



# What is the effectiveness of supervised injection services?



## Question

What is the effectiveness of supervised injection services?

## Key Take-Home Messages

- The use of supervised injection services can lead to reductions in injecting behaviour and an increase in the number of clients accessing addiction treatment services.
- Supervised injection services can be cost saving when the analysis takes into account their capacity to reduce transmission of blood-borne diseases, namely HIV and HCV.
- People who inject at supervised injection sites feel safer than those who inject publically.
- Overdose morbidity and mortality are reduced when clients inject at supervised injection sites. Clients who inject at supervised injection sites receive education on safer injecting practices that helps reduce injection-related morbidity.
- When nursing care is provided at supervised injection sites, clients access nursing services frequently.
- Supervised injection sites do not lead to any significant disruptions in public order or safety in the neighbourhoods where they are located.
- Supervised injection sites pose a few challenges based on their operating models and regulations: if capacity does not meet demand there may be long lines that dissuade some clients from injecting at the facility; there will still be times when clients have no choice but to inject elsewhere when facilities are not open 24 hours per day, 7 days a week; some clients cannot inject independently and will not use supervised injection services that prohibit assisted injections; and when facilities prohibit splitting or sharing drugs on site, some clients might be excluded.

## EVIDENCE INTO ACTION

The OHTN Rapid Response Service offers HIV/AIDS programs and services in Ontario quick access to research evidence to help inform decision making, service delivery and advocacy. In response to a question from the field, the Rapid Response Team reviews the scientific and grey literature, consults with experts, and prepares a brief fact sheet summarizing the current evidence and its implications for policy and practice.

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1. Dolan JK, Craig Fry, David McDonald, John Fitzgerald, Franz Trautmann, Kate. Drug consumption facilities in Europe and the establishment of supervised injecting centres in Australia. *Drug and alcohol review*. 2000;19(3):337-46.
2. Hedrich D, Kerr T, Dubois-Arber F. Drug consumption facilities in Europe and beyond. *European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), Harm reduction: evidence, impacts and challenges*, Rhodes, T and Hedrich, D (eds), Scientific Monograph Series. 2010(10).
3. Kimber J, Wodak A, Dolan KA. International Survey of Supervised Injecting Centres, 1999-2000: National Drug and Alcohol Research Centre, University of New South Wales; 2001.
4. Small W, Shoveller J, Moore D, Tyndall M, Wood E, Kerr T. Injection drug users' access to a supervised injection facility in Vancouver, Canada: the influence of operating policies and local drug culture. *Qualitative health research*. 2011;1049732311400919.
5. Bayoumi AM, Strike C. Report of the Toronto and Ottawa supervised consumption assessment study, 2012: St. Michael's Hospital; 2012.
6. Petrar S, Kerr T, Tyndall MW, Zhang R, Montaner JS, Wood E. Injection drug users' perceptions regarding use of a medically supervised safer injecting facility. *Addictive behaviors*. 2007;32(5):1088-93.
7. DeBeck K, Kerr T, Bird L, Zhang R, Marsh D, Tyndall M, et al. Injection drug use cessation and use of North America's first medically supervised safer injecting facility. *Drug and alcohol dependence*. 2011;113(2):172-6.
8. Wood E, Tyndall MW, Zhang R, Montaner JS, Kerr T. Rate of detoxification service use and its impact among a cohort of supervised injecting facility users. *Addiction*. 2007;102(6):916-9.
9. Beek I, Gilmour S. Preference to have used a medically supervised injecting centre among injecting drug users in Kings Cross, Sydney. *Australian and New Zealand journal of public health*. 2000;24(5):540-2.
10. Jozaghi E, Andresen MA. Should North America's first and only supervised injection facility (InSite) be expanded in British Columbia, Canada? *Harm reduction journal*. 2013;10(1):1-9.

## The Issue and Why It's Important

Supervised injection sites (SISs) are “legally sanctioned and supervised facilities designed to reduce the health and public order problems associated with illegal injection drug use” (1). They “enable the consumption of pre-obtained drugs in an anxiety and stress-free atmosphere, under hygienic and low risk conditions” (1). Commonly, the purpose of SISs are to reduce public disorder and enhance public safety, reduce overdose morbidity and mortality, reduce transmission of blood-borne infections, and improve access to other health and social services (1).

