

Circumstances of First Injection Among Illicit Drug Users Accessing a Medically Supervised Safer Injection Facility

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There have been concerns that safer injecting facilities may promote initiation into injection drug use. We examined length of injecting career and circumstances surrounding initiation into injection drug use among 1065 users of North America's first safer injecting facility and found that the median years of injection drug use were 15.9 years, and that only 1 individual reported performing a first injection at the safer injecting facility. These findings indicate that the safer injecting facility's benefits have not been offset by a rise in initiation into injection drug use. (*Am J Public Health*. 2007;97:1228–1230. doi:10.2105/AJPH.2006.086256)

Medically supervised safer injection facilities, where injection drug users can inject preobtained illicit drugs, have been implemented in various cities to reduce the public health effects of illicit drug use.¹ Although evidence suggests that safer injecting facilities reduce overdose deaths,² HIV risk behavior,³ and public disorder,⁴ this intervention remains highly controversial,^{5–7} largely because of concerns that the provision of a legal place to inject drugs may encourage initiation into injection drug use.^{8,9} Preventing initiation into injection drug use is a key public health priority,¹⁰ and it is noteworthy that fears regarding potential increased rates of injection drug use were among the reasons for the US federal ban on funding for needle exchange programs.⁹

In the light of concerns regarding the potential of safer injecting facilities to promote initiation into injection drug use,¹¹ we examined

length of injecting career and circumstances surrounding initiation into injection drug use among a cohort of users of a safer injecting facility in Vancouver, British Columbia. The Vancouver safer injecting facility—known as Insite—opened in September 2003 as part of a 3-year pilot study.

The Scientific Evaluation of Supervised Injecting (SEOSI) cohort has been described previously.¹² In brief, the SEOSI participants were a representative sample of users of the Insite safer injecting facility derived through random recruitment at the Insite facility. During study visits, blood samples for HIV and hepatitis C virus testing were drawn and a questionnaire was administered to elicit demographic and other information, including drug use and HIV risk-associated behavior.

METHODS

First, we examined length of injecting career. To avoid the potential bias resulting from participants' potential unwillingness to report that their first injection was within the safer injecting facility, we calculated duration of injection drug use by subtracting each participant's age at first injection from the participant's current age rather than asking this question directly. Later in the interview, we assessed the circumstances surrounding initiation into injection drug use among SEOSI participants. Variables of interest included injection by someone else during first injection, injection with a used syringe during first injection, and location of first injection (including within the safer injecting facility). As a subanalysis, we compared the overall rate of initiation into injection drug use among SEOSI participants since the safer injecting facility had opened with the expected rate of initiation among local street youths during a similar follow-up period.

RESULTS

Overall, 1065 participants completed surveys from December 1, 2003, to October 21, 2005 (Table 1). The median age of the participants was 39 years (range=19–64 years); 312 (29%) participants were women. The median number of years of injection drug use

TABLE 1—Circumstances of Initiation Into Injection Drug Use Among Users of Vancouver's Safer Injecting Facility (N = 1065): The Scientific Evaluation of Supervised Injecting cohort, 2003–2005

Variable	No. (%)
Median age, y (range)	39 (19–64)
Years of injecting (interquartile range)	15.9 (8.6–25.9)
Gender	
Male	753 (70.7)
Female	312 (29.3)
Took place at safer injecting facility ^a	
Yes	1 (0.1)
No	1064 (99.9)
Used a borrowed syringe ^a	
Yes	213 (20.0)
No	852 (80.0)
Was assisted with injection ^{a,b}	
Yes	796 (74.7)
No	269 (25.3)

^aAll behaviors refer to the time of first injection drug use.

^bRefers to being physically injected by another individual.

was 15.9 (interquartile range=8.6–25.9). High levels of HIV risk-associated behavior at the time of initiation into injection drug use were reported: 213 (20%) participants reported that their first injection was performed with a used syringe, and 796 (75%) participants reported that they were injected by someone else during their first injection. One man reported performing his first injection within the safer injecting facility. On the basis of the difference between age at first injection and current age, we calculated that an additional 14 individuals had initiated injection drug use since the opening of Insite, all of whom did not report performing their first injection within the facility. When these data were extrapolated to the entire population of safer injecting facility's users (i.e., approximately 5000 individuals),¹³ the estimated number of injection drug users who may have initiated injection drug use inside and outside the safer injecting facility were 5 (95% confidence interval [CI]=2, 12) and 70 (95% CI=55, 80), respectively.

