceptability, including New York State (NYS) (14). Though SIFs are largely nonexistent in the US, such facilities have been proposed in several NYS locations. With calls for SIF approval, there is an urgent need to understand acceptability of such facilities by PWID in the community (15). Such data is also important given increases in fatal and non-fatal overdoses driven by the COVID-19 pandemic, as well as increasing fentanyl-related morbidity and mortality (16). This analysis aims to assess the acceptance of SIFs among PWID in Upstate New York and explore specific subgroups that may most benefit from such facilities.

Methods

Participants

Participants were drawn from the Upstate PWID Study for Infectious Disease Elimination (UPSIDE), a larger study that aimed to estimate the prevalence of Hepatitis C Virus (HCV) and Human Immunodeficiency Virus (HIV) infection among PWID in Upstate New York, investigate associated behavioral and social risk factors, and assess facilitators and barriers to accessing HCV and HIV care. Participants were recruited from three syringe exchange programs (SEPs) in Albany, Plattsburgh, and Norwich. Respondent-driven sampling was employed to recruit additional participants, where seed participants were asked to refer up to three peers who were also current PWID. Participants received up to \$50 in gift cards for their time to complete the study procedures and \$20 per referral of a peer, up to three peers. Study eligibility included those who were aged eighteen years and older, had injected drugs in the previous 12 months, were able to read and write in English, resided in selected counties that the

collaborating SEPs generally served, and had no immediate plans for relocation. Participants who agreed and were eligible to participate completed a self-administered questionnaire, either on-site or on their own electronic devices. UPSIDE protocol was approved by University at Albany Institutional Review Board.

Measures

Participants were given a brief description of SIFs and told that none were available in NYS. They were then asked the question, “If one was available, would you use such a safe injection facility?” with response options, 1 = Yes, 0 = No, and 9 = Don’t know/not sure. Participants also answered questions about sociodemographic characteristics, drug use history, harm reduction behavior, sexual risk, healthcare-seeking behavior and experiences, experienced and perceived stigma, and mental health status.

Analysis

Descriptive statistics were used to examine the distribution of characteristics among our analytic sample. Chi-square and Fisher’s exact tests were run in order to compare sociodemographic characteristics and drug use behaviors by acceptability of SIFs, at a significance level of $p < 0.05$. All analyses were completed using SAS 9.4 software (17).

Results

This analysis included 285 PWID recruited for a study to assess the prevalence of hepatitis C among PWID in Upstate New York, with 80 participants recruited from SEP visits and 223 referrals recruited from their injection networks. This study excluded 18 participants who were part of the larger UPSIDE study, but did not answer the SIF question. Our sample was majority male (57.7%) and non-Hispanic white (72.3%), with a mean age of 38.7 years (SD=10.8). A majority of our sample had at least a high school education (77.2%) and 26.1% of participants identified as homeless or unstably housed. Regarding drug use history and injecting behavior, 50.2% our sample injected daily, 79.3% most often injected in private, and 44.6% had ever overdosed.

Overall, 67.4% (n=192) of our analytic sample reported willingness to use SIFs, 18.3% (n=52) reported being unwilling, and 14.4% (n=41) reported being unsure of use. Among those reporting either being willing or unwilling, the proportion of PWID reporting willingness to use SIFs was greater among those who were currently homeless compared to those who were not currently homeless (91.8% vs. 74.6%; $p=0.004$), who had interacted with police in the past 12 months compared to those who had not had such interactions (85.7% vs. 74.5%; $p=0.04$), and who had been refused service within a healthcare setting compared to those who had not been refused service (100% vs. 77.1%; $p=0.03$).

Discussion

Our analysis points to strong acceptability of and willingness to use SIFs among several Upstate New York PWID communities. We also found significant associations between acceptance of SIFs and

indicators of greater social need and marginalization within society, such as current homelessness, interaction with police in the past twelve months, and being refused service within a healthcare setting.

Such results align with existing research. First, homelessness has been associated with negative aspects of drug use, such as increased risk of overdose, increased intensity of drug use, increased risk of relapse when in recovery, and greater participation in risky income-generating activity (18–20). To this point, homeless PWID are often in need of more comprehensive services than those who are stably housed, and SIFs may be able to fulfill this need through referrals (18). Furthermore, PWID often have negative interactions with law enforcement, and those who are homeless or living transiently are particularly at risk for police scrutiny (21, 22). Our results may point to SIFs having the potential to not only provide health benefits, but also act as safe spaces for PWID, specifically regarding discrimination experienced from police due to drug use status.

In terms of treatment within healthcare settings, our results fall in line with existing literature on PWID experiences around healthcare utilization. PWID frequently avoid medical services when needed due to perceived and actual stigma from healthcare professionals, and this often results in worse health outcomes and need for acute care within this population (23, 24). This highlights the need for non-judgmental, friendly medical services for PWID and may explain the greater acceptability of SIFs by those who are either given less attention in medical settings or refused medical services within our analytic sample.