First established in Europe in the 1970s (1), there are roughly 45 SISs currently operating there with the majority located in the Netherlands, Switzerland and Germany (1). On average, European SISs report between 25 and 400 visits per day (2). There is one SIS in Australia, the Sydney Medically Supervised Injecting Centre, and two in Canada, Insite and the Dr. Peter Centre – both located in Vancouver where there is a visible and well known public drug use scene. Insite is a stand-alone SIS that allows anyone to inject drugs on-site. Insite sees a large volume of clients: roughly 700 injections are performed on site each day (3). The Dr. Peter Centre is an integrated health centre for people living with HIV and substance use issues. It offers day programs, a range of therapy programs, a meal program and a long-term residence as well as supervised injection services for its registered clients.

Each SIS has a unique set of rules and regulations (2,3). The sites in Canada and Australia have undergone numerous evaluations and are discussed in several peer-reviewed publications; however, in general, the English language peer-reviewed and grey literature describing these centres and their effectiveness is limited.

SISs are highly controversial and have been the subject of debate in Ontario for several years (4). Opponents frequently suggest that SISs condone or promote drug use and cause people who use drugs to congregate in one neighbourhood which disrupts the community, or dissuades people who use drugs from accessing addiction treatment programs (1,4).

## What We Found

### *Reduction in Harmful Behaviours*

Evidence from Insite shows that the introduction of a SIS led to a reduction in harmful drug-related behaviours. One study found that 75% of Insite clients reported a change in their injecting behaviour as a result of using their services (5). Another study found that 23% of respondents who had been Insite clients had stopped injecting by the end of the study period, and another 57% had entered addiction treatment (6). Wood et al. found that one year after Insite opened, 30% of clients reported using detoxification services (7). Clients at Insite and the Sydney Medically Supervised Injecting Centre also reported preferring to inject at the facility whenever possible (8,9). At the Sydney Medically Supervised Injecting Centre, 16% of clients who received referrals for addiction treatment services confirmed actually participating in addiction treatment programs; however, 20% of clients at Insite indicated that waiting lists prevented them from accessing the addiction programs they had been referred to (10,11).

Insite clients were also more likely to report less risky sexual practices (1,12). For clients with regular sexual partners, 25% used condoms regularly before they began injecting at Insite compared to 33% two years after Insite opened (12). Similarly, 62% of clients regularly used condoms with casual partners before they

began injecting at Insite compared to 70% two years later (12). Clients visiting SISs in Europe also report more consistent condom use after using SISs (2).

### *Cost Effectiveness*

Studies showed that 17% of Insite clients tested positive for HIV and 88% were positive for Hepatitis C (HCV) (13,14). Rates of HIV at the Sydney Medically Supervised Injecting Centre are lower – although 94% of clients had been tested within the last 12 months, self-reported prevalence among all clients was 2%, with self-reported prevalence among MSM at 23% (15). Although estimates vary widely, Insite is predicted to avert up to 84 new HIV infections annually (16–19). A study of a prospective SIS in Montreal found that 11 cases of HIV and 65 cases of HCV could be prevented each year in that city (20). SISs can prevent the spread of blood-borne infections, including HIV and HCV, and can therefore decrease the burden on the healthcare system of extensive lifetime costs associated with these infections. The annual cost savings as a result of HIV infections prevented at Insite are estimated to be between \$2.85 and \$8.55 million (16). Another study found an average of \$17.6 million in lifetime medical expenses saved for each year that Insite is operational (18). All of these estimates of savings greatly exceed Insite's annual operating cost of \$3 million.

### *Client Safety*

Several qualitative studies reported that clients who visited SISs felt safer while injecting than those who injected in other public or private spaces (21–23). Respondents, especially women, frequently explained that there is a risk of being taken advantage of while intoxicated in a public space (21). Study participants had been robbed of money or drugs and subjected to physical violence while injecting or intoxicated (8,21). When injecting in public, some reported being obliged to share drugs and encountering violence if there were disputes (21).

In addition to the decreased risk of encountering violence, clients reported less concern about being arrested while injecting (8,21,23). This allows them to take more time to inject and minimizes problems related to rushed injecting (e.g. infection, overdose, etc.) (21,23–25). Clients also report that they prefer to inject at Insite if they are unsure about the quality or nature of their drugs, or if they inject opiates (which carry a greater risk of overdose) (22,24). In one study, respondents who indicated they visited Insite showed changes in their injecting behaviour – 80% reported less rushed injecting (5). One study participant also noted that she would inject more if she knew she was safe in order to avoid having any leftover drugs confiscated by police (24). Another reported taking more time to inject a small amount initially to “test the strength” of the drug, before proceeding to inject an appropriate amount.