For comparison purposes, we estimated the rate of initiation into injection drug use

that might be expected among the estimated 1250 Vancouver street youths during a single year.^{14,15} On the basis of published estimates of the annual incidence of first injection among Canadian street youths (8 per 100 person-years),¹⁶ one can estimate that approximately 100 (95% CI=81, 122) Vancouver street youths initiate injection drug use each year. This rate is higher than the rate observed among users of safer injecting facilities overall, and street youths represent only a small fraction of the local population that is at risk for initiating injection drug use on an annual basis. The 14 individuals who initiated injection drug use outside of the safer injecting facility likely did so completely independently of the existence of the safer injecting facility. Thus, the values that are most relevant for comparison are likely the estimated rate of initiation among street youths (100; 95% CI=81, 122) and the estimated rate of initiation within the safer injecting facility (5; 95% CI=2, 12).

DISCUSSION

Our findings indicated that most users of the safer injecting facility were long-time injection drug users, and we found no evidence to suggest that the safer injecting facility prompted elevated rates of initiation into injection drug use in the community. In fact, the median years of injection drug use among users of safer injecting facilities were greater than the median years of injection drug use (10; interquartile range=4–20) among participants in another cohort study of local injection drug users (the Vancouver Injection Drug Users Study).¹⁷ Although 1 individual reported performing his first injection at the safer injecting facility, even when we included individuals who initiated injection drug use outside the safer injecting facility, the overall rate of recent initiation into injection drug use among users of the safer injecting facility was markedly lower than the estimated background community-level rate of injection initiation.^{16,18}

The negligible number of new injectors observed in the Vancouver safer injecting facility compares favorably with the proportions observed in European safer injecting facilities.¹¹ Our findings also may reflect rules that

prevent first-time injectors from using the safer injecting facility. More specifically, the staff members at the safer injecting facility ask all new visitors to the facility to sign a waiver indicating that they have injected previously, and it is known in the community that first-time injectors are prohibited from using the facility.

The findings pertaining to risky behavior during first injections were consistent with those of previous studies¹⁹ and indicated the need for interventions to prevent initiation into injection drug use and programs that promote safer injecting practices among new injectors. Given the high rates of syringe borrowing and assisted injection during the first injections reported among participants in this study, rules preventing first-time injectors from using the safer injecting facility should potentially be reevaluated. For example, perhaps first-time injectors could inject at the safer injecting facility if, after a careful assessment, an addiction counselor determined that the individual was unlikely to act on referrals to abstinence-based treatments and remained highly likely to initiate injection drug use.

This study relied on self-reports that may have been susceptible to socially desirable reporting. Although studies indicate that injection drug users may underreport undesirable behaviors, participants were blinded to this eventual use of the data, and therefore, we have no reason to believe that our estimates were biased. This assumption was further supported by the fact that our primary outcome was calculated by subtracting the age at first injection from the participant's current age rather than asking directly about years of injecting. However, we recognize that socially desirable responding may have biased our estimates of the number of first injections performed at the safer injecting facility among the 14 individuals who initiated injection drug use after the safer injecting facility opened. Regardless, even if we assume that all of these individuals initiated injection drug use at the safer injecting facility, the rate of initiation into injection drug use among users of safer injecting facilities still would be lower than the rates that have been reported among similar at-risk populations.

Also, even though we generalized the rates observed in the SEOSI cohort to the overall

cohort of users of the safer injecting facility, we thought that this was justifiable because SEOSI was based on a random sample and because previous comparisons between the SEOSI cohort and the overall cohort of users of the safer injecting facility have shown the 2 populations to be statistically similar.¹² A further potential limitation of our study pertains to our comparison of rates of initiation into injection drug use from other settings and from previous years. We recognize that contextual and temporal differences may have limited the appropriateness of these comparisons, but local estimates were unavailable.

We found that the Vancouver safer injecting facility is used by individuals with long injecting careers and that users of the safer injecting facility were almost universally long-term injectors. Together, these findings indicate that the reported benefits of the safer injecting facility on HIV risk-associated behavior and public disorder were unlikely to have been offset by negative effects of increased rates of initiation into injection drug use. ■

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Contributors

T. Kerr and E. Wood originated and designed the study, supervised all aspects of study implementation, drafted the article, and incorporated reviewer suggestions. T. Kerr, R. Zhang, and C. Lai conducted the statistical analyses. M. W. Tyndall and J. S. G. Montaner made significant contributions to the formulation and design of the analyses, interpretation of the data, and drafting of the article. All authors helped to interpret findings and review drafts of the article.

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Human Participant Protection

The evaluation received ethical approval from the University of British Columbia/Providence Health Care Clinical Research Ethics Board and from Health Canada.

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