# How do SCS impact public health?

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#### Overview

Safer drug consumption services (SCS) are legally sanctioned spaces where people who use drugs are free to inject on the premises, using clean equipment, while under the supervision of trained staff. This harm reduction approach is effective in reducing injection-related morbidity and mortality. Availability of SCS have been shown to: prevent transmission of blood-borne infections, avert overdose fatalities, change high-risk behaviors, and increase uptake of health and social services by people who inject drugs. These positive health outcomes provide convincing evidence to support the establishment of SCS in the U.S.

#### **Blood-Borne Infectious Diseases**

Blood-borne infections such as hepatitis C virus (HCV) and HIV continue to be a significant health burden and cause of death in the United States. Though comprising less than one percent of the country's total population, people who inject drugs experience over 50 percent of new HCV infections<sup>1</sup> and 6 percent of new HIV injections.<sup>2</sup> In San Francisco, people who inject drugs account for 21 percent of people living with HIV and 70 percent of active Hepatitis C infections in the city.<sup>3</sup>

SCS are an effective method to reduce transmission of both HIV and HCV by preventing needle sharing and reuse. Regular use of SCS has consistently been shown to lead to fewer instances of risky injection behavior. For example, a 69 percent reduction in the likelihood of syringe sharing was shown among those using SCS in Vancouver. Implementing a SCS in San Francisco is estimated to avert 19 cases of HCV and 3.3 cases of HIV each year.

## Overdose

Among people who use injection drugs, overdose is the greatest cause of mortality, exceeding the proportion of deaths caused by AIDS and other conditions. Since 2000, the number of deaths from drug overdose has increased nearly 1.5-fold in the United States, reaching over 47,000 in 2014, and surpassing motor vehicle injuries as the leading cause of accidental death.

Mortality from overdose is preventable with the provision of naloxone or "Narcan", a prescription drug that temporality reverses the physiological effects of opioid overdose. <sup>10</sup> While availability of naloxone has expanded dramatically across the country, <sup>11</sup> SCS take this a step further to

provide immediate medical service to clients in the event of an overdose. <sup>12</sup> To date, there are no reported overdose fatalities at any SCS worldwide. <sup>13</sup>

Implementation of SCS in Vancouver brought about a 35 percent decrease in the number of fatal overdoses within a 500-meter radius of the facility, <sup>14</sup> translating to between 2 and 12 deaths averted each year. <sup>15</sup> In Australia, the facility significantly reduced ambulance calls related to overdoses by 68 percent during operational hours, thereby freeing up ambulance services to attend other community emergencies. <sup>16</sup>

# **Changes in High-Risk Behaviors**

Use of SCS has wide-reaching effects on other harm-reducing behaviors such as condom use and wound care. Over a two-year period, a cohort of SCS users in Vancouver exhibited an 8 percent increase in condom use during intercourse. <sup>17</sup> Cutaneous injection-related infections such as abscesses and cellulitis represent the primary cause of morbidity among people who inject drugs. Twenty-seven percent of people attending *Insite* received nursing care for such issues. <sup>18</sup>

#### Uptake of Health and Social Services

SCS aim to connect people who use drugs with health and social services. Data from existing facilities point to significant increases in the uptake of treatment services, including addiction treatment, detoxification programs, and initiation of medication-assisted treatment. Vancouver's SCS has been associated with a 30 percent increase in detoxification service use among clients, with 57 percent of those attending the facility initiating addiction treatment, and 23 percent ceasing to inject drugs completely.

In Sydney, 25 percent of people engaging with SCS started such a program. A referral for further assistance is made every 41 visits to the facility, of which: 43 percent are to treatment related to drug dependence; 32 percent to primary health care services; and 25 percent to social welfare services.

# Recommendations

Given the continued threats of HIV, HCV, drug overdose, and other injection-related harms, innovative interventions are needed to address drug-related disease and deaths in the U.S.<sup>24</sup> SCS provide an effective and evidence-based approach to improving the health of people who inject drugs.

<sup>1</sup> Klevens, R. M., Hu, D. J., Jiles, R., & Holmberg, S. D. (2012). Evolving epidemiology of hepatitis C virus in the United States. *Clinical Infectious Diseases*, *55*(suppl 1),

S3-S9.