### *Improved Access to Overdose Care and Reduced Overdose Fatalities*

Milloy et al. reported that Insite staff successfully intervene, on average, in two to 13 potentially fatal overdoses each year (26). These overdoses account for six to 37% of the overdoses that occur in Vancouver's downtown east side (26). Notably, those who used Insite for more than 75% of their injections did not have greater rates of non-fatal overdoses than those who used the site less frequently (27). Reports from Europe also suggest a decline in overdose fatalities following the opening of SISs (1). European SISs reported zero overdose deaths and a rate of non-fatal overdose of one to 36 per 10,000 visits (2). Similarly, ambulance calls related to overdose emergencies in the neighbourhood surrounding the Sydney Medically Supervised Injecting Centre declined significantly after the facility opened, and remained lower during their opening hours (28).

11. Kimber J, Kimber J, Mattick RP, Kimber J, Mattick RP, Kaldor J, et al. Process and predictors of drug treatment referral and referral uptake at the Sydney Medically Supervised Injecting Centre. *Drug and alcohol review*. 2008;27(6):602-12.
12. Milloy MJ, Kerr T, Zhang R, Tyndall M, Montaner J, Wood E. Inability to access addiction treatment and risk of HIV infection among injection drug users recruited from a supervised injection facility. *J Public Health (Oxf)*. 2010;32(3):342-9.
13. Marshall BD, Wood E, Zhang R, Tyndall MW, Montaner JS, Kerr T. Condom use among injection drug users accessing a supervised injecting facility. *Sex Transm Infect*. 2009;85(2):121-6.
14. Tyndall MW, Wood E, Zhang R, Lai C, Montaner JS, Kerr T. HIV seroprevalence among participants at a Supervised Injection Facility in Vancouver, Canada: implications for prevention, care and treatment. *Harm Reduct J*. 2006;3:36.
15. Wood E, Kerr T, Stoltz J, Qui Z, Zhang R, Montaner JS, et al. Prevalence and correlates of hepatitis C infection among users of North America's first medically supervised safer injection facility. *Public Health*. 2005;119(12):1111-5.
16. Salmon AM, van Beek I, Amin J, Grulich A, Maher L. High HIV testing and low HIV prevalence among injecting drug users attending the Sydney Medically Supervised Injecting Centre. *Aust N Z J Public Health*. 2009;33(3):280-3.
17. Andresen MA, Boyd N. A cost-benefit and cost-effectiveness analysis of Vancouver's supervised injection facility. *Int J Drug Policy*. 2010;21(1):70-6.
18. Bayoumi AM, Zaric GS. The cost-effectiveness of Vancouver's supervised injection facility. *Cmaj*. 2008;179(11):1143-51.
19. Pinkerton SD. Is Vancouver Canada's supervised injection facility cost-saving? *Addiction*. 2010;105(8):1429-36.
20. Pinkerton SD. How many HIV infections are prevented by Vancouver Canada's supervised injection facility? *Int J Drug Policy*. 2011;22(3):179-83.

21. Jozaghi E, Reid AA, Andresen MA. A cost-benefit/cost-effectiveness analysis of proposed supervised injection facilities in Montreal, Canada. *Subst Abuse Treat Prev Policy*. 2013;8(1):25.
22. Jozaghi E, Reid AA, Andresen MA, Juneau A. A cost-benefit/cost-effectiveness analysis of proposed supervised injection facilities in Ottawa, Canada. *Subst Abuse Treat Prev Policy*. 2014;9:31.
23. Fairbairn N, Small W, Shannon K, Wood E, Kerr T. Seeking refuge from violence in street-based drug scenes: women's experiences in North America's first supervised injection facility. *Soc Sci Med*. 2008;67(5):817-23.
24. Krusi A, Small W, Wood E, Kerr T. An integrated supervised injecting program within a care facility for HIV-positive individuals: a qualitative evaluation. *AIDS Care*. 2009;21(5):638-44.
25. McNeil R, Small W. 'Safer environment interventions': a qualitative synthesis of the experiences and perceptions of people who inject drugs. *Soc Sci Med*. 2014;106:151-8.
26. Kerr T, Small W, Moore D, Wood E. A micro-environmental intervention to reduce the harms associated with drug-related overdose: evidence from the evaluation of Vancouver's safer injection facility. *Int J Drug Policy*. 2007;18(1):37-45.
27. Stoltz JA, Wood E, Small W, Li K, Tyndall M, Montaner J, et al. Changes in injecting practices associated with the use of a medically supervised safer injection facility. *J Public Health (Oxf)*. 2007;29(1):35-9.
28. Milloy MJ, Kerr T, Tyndall M, Montaner J, Wood E. Estimated drug overdose deaths averted by North America's first medically-supervised safer injection facility. *PLoS One*. 2008;3(10):e3351.
29. Milloy MJ, Kerr T, Mathias R, Zhang R, Montaner JS, Tyndall M, et al. Non-fatal overdose among a cohort of active injection drug users recruited from a supervised injection facility. *Am J Drug Alcohol Abuse*. 2008;34(4):499-509.
30. 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. *Addiction*. 2010;105(4):676-83.

