

Does evidence support supervised injection sites?

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Clinical question

Do supervised injection sites (SISs) reduce mortality, hospitalizations, ambulance calls, or disease transmission?

Bottom line

Best evidence from cohort and modeling studies suggests that SISs are associated with lower overdose mortality (88 fewer overdose deaths per 100 000 person-years [PYs]), 67% fewer ambulance calls for treating overdoses, and a decrease in HIV infections. Effects on hospitalizations are unknown.

Evidence

- One high-quality cohort study examined overdose mortality before and after an SIS opened in Vancouver, BC.¹
 - Of persons living within 500 m of the SIS (70% of SIS users), overdose deaths decreased from 253 to 165 per 100 000 PYs and the absolute risk difference was 88 deaths per 100 000 PYs; 1 overdose death was prevented annually for every 1137 users.
 - There was no change in mortality in the rest of city.
- Before the SIS opened, 35% of 598 intravenous drug users were admitted to hospital in a 3-year period,² 15% for skin infections.
 - After the SIS opened, of 1083 SIS users over 4 years,³ 9% were admitted with cutaneous injection-related infections (including osteomyelitis and endocarditis).
 - While SIS nurse "referral" to hospital increased the likelihood of admission, the average length of stay decreased by 8 days (from 12 to 4).³
 - Indirect comparison of different cohorts is a limitation.
- Near one SIS, average monthly ambulance calls with naloxone treatment for suspected opioid overdose decreased from 27 to 9 (relative risk reduction of 67%).⁴
- About 6 to 57 HIV infections per year are prevented by the SIS according to mathematical modeling.^{5,6}
 - Limitations include assumptions made about drug use and injecting practices, and might include benefit from needle exchange programs.⁶

Context

- The age-standardized mortality rate among intravenous drug users is about 8 times higher than in the rest of the population.⁷
- The benefit of the SIS is likely limited by site capacity: the SIS assists only about 4% of all injections in Vancouver's Downtown Eastside.⁵
- Educating SIS users likely contributes to decreased syringe borrowing (37% in 1996 to 2% in 2011).⁷

- There is about 1 overdose at the SIS per 1000 injections; no fatal overdoses have been reported.⁸
- All studies show health care savings for each \$1 spent.^{6,9}
- Opening the SIS did not increase arrests for drug trafficking, assaults, or robberies.¹⁰

Implementation

There are more than 90 SISs worldwide¹¹; Vancouver's SIS has operated since 2003. Many other Canadian jurisdictions are planning SISs; these should be tailored to community needs. Services at SISs include emergency response to overdoses; injection-related first aid; assessment and referral to primary health care; harm reduction counseling; exchange of needles and other drug paraphernalia; and condom provision.¹² These sites support users to seek counseling, detoxification, and treatment for addiction.¹² Details about operating an SIS can be found online.¹¹

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Competing interests

Dr Sutherland is Medical Director of the Portland Hotel Society, the non-profit that runs Vancouver's safe injection site (InSite) in partnership with the Vancouver Coastal Health Authority. The other authors have no potential conflicts of interest.

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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