To our knowledge, this analysis is the first to date assessing willingness of PWID to use SIFs in New York. Our study may be restricted by a few limitations. For instance, we sampled a hard-to-reach population, and given the lack of an available sampling frame, we may not have penetrated all subgroups of PWID within the larger community. Furthermore, we collected potentially sensitive information from study participants, and this may have introduced bias in data collection. However, measures were taken to mitigate concerns around confidentiality and trust, such as self-administration of the questionnaire and utilization of a peer recruitment strategy. Lastly, statistical power may be an issue for our findings, given this was a secondary, exploratory analysis.

Our results also suggest a few directions for future research on SIFs. For instance, a notable proportion of our sample reported being unsure about or unwilling to use SIFs. Understanding reasons underlying these responses and wider promotion of comprehensive benefits of SIFs, not only among PWID but also the general public, may be warranted. Finally, our results support SIF acceptability in Upstate New York PWID communities as a whole, and emphasize the need to provide comprehensive care to marginalized subpopulations. While this is an important observation, should SIFs become operationalized in New York, ongoing programmatic evaluation will be necessary in order to build on these findings and better understand SIF utilization patterns in practice, especially in light of the immediate and lasting effects of the COVID-19 pandemic on NYS PWID populations.

List Of Abbreviations

HIV: Human immunodeficiency virus

HCV: Hepatitis C Virus

NYS: New York State

PWID: Persons who inject drugs

SIF: Supervised injection facilities

Declarations

Ethical approval and consent to participate

Informed consent was obtained from all study participants. Participants were notified of all study aims and procedures prior to consenting. The study protocol was approved by the University at Albany Institutional Review Board in March 2019.

Consent for publication

Not applicable.

Availability of data and materials

The dataset analyzed during the current study is not publicly available in order to protect study participant privacy.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

ED, TU, SS, and MB contributed to the design and implementation of study procedures. ED analyzed and interpreted data for the present analysis, and prepared the manuscript. TU provided guidance throughout analysis and preparation of the manuscript. All authors provided feedback on and approval of the final manuscript.

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References

1. Paquette CE, Syvertsen JL, Pollini RA. Stigma at every turn: Health services experiences among people who inject drugs. *International Journal of Drug Policy*. 2018 Jul;57:104–10.
2. Wogen J, Restrepo MT. Human Rights, Stigma, and Substance Use. *Health Hum Rights*. 2020 Jun;22(1):51–60.
3. Armbrecht E, Guzauskas G, Hansen R, Pandey R, Fazioli K, Chapman R, et al. Supervised Injection Facilities and Other Supervised Consumption Sites: Effectiveness and Value; Final Evidence Report [Internet]. Institute for Clinical and Economic Review; 2021 Jan. Available from: https://icer.org/wp-content/uploads/2020/10/ICER_SIF_Final-Evidence-Report_010821-1.pdf
4. Ng J, Sutherland C, Kolber MR. Does evidence support supervised injection sites? *Can Fam Physician*. 2017 Nov;63(11):866–866.
5. Marshall BD, Milloy M-J, 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. *The Lancet*. 2011 Apr;377(9775):1429–37.
6. Wood E, Kerr T, Small W, Li K, Marsh DC, Montaner JSG, et al. Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *CMAJ*. 2004 Sep 28;171(7):731–4.
7. Wood E, Tyndall MW, Zhang R, Montaner JSG, Kerr T. Rate of detoxification service use and its impact among a cohort of supervised injecting facility users. *Addiction*. 2007 Jun;102(6):916–9.
8. Salmon AM, Van Beek I, Amin J, Kaldor J, Maher L. The impact of a supervised injecting facility on ambulance call-outs in Sydney, Australia: Impact of a SIF on ambulance utilization. *Addiction*. 2010 Mar 10;105(4):676–83.
9. van Beek I, Kimber J, Dakin A, Gilmour S. The Sydney Medically Supervised Injecting Centre: reducing harm associated with heroin overdose. *Drug Alcohol Depend*. 2004 Dec 1;14(4):391–406.
10. Kral AH, Wenger L, Carpenter L, Wood E, Kerr T, Bourgois P. Acceptability of a safer injection facility among injection drug users in San Francisco. *Drug and Alcohol Dependence*. 2010 Jul 1;110(1–2):160–3.
11. Bouvier BA, Elston B, Hadland SE, Green TC, Marshall BDL. Willingness to use a supervised injection facility among young adults who use prescription opioids non-medically: a cross-sectional study. *Harm Reduction Journal*. 2017 Feb 20;14(1):13.
12. Harris RE, Richardson J, Frasso R, Anderson ED. Perceptions about supervised injection facilities among people who inject drugs in Philadelphia. *International Journal of Drug Policy*. 2018 Feb;52:56–61.
13. Park JN, Sherman SG, Rouhani S, Morales KB, McKenzie M, Allen ST, et al. Willingness to Use Safe Consumption Spaces among Opioid Users at High Risk of Fentanyl Overdose in Baltimore, Providence, and Boston. *J Urban Health*. 2019 Jun;96(3):353–66.