Clients at Insite and another unsanctioned facility in Vancouver repeatedly noted that they believed the service saved lives (8,24,29). Many had personally experienced an overdose at Insite, or had witnessed a friend overdose. In all cases, clients reported that Insite staff intervened swiftly and competently and ultimately averted deaths (8,24). Clients noted that it is easier for medical personnel to locate an overdose requiring attention at Insite than at an indeterminate location in an alleyway or behind a dumpster (24). SIS clients also reported observing fewer fatal overdoses in the streets (8).

The sites provide people who inject drugs an opportunity to inject privately without facing the risks of overdosing while injecting alone (24,30). Many prefer to inject alone because they do not have to share drugs, but acknowledge that if an overdose occurs in a public injecting setting it is unlikely that an onlooker will seek medical attention (24). Many participants in the studies reported they had been robbed of drugs or money during a non-fatal overdose in the streets (24).

### *Nursing Care*

In addition to receiving information on safer injecting practices and overdose intervention, SIS clients also access other nursing services, namely care for abscesses and other injection-related wounds and infections, assistance with accessing transportation to other health and social service sites, psychosocial support, and referrals to other services (1,8,31,32). Clients especially appreciated being able to access all services at one location (31). Some clients reported difficulties finding time to access medical care in any other setting, and others reported not being able to recognize the severity of their condition without advice from an Insite nurse (32). Lloyd-Smith reported that 65% of individuals visiting Insite nurses for services other than supervised injection sought care for injection related wounds or infections, 7% sought psychosocial support, 6% sought foot care, 3% sought respiratory care, 2% sought a pregnancy test, and 17% sought other health services (33). Clients who receive these nursing services are more likely to be female, have unstable housing conditions, and/or inject heroin daily (33). Small et al. reported that 94% of Insite clients accessed non-medical services on site, 44% accessed medical services, and 24% indicated they would not have accessed these services if they had not been made available at Insite (31).

Clients at the Dr. Peter Centre who required care reported instances of leaving hospital settings against medical advice the Centre began offered supervised injection services (30). Reasons for leaving medical care included inadequate pain and withdrawal management and policies prohibiting drug use (30). Dr. Peter Centre clients indicated that they were able to receive the nursing care they needed without feeling worried about discussing their drug use with care providers (30). Clients reported that accessing this care without entering the chaos of withdrawal or hidden drug use had a stabilizing effect on their lives and improved their ability to adhere to HIV medication regimens (30).

Many referred to Insite and other SISs as a 'safe haven' or a 'refuge' for people who inject drugs (8,23). They reported feelings of empowerment and a sense of community, and described relationships with staff that were trusting and non-judgemental (8,22,29,31,32,34). These relationships are important in being able to have open conversations about health and drug use, and in facilitating timely care and connections to other health and social services (8,22).

### *Safer Injection Education*

In a survey of clients who visited the Sydney Medically Supervised Injecting Centre, 29% reported a history of injection related problems, injury, or disease (35). These included difficulties finding a suitable vein, scarring or bruising, swelling of the hands or feet, abscesses, skin infections, thrombosis,

septicaemia, and endocarditis (35). Many reported that the nurses were an excellent source of information on correct injecting technique, which helped clients minimize injection-related infections and injuries and facilitated a more comfortable injecting experience (22,36). In one study of Insite clients, more than 40% had received safer injection education from staff (37). Although respondents acknowledged that this information was likely available before, many indicated that it had only existed outside of their drug using environments and was therefore less accessible (36). Some reported continuing to implement safer injection techniques even when they injected outside the site or shared the new information with others who injected elsewhere (8,36).

