2015 Harm Reduction Client Survey: Analysis of Supervised Injection Site Acceptability

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Background and Data Collection

The 2015 BC Harm Reduction Client Survey was administered at 34 harm reduction distribution sites across all BC health authorities and completed by 812 participants. For more details regarding the process, methods and results of the 2015 Client Survey please see Substance Use Trends, Survey reports 2015 at http://www.bccdc.ca/health-professionals/clinical-resources/harm-reduction/substance-use-trends

Respondents were asked "if it were made available to you, which of the following settings would you use for supervised injection services? Select all that apply":

- Shelter or housing
- Community Health Centre/Health Clinic
- Stand-alone facility (like Insite)
- Mobile Site
- Other
- I wouldn't use a supervised injection site
- Prefer not to say

The following analyses of Supervised Injection Site (SIS) acceptability and regional facility preferences were restricted to the 477 respondents who reported having injected in the previous month. SIS acceptability refers to a survey respondent indicating that they would use at least one of the options above.

Data Analysis

Analyses were conducted using R Statistical Computing Software Version 3.2.2. An ANOVA test was used to determine if mean age differed by Health Authority. Fisher's Exact Test was conducted to assess if the sex ratio of participants differed by Health Authority. An independent, two-sample t-test was conducted to determine if average age differed according to SIS acceptability. Simple logistic regression was conducted to assess the relationship between SIS acceptability and the variables gender, needle sharing behaviour, and Health Authority, as well as to determine if accessibility of harm reduction services differed by Health Authority. Contingency table methods were used to calculate odds of SIS acceptability and having witnessed or experienced an overdose. Chi-square tests were used to assess if acceptability of facility type differed between Health Authorities.

Logistic regression models with random effects were used to determine if there was a preference for SIS facility type within each Health Authority. Attempts to build multivariate logistic regression models with random effects were unsuccessful due to non-convergence. Thus, analyses attempting to control for a subject's multiple responses were not considered reliable and have not been reported here.

Key Findings

More than three-quarters (76.7%) of respondents who inject drugs reported they would use some form of SIS. Female gender and difficulty accessing harm reduction services were both associated with increased odds of SIS acceptability ($p < 0.05$). Age, Health Authority, having used a needle previously used by another person, and having experienced or witnessed an overdose were not associated with SIS acceptability ($p > 0.05$). Interest in SIS in a Community Health Centre and Stand-alone facility differed between Health Authorities ($p < 0.001$). Respondents in Vancouver Coastal Health had a statistically significant preference for SISs to be located in stand-alone facilities or mobile sites compared to a community health centre or health clinic. Excluding the response "Other," there was no statistically significant preference for SIS facility type among respondents in Fraser, Interior, Northern, or Island Health Authorities ($p > 0.05$).

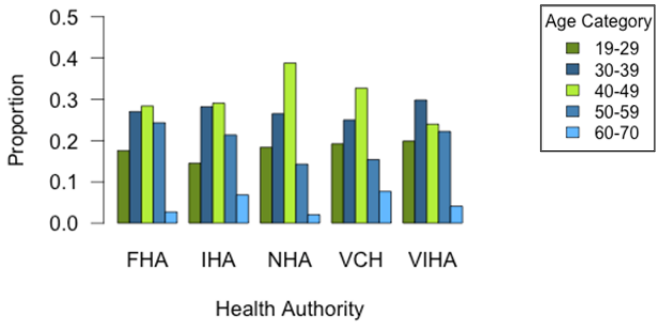
Results

Gender

Gender distributions of participants were approximately equal across all Health Authorities with no statistically significant differences. Male gender was associated with a 48% decrease in odds of SIS acceptability, relative to female gender (OR = 0.52; 95% CI: 0.33, 0.82). The sample size of transgender and gender non-binary individuals (n=5) was insufficient to determine an association with SIS acceptability.

Age

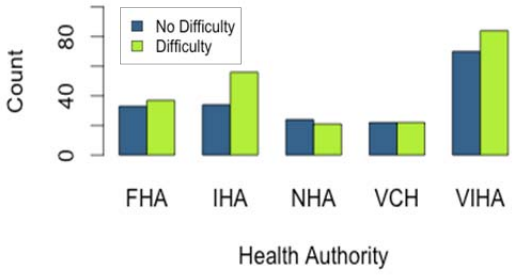
Figure 1. Categorical Age Distribution



The age of respondents who report injecting drugs ranged from 19 to 70 years, with a mean of 40.9 years (median 41 years). The mean age of respondents who reported interest in using a SIS in one of the facilities listed was 43 years, compared to 40.3 years among those who did not; this was not a statistically significant difference ($p > 0.05$).