- <sup>3</sup> San Francisco Department of Public Health, Population Health Division - HIV Epidemiology Section. (2016) HIV Epidemiology: Annual Report 2015. Retrieved from: https://www.sfdph.org/dph/files/reports/RptsHIVAIDS/AnnualReport2015-20160831.pdf
- <sup>4</sup> Wood, E., Tyndall, M. W., Li, K., Lloyd-Smith, E., Small, W., Montaner, J. S., & Kerr, T. (2005). Do supervised injecting facilities attract higher-risk injection drug users?. *American Journal of Preventive Medicine*, 29(2), 126-130.
- <sup>5</sup> Milloy, M.J., & Wood, E. (2009). Emerging role of supervised injecting facilities in Human Immunodeficiency Virus prevention. *Addiction* 104.4 (2009): 620-621.
- <sup>6</sup> Irwin, A., Jozaghi, E., Bluthenthal, R. N., & Kral, A. H. (2016). A Cost-Benefit Analysis of a Potential Supervised Injection Facility in San Francisco, California, USA. *Journal of Drug Issues*, 0022042616679829.
- <sup>7</sup> Degenhardt, L., Bucello, C., Mathers, B., Briegleb, C., Ali, H., Hickman, M., & McLaren, J. (2011). Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies. *Addiction*, *106*(1), 32-51.
- <sup>8</sup> Rudd, R. A., Aleshire, N., Zibbell, J. E., & Matthew Gladden, R. (2016). Increases in drug and opioid overdose deaths—United States, 2000–2014. *American Journal of Transplantation*, *16*(4), 1323-1327.
- <sup>9</sup> Kochanek, K.D., Murphy, S.L., Xu, J., Tejada-Vera, B. (2016). National Vital Statistics Reports: Deaths: Final Data for 2014. *Centre for Disease Control and Prevention* 65.4 (2016): 1-120.
- <sup>10</sup> Kerr, T., Small, W., Moore, D., & Wood, E. (2007). A micro-environmental intervention to reduce the harms associated with drug-related overdose: evidence from the evaluation of Vancouver's safer injection facility. *International Journal of Drug Policy*, *18*(1), 37-45.
- <sup>11</sup> Wheeler, E., Jones, T. S., Gilbert, M. K., & Davidson, P. J. (2015). Opioid overdose prevention programs providing naloxone to laypersons—United States, 2014. *MMWR Morb Mortal Wkly Rep*, 64(23), 631-635.
- <sup>12</sup> Kerr, T., Small, W., Moore, D., & Wood, E. (2007). A micro-environmental intervention to reduce the harms associated with drug-related overdose: evidence from the evaluation of Vancouver's safer injection facility. *International Journal of Drug Policy*, *18*(1), 37-45.
- <sup>13</sup> Semaan, S., Fleming, P., Worrell, C., Stolp, H., Baack, B., & Miller, M. (2011). Potential role of safer injection facilities in reducing HIV and hepatitis C infections and overdose mortality in the United States. *Drug and alcohol dependence*, *118*(2), 100-110.

- <sup>14</sup> Marshall, B. D., Milloy, M. J., Wood, E., Montaner, J. S., & Kerr, T. (2011). Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *The Lancet*, 377(9775), 1429-1437.
- <sup>15</sup> Milloy, M. S., Kerr, T., Tyndall, M., Montaner, J., & Wood, E. (2008). Estimated drug overdose deaths averted by North America's first medically-supervised safer injection facility. *PLoS one*, *3*(10), e3351.
- <sup>16</sup> Salmon, A. M., Van Beek, I., Amin, J., Kaldor, J., & Maher, L. (2010). The impact of a supervised injecting facility on ambulance call-outs in Sydney, Australia. *Addiction*. *105*(4), 676-683.
- <sup>17</sup> Marshall, B. D., Wood, E., Zhang, R., Tyndall, M. W., Montaner, J. S., & Kerr, T. (2009). Condom use among injection drug users accessing a supervised injecting facility. *Sexually transmitted infections*, *85*(2), 121-126.
- <sup>18</sup> Lloyd-Smith, E., Wood, E., Zhang, R., Tyndall, M. W., Montaner, J. S., & Kerr, T. (2009). Determinants of cutaneous injection-related infection care at a supervised injecting facility. *Annals of epidemiology*, *19*(6), 404-409.
- <sup>19</sup> Potier, C., Laprévote, V., Dubois-Arber, F., Cottencin, O., & Rolland, B. (2014). Supervised injection services: what has been demonstrated? A systematic literature review. *Drug and alcohol dependence*, *145*, 48-68.
- <sup>20</sup> Wood, E., Tyndall, M. W., Zhang, R., Montaner, J. S., & Kerr, T. (2007). Rate of detoxification service use and its impact among a cohort of supervised injecting facility users. *Addiction*, *102*(6), 916-919.
- <sup>21</sup> DeBeck, K., Kerr, T., Bird, L., Zhang, R., Marsh, D., Tyndall, M., ... & Wood, E. (2011). Injection drug use cessation and use of North America's first medically supervised safer injecting facility. *Drug and Alcohol Dependence*, *113*(2), 172-176.
- <sup>22</sup> Kimber, J. O., Kimber, J., Mattick, R. P., Kimber, J., Mattick, R. P., Kaldor, J., ... & Kimber, J. (2008). Process and predictors of drug treatment referral and referral uptake at the Sydney Medically Supervised Injecting Centre. *Drug and alcohol review*, *27*(6), 602-612.
- <sup>23</sup> MSIC Evaluation Committee. (2003). Final report of the evaluation of the Sydney Medically Supervised Injecting Centre. MSIC Evaluation Committee.
- <sup>24</sup> Broadhead, R. S., Kerr, T. H., Grund, J. P. C., & Altice, F. L. (2002). Safer injection facilities in North America: their place in public policy and health initiatives. *Journal of Drug Issues*, 32(1), 329-355.

<sup>&</sup>lt;sup>2</sup> Centers for Disease Control and Prevention. (2017) HIV and Injection Drug Use." *HIV/AIDS*. Retrieved from: https://www.cdc.gov/hiv/risk/idu.html