Clients who were accustomed to receiving injection assistance, reported empowerment and increased independence when taught how to properly inject without assistance (21). These clients reported that relying on someone else to perform their injections meant that they were easily controlled by that person (29).

In a quantitative study, Kerr et al. found that accessing Insite was independently associated with reductions in needle sharing (38). In qualitative interviews, people who accessed Insite reported sharing needles less frequently (8,23). Clients of SISs in Europe also reported reductions in needle sharing when they had access to a SIS (1).

#### *Public Safety and Disorder*

Law enforcement officials in some jurisdictions, including Vancouver, are supportive of SISs and help divert public injecting and drug-related activities to the local SIS (39). One Vancouver study reported that 17% of respondents had been referred to Insite by police, and that 2% had first heard about the service from the police (39). In a survey of clients using an SIS in Hannover, Germany, 94% reported no negative experiences with law enforcement officials in the neighbourhood (1). Law enforcement officials in other jurisdictions may stand in opposition to SISs or may not have a formal publicized stance on the subject (4).

Petrar et al. found that among Insite users whose injecting behaviour had changed as a result of accessing Insite, 71% reported fewer public injections and 56% reported less unsafe needle disposal (5). Another study found that the opening of Insite was independently associated with reductions in public injecting, publically discarded needles, and other injection related litter in Vancouver's downtown east side (40). In this observational study, an average of four injections were observed daily in public spaces prior to the opening of Insite, followed by only two after the opening (40). Similarly, 12 needles were found discarded in public spaces each day before the facility opened, followed by five after it opened (40). Respondents to a survey about SISs in Europe also believed that the facilities had reduced the incidence of public injecting and injection litter (2).

There was no evidence of increased rates of robbery, theft, drug-related loitering or drug-related criminal offences in the surrounding neighbourhood following the opening of the Sydney Medically Supervised Injecting Centre (41). Five years after its opening, local business owners reported a significant decrease in public injecting or publically discarded injecting equipment, and no change in offers of drugs for purchase in the neighbourhood (42). Similarly, SISs in Switzerland and Germany have reported reductions in the visibility of their public injecting scenes (1). Respondents from surveys in six of 15 neighbourhoods with SISs in Europe perceived an increase in drug dealing in the vicinity of the facilities or incidents of violence in the neighbourhood (2).

31. McNeil R, Small W, Lampkin H, Shannon K, Kerr T. "People knew they could come here to get help": an ethnographic study of assisted injection practices at a peer-run 'unsanctioned' supervised drug consumption room in a Canadian setting. *AIDS Behav.* 2014;18(3):473-85.
32. McNeil R, Dilley LB, Guirguis-Younger M, Hwang SW, Small W. Impact of supervised drug consumption services on access to and engagement with care at a palliative and supportive care facility for people living with HIV/AIDS: a qualitative study. *J Int AIDS Soc.* 2014;17:18855.
33. Small W, Van Borek N, Fairbairn N, Wood E, Kerr T. Access to health and social services for IDU: the impact of a medically supervised injection facility. *Drug Alcohol Rev.* 2009;28(4):341-6.
34. Small W, Wood E, Lloyd-Smith E, Tyndall M, Kerr T. Accessing care for injection-related infections through a medically supervised injecting facility: a qualitative study. *Drug Alcohol Depend.* 2008;98(1-2):159-62.
35. Lloyd-Smith E, Wood E, Zhang R, Tyndall MW, Montaner JS, Kerr T. Determinants of cutaneous injection-related infection care at a supervised injecting facility. *Ann Epidemiol.* 2009;19(6):404-9.
36. Small W, Ainsworth L, Wood E, Kerr T. IDU perspectives on the design and operation of North America's first medically supervised injection facility. *Subst Use Misuse.* 2011;46(5):561-8.
37. Salmon AM, Dwyer R, Jauncey M, van Beek I, Topp L, Maher L. Injecting-related injury and disease among clients of a supervised injecting facility. *Drug Alcohol Depend.* 2009;101(1-2):132-6.
38. Fast D, Small W, Wood E, Kerr T. The perspectives of injection drug users regarding safer injecting education delivered through a supervised injecting facility. *Harm Reduct J.* 2008;5:32.
39. Wood RA, Wood E, Lai C, Tyndall MW, Montaner JS, Kerr T. Nurse-delivered safer injection education among a cohort of injection drug users: evidence from the evaluation of Vancouver's supervised injection facility. *Int J Drug Policy.* 2008;19(3):183-8.