Accessibility of Harm Reduction Supplies

Figure 2. Difficulty Accessing Harm Reduction



Reported accessibility of harm reduction supplies was consistent across Health Authorities. Difficulty accessing harm reduction supplies ranged from 46.6% in Northern Health to 62.2% in Interior Health. Difficulty accessing harm reduction services is more common among respondents who indicated SIS acceptability. Respondents who reported difficulty accessing harm reduction supplies had 3.18 times greater odds of expressing interest in using a SIS when compared to respondents who did not report difficulty accessing harm reduction supplies ($p < 0.05$, 95% CI: 1.94, 5.33).

Needle Sharing

Twelve percent of respondents who indicated interest in using a SIS reported injecting with a needle previously used by another person, compared to 2.3% of people who indicated no interest in using a SIS. This corresponds to a 67% increase in the odds of a person who has injected with a used needle expressing interest in a SIS in some type of facility; however, this is not a statistically significant difference, ($p > 0.05$, OR = 1.67; 95% CI: 0.98, 2.36).

Overdose

Having witnessed or experienced an overdose is not significantly associated with SIS acceptability; 80% of respondents who would use an SIS had witnessed an overdose, compared to 74% of respondents who would not use an SIS (Figure 3). Reports of having overdosed were associated with a non-significant 30% increase in the odds of SIS acceptability (OR 1.3; 90% CI: 0.80, 2.12). Similarly, witnessing an overdose increased the odds of SIS acceptability by 43% (OR 1.43; 90% CI: 0.97, 2.11), but this was not statistically significant ($p > 0.05$).

Figure 3. Witness Overdose (n = 447)

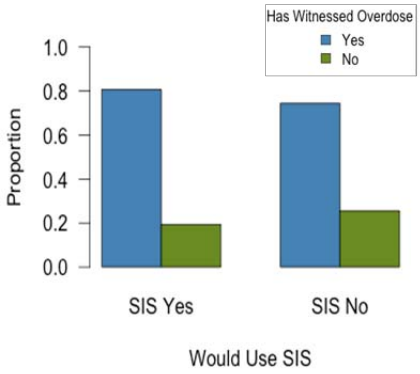
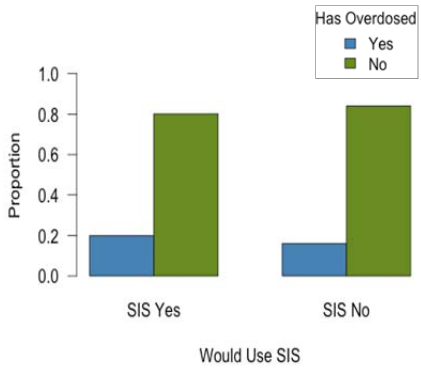


Figure 4. Experience Overdose (n = 453)



SIS Acceptability by Health Authority

SIS acceptability is high in all Health Authorities, ranging from 70% in Fraser Health to 83% in Island Health (formerly Vancouver Island Health Authority). Overall, 76.7% of respondents indicated SIS acceptability. Although Northern and Island Health Authorities are associated with 79% and 87% higher odds of SIS acceptability, respectively, there is no significant difference in SIS acceptability between Health Authorities.

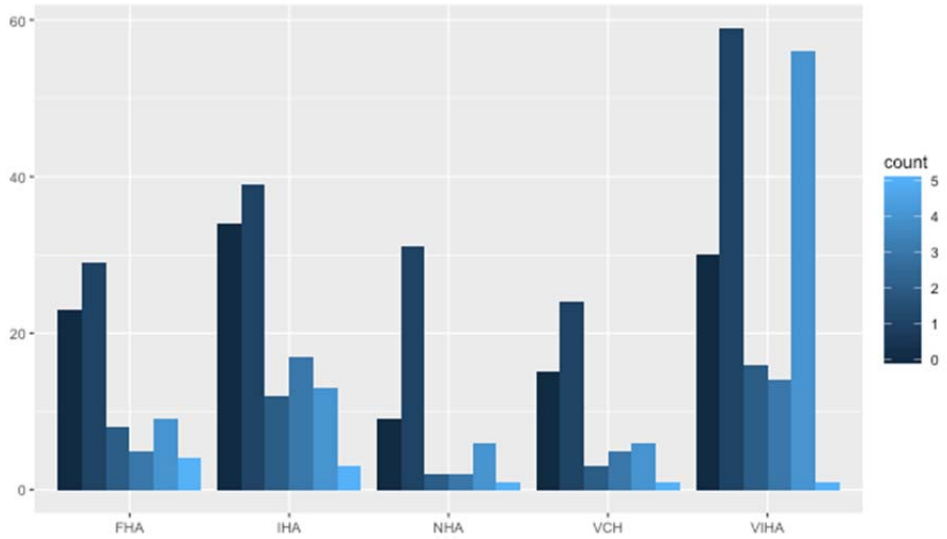
Table 1. SIS Acceptability by Health Authority