14. O'Rourke A, White RH, Park JN, Rodriguez K, Kilkenny ME, Sherman SG, et al. Acceptability of safe drug consumption spaces among people who inject drugs in rural West Virginia. *Harm Reduction Journal*. 2019 Aug 31;16(1):51.
15. Young S, Eisenberg A. Lawmakers renew push for supervised injection sites. *Politico* [Internet]. 2020 Feb 28; Available from: <https://www.politico.com/states/new-york/newsletters/politico-new-york-health-care/2020/02/28/lawmakers-renew-push-for-supervised-injection-sites-332982>
16. CDC Health Alert Network. Increase in Fatal Drug Overdoses Across the United States Driven by Synthetic Opioids Before and During the COVID-19 Pandemic [Internet]. Centers for Disease Control and Prevention; 2020 Dec. Available from: <https://emergency.cdc.gov/han/2020/han00438.asp>
17. SAS 9.4. Cary, NC: SAS; 2013.
18. The PROUD Community Advisory Committee, Shaw A, Lazarus L, Pantalone T, LeBlanc S, Lin D, et al. Risk environments facing potential users of a supervised injection site in Ottawa, Canada. *Harm Reduct J*. 2015 Dec;12(1):49.
19. Cheng T, Wood E, Nguyen P, Kerr T, DeBeck K. Increases and decreases in drug use attributed to housing status among street-involved youth in a Canadian setting. *Harm Reduct J*. 2014;11(1):12.
20. Baggett TP, Hwang SW, O'Connell JJ, Porneala BC, Stringfellow EJ, Orav EJ, et al. Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. *JAMA Intern Med*. 2013 Feb 11;173(3):189–95.
21. Rhodes T, Singer M, Bourgois P, Friedman SR, Strathdee SA. The social structural production of HIV risk among injecting drug users. *Social Science & Medicine*. 2005 Sep;61(5):1026–44.
22. Beletsky L, Heller D, Jenness SM, Neaigus A, Gelpi-Acosta C, Hagan H. Syringe access, syringe sharing, and police encounters among people who inject drugs in New York City: A community-level perspective. *International Journal of Drug Policy*. 2014 Jan 1;25(1):105–11.
23. Kendall CE, Boucher LM, Mark AE, Martin A, Marshall Z, Boyd R, et al. A cohort study examining emergency department visits and hospital admissions among people who use drugs in Ottawa, Canada. *Harm Reduction Journal*. 2017 May 12;14(1):16.
24. Muncan B, Walters SM, Ezell J, Ompad DC. "They look at us like junkies": influences of drug use stigma on the healthcare engagement of people who inject drugs in New York City. *Harm Reduction Journal*. 2020 Jul 31;17(1):53.

Tables

Table 1. Selected characteristics of PWID assessed for willingness (no vs. yes) to use SIFs (n=244)¹

Variable	No		Yes		p-value
	n = 52	(%)	n = 192	(%)	
Gender					
Male	27	(18.8)	117	(81.3)	0.42
Female	25	(25.3)	74	(74.8)	
Non-binary	0	(0)	1	(100.0)	
Education					
Less than high school	10	(17.5)	47	(82.5)	0.43
At least high school/GED	42	(22.5)	145	(77.5)	
Currently homeless					
No	46	(25.4)	135	(74.6)	0.004
Yes	5	(8.2)	56	(91.8)	
Drugs injected at least once in past 30 days					
No	28	(26.4)	78	(73.6)	0.09
Yes	23	(17.3)	110	(82.7)	
Injections per day					
1-2	22	(27.2)	59	(72.8)	0.07
3-4	20	(22.5)	69	(77.5)	
>5	8	(11.9)	59	(88.1)	
Primary injecting location					
Private	42	(21.7)	152	(78.4)	0.66
Public	9	(18.8)	39	(81.3)	
Ever overdose					
No	28	(21.7)	101	(78.3)	0.93
Yes	24	(21.2)	89	(78.8)	
Visited SEP (past 12 mo)					
No	26	(22.8)	88	(77.2)	0.78
Yes	21	(21.2)	78	(78.8)	
Ever used narcan					

No	34	(21.8)	122	(78.2)	0.62
Yes	15	(19.0)	64	(81.0)	
Interaction with police (past 12 mo)					
No	38	(25.5)	111	(74.5)	0.04
Yes	13	(14.3)	78	(85.7)	
Ever arrested or incarcerated (past 12 mo)					
No	16	(26.2)	45	(73.8)	0.26
Yes	35	(19.4)	145	(80.6)	
Given less attention than other patients in a healthcare setting					
No	47	(23.9)	150	(76.1)	0.05
Yes	5	(10.6)	42	(89.4)	
Treated with hostility by a healthcare provider					
No	44	(22.8)	149	(77.2)	0.27
Yes	8	(15.7)	43	(84.3)	
Refused service by a healthcare provider					
No	52	(22.9)	175	(77.1)	0.03
Yes	0	(0)	17	(100)	

¹ Excludes those who were unsure about their acceptance of SIFs