40. Kerr T, Tyndall M, Li K, Montaner J, Wood E. Safer injection facility use and syringe sharing in injection drug users. *Lancet*. 2005;366 (9482):316-8.
41. DeBeck K, Wood E, Zhang R, Tyndall M, Montaner J, Kerr T. Police and public health partnerships: evidence from the evaluation of Vancouver's supervised injection facility. *Subst Abuse Treat Prev Policy*. 2008;3:11.
42. Wood E, Kerr T, Small W, Li K, Marsh DC, Montaner JS, et al. Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *Cmaj*. 2004;171 (7):731-4.
43. Freeman K, Jones CG, Weatherburn DJ, Rutter S, Spooner CJ, Donnelly N. The impact of the Sydney Medically Supervised Injecting Centre (MSIC) on crime. *Drug Alcohol Rev*. 2005;24(2):173-84.
44. Salmon AM, Thein HH, Kimber J, Kaldor JM, Maher L. Five years on: what are the community perceptions of drug-related public amenity following the establishment of the Sydney Medically Supervised Injecting Centre? *Int J Drug Policy*. 2007;18(1):46-53.

## Challenges

There are several key issues that SIS clients have raised during evaluative studies:

- Lines can be long, especially during the weeks that social assistance cheques are distributed (5,8,34). This can be especially problematic for clients who are experiencing symptoms of withdrawal (24). At the busiest times, Insite clients may have to wait 15-30 minutes for a booth to become available, and almost 10% of clients leave while waiting for a booth (3). Only 20% of clients would prefer to wait than to inject outside sooner (34).
- While many clients find relationships with SIS staff beneficial, some report that their relationships with staff deter them from using the SIS because they do not want to disappoint staff (22).
- Few SISs are open 24 hours, which leaves clients with some hours during the day during which they must find another place to inject, or inject publically (1,5,34).
- Most SISs, including Insite, do not permit assisted injection to take place on the premises. This is problematic for people who require injecting assistance – often women who receive assistance from male partners, people with disabilities, people who are experiencing withdrawal, or people who are already intoxicated (3,29,34). Up to 50% of clients at Insite would like the option to receive injection assistance (34). Some clients reported attempting to self-inject at Insite and found that after a lengthy period of unsuccessful attempts their drugs coagulated and they needed to return to the street to acquire a new batch (29). Because Insite does not permit assisted injecting, these individuals were forced to rely on a partner (29). This can lead to violence, theft or use of unclean injecting equipment (3,29). In a study of an unsanctioned SIS in Vancouver that permits staff to provide injection assistance, clients reported that, in addition to the advantages already listed, they were more likely to have a safer quantity injected at the facility (29).
- Clients are not generally permitted to split or share drugs on SIS premises. Clients report that this presents a barrier to using Insite, because people commonly purchase drugs together with the intention of sharing them (3). Drugs that come in the form of a pill may need to be prepared in a liquid solution before they can be divided, so it is not possible to split in advance of injecting
- Some clients found the SIS environment too clinical and sterile (34)

Clients also cited several reasons for not using SISs, or not always using SISs, especially if they had an alternate private venue for injecting available:

- The experience of 'nodding off' can be more enjoyable at home (24). SIS staff may try to rouse clients who are in drug-induced sleep to prevent overdose, which some clients found disrupting (24).
- Certain drugs, like cocaine, can make a person feel very suspicious and paranoid. In these cases, clients may prefer to be at home (22).
- Clients may have difficulty traveling to the SIS (1,5)

## Factors That May Impact Local Applicability

The nature of the injection drug scene in a particular locale will have significant impacts on the harm reduction measures that will be explored. The injection drug scene in Vancouver's downtown east side, for example, is highly visible and concentrated. In other regions, like Toronto or Ottawa, the injection drug use ecology is less concentrated. Studies are exploring the integration of supervised injection services into existing community health centres as a model that is more compatible with the ecology of drug use in these regions. Support from political leaders, law enforcement officials, and community members will also seriously impact the feasibility of implementing supervised injection services in a particular community or region.

## What We Did

We searched PubMed for articles using a combination of text terms in the title or abstract: (((supervised OR safe OR safer[Title/Abstract])) AND (injection OR consumption[Title/Abstract])) AND (site OR facility OR room OR service OR services[Title/Abstract]). A separate search was conducted for "Medically Supervised Injecting Centre".