Health Authority	SIS Acceptability	Odds Ratio	95% CI
FHA	70%	0.92	0.42, 1.97
IH	72.2%	0.95	0.46, 1.92
IsH	83%	1.87	0.90, 3.78
NHA	82.4%	1.79	0.71, 4.71
VCH	72%	Reference	

Facility Preferences by Health Authority

In each Health Authority, respondents indicated a preference for a SIS in only one of five possible locations listed (Figure 4). It is notable that in Island Health, respondents selected four different options almost as often as they selected one option.

Figure 4. Number of Locations Selected by Respondents



Because survey respondents were invited to select all of the locations in which they would use a SIS, responses for each Health Authority exceed 100% (Table 2). Interest in using SIS in Community Health Centres or a stand-alone facilities differs by Health Authority ($p < 0.001$), while interest in using SIS in shelters or mobile sites does not differ by Health Authority (Figure 5).

Table 2. Interest in Facility Type by Health Authority

	Shelter or housing	Community Health Centre	Stand Alone Facility	Mobile Site	Other
FHA	44.9%	30.7%	30.7%	30.7%	11.5%
IHA	36.4%	35.6%	39%	33.1%	8.5%
IsH	43.2%	52.3%	58.5%	44.3%	5.7%
NHA	37.3%	31.4%	31.4%	31.4%	5.9%
VCH	29.6%	20.4%	44.4%	40.7%	1.9%

Figure 5. Facility Type Preferences Among Health Authorities

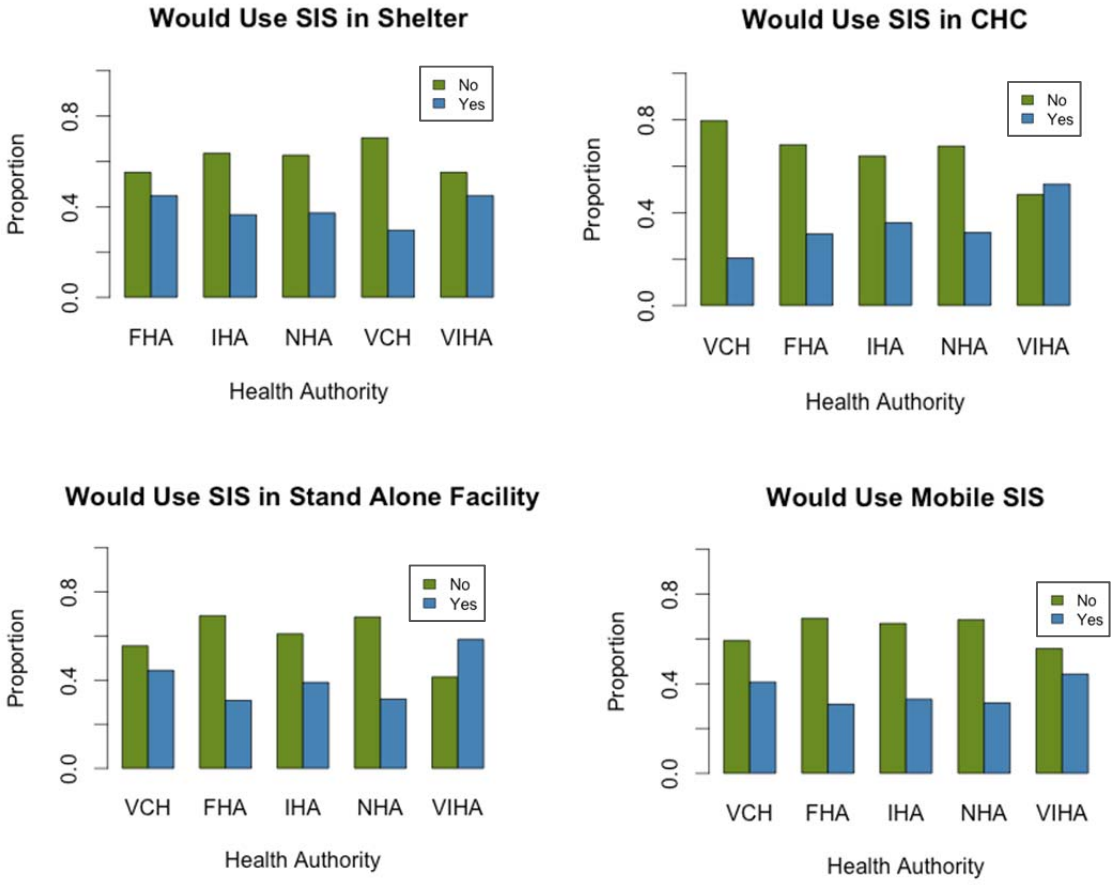


Table 3 shows the facility preferences within health authorities. Significant preferences for a particular facility type are shown in bold. Independent of other selections that an individual made, respondents in Fraser Health are almost twice as likely to select "Shelter" than they are to select "CHC;" however, this did not quite reach statistical significance (p = 0.06)

Table 3. Facility Preferences within Health Authority.

