

Scientific Update on Overdose Prevention Centers

Annotated Bibliography
2022-2023



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2022-2023 Bibliography Update: Overdose Prevention Centers

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For the purposes of standardization, all sites in the 2022-2023 update are referred to as “overdose prevention centers” though they may be referred to with previous terminology in the respective papers.

This is a living document and may be updated periodically.

Bibliographies from years 2018-2020 and 2020-2022 are available at the end of this document.

Health-related Outcomes (Overdose Prevention, Harm Reduction, Assisted Injection)

- Lambdin BH, Davidson PJ, Browne EN, Suen LW, Wenger LD, Kral AH. [Reduced emergency department visits and hospitalization with use of an unsanctioned safe consumption site for injection drug use in the United States.](#) *Journal of General Internal Medicine.* 2022;37(15):3853-3860. doi:10.1007/s11606-021-07312-4

This study focuses on how overdose prevention centers (OPCs) reduce emergency department visits. Based on 6 and 12 month interviews collected between 2018-2020 from participants (people who inject drugs - 494 total) who are located in the surrounding neighborhood, those using the OPC had a 24% lower risk of any overdose (fatal or non-fatal) within a 6-month period. There was a 13% lower incident rate of non-fatal overdose and a 14% higher risk of skin and soft tissue infections compared with those who were not using the OPC. Lastly, all overdoses were successfully reversed. The findings of the paper support the growing evidence to support the implementation and use of overdose prevention centers to reduce the burden on emergency services.

- Nolan S, Kelian S, Kerr T, et al. [Harm reduction in the hospital: An overdose prevention site \(OPS\) at a Canadian hospital.](#) *Drug and Alcohol Dependence.* 2022;239:109608. doi:10.1016/j.drugalcdep.2022.109608

Managing substance use in a hospital setting can be difficult. To alleviate the strain on the emergency department, a Canadian hospital decided to open an overdose prevention center (OPC) to provide community members and patients a safe and supervised place to inject previously obtained drugs. The goal of this study is to describe community utilization of the OPC. Over a one-year span, there were 11,673 visits to the OPC. Their findings concluded that overdose events were more common among hospital inpatients compared to community clients. Overall, 39 overdose events occurred at the site, and 82% of them required naloxone reversal. The remaining 28% required transfer to the hospital's emergency department but none resulted in death. The use of the paper is to highlight the benefits of a hospital-based harm reduction site to combat the overdose deaths.

- Roux P, Jauffret-Roustide M, Donadille C, et al. [Impact of drug consumption rooms on non-fatal overdoses, abscesses and emergency department visits in people who inject drugs in France: Results from the Cosinus cohort.](#)

International Journal of Epidemiology. 2022;52(2):562-576.
doi:10.1093/ije/dyac120

Overdose prevention centers (OPCs) have been shown to be effective at reducing risk of HIV, hepatitis C, and increasing access to care for those with substance use disorders. Utilizing data from the French COSINUS cohort (a 12 month cohort study of 665 people who use drugs), the authors investigated the impact OPCs have on non-fatal overdoses, abscess development, and emergency room visits. The findings of this study supported their hypothesis - that patients who accessed the OPCs were less likely to have reported overdoses, abscesses, and ED visits.

- Dow-Fleisner SJ, Lomness A, Woolgar L. [Impact of safe consumption facilities on individual and community outcomes: A scoping review of the past decade of research](#). *Emerging Trends in Drugs, Addictions, and Health*. 2022;2:100046. doi:https://doi.org/10.1016/j.etdah.2022.100046

This paper was a literature review of the individual and community outcomes related to overdose prevention centers. Thus, this review examined the impact and effectiveness of OPCs related to: (1) health outcomes for individuals who inject drugs; (2) community outcomes associated with OPCs; and (3) the cost-effectiveness of OPCs. The findings showed that OPCs were associated with reducing drug related infections and the transmission of disease, increasing access to addiction and other health services, reducing the risk of non-fatal overdoses, and were not associated with a significant increase in drug use or an increase in drug-related crime.

Participant and Staff Experiences

- Greene C