	Fraser Health		Interior Health		Island Health		Northern Health		Vancouver Coastal	
Facility type	OR*	p-value	OR	p-value	OR	p-value	OR	p-value	OR	p-value
CHC** / Health Clinic	Reference		Reference		Reference		Reference		Reference	
Shelter or housing	1.97	0.06	1.04	0.89	0.73	0.15	1.3	0.53	1.72	0.24
Stand Alone Facility	1.0	0.99	1.16	0.58	1.3	0.23	1.0	0.99	**3.52**	**0.006**
Mobile Site	1.0	0.99	0.88	0.67	0.71	0.13	1.0	0.99	**2.98**	**0.02**
Other	0.27	0.003	0.18	<0.001	0.04	<0.0001	0.14	<0.003	0.07	0.01

*OR = Odds Ratio; **CHC= Community Health Centre

Respondents from Vancouver Coastal Health Authority (VCH) most strongly preferred a Stand-alone Facility, followed by a mobile site. The odds of participants in VCH selecting a "Stand-alone Facility" is 252% greater than the odds of selecting the reference facility type "Community Health Centre" ($p < 0.01$). Similarly, the odds of VCH respondents selecting "Mobile Site" is almost 200% greater than the odds of respondents selecting "Community Health Centre or Clinic" ($p < 0.05$).

Of the 34 respondents reporting injection drug use who selected "Other," 26 provided an explanation of the alternative location where they would use a SIS (Table 4).

Table 4. Other Locations Specified in Responses

	Any Location[1]	Generic Location[2]	Specific Location[3]	Communication[4]	General Concepts[5]	N/A[6]	Not Interpretable[7]
FHA	1	1	1	0	1	4	1
IHA	3	1	1	0	2	1	3
IsH	1	3	2	0	1	2	1
NHA	1	0	0	1	0	1	0
VCH	0	0	0	1	0		0
Total	6	5	4	2	4	8	5

[1]Would use in any location [2]Reference to facility type not listed (e.g. hospital or pharmacy) [3]Reference to a facility by name (e.g. Insite, VANDU) [4]Reference to telecommunications [5]Reference to concepts related to SIS (e.g. safety, privacy) [6]No explanation provided [7]Unclear what respondent meant

Discussion

Recent studies have shown that female PWID are at greater risk of experiencing injection-related mortality and violence associated with assisted injecting.[1,2] Findings that female PWID express greater interest in accessing SIS indicate that provision of SISs are an opportunity to rectify gendered health disparities among PWID. Difficulty accessing harm reduction services is significantly associated with increased interest in using a SIS. SISs are known to mitigate barriers to accessing harm reduction services by providing low-barrier services. Findings, however, may indicate the need for expansion of staff training and other harm reduction services, in addition to provision of SISs.

Elsewhere, LGBTQ identity has been associated with increased interest in SISs.[3] Due to limited numbers of non-cisgender people, findings are limited to the relationship between SIS acceptability and cisgendered males and females. Additional limitations include the use of convenience sampling, exclusion of neighbourhoods from participation (no sites in Vancouver's Downtown Eastside, where a supervised injection site currently exists participated), and social desirability bias. Consequently, generalizability of results is limited. Analyses employed only simple regression, and did not control for confounding or interaction terms. Further analyses using multivariate models are required to tease apart the independent effects of key variables such as gender and difficulty accessing harm reduction.

References

1. Hayashi K, Dong H, Marshall B, Milloy M, Montaner J, Wood E et al. Sex-Based Differences in Rates, Causes, and Predictors of Death Among Injection Drug Users in Vancouver, Canada. Am J Epidemiol [Internet]. 2016 [cited 2016 Aug 15];183(6):544-552. Available from: Oxford Journals.
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3. Shaw A, Lazarus L, Pantalone T, LeBlanc S, Lin D, Stanley D et al. Risk environments facing potential users of a supervised injection site in Ottawa, Canada. Harm Reduction Journal [Internet]. 2015 [cited 2016 Aug 15];12(1). Available from: BioMedCentral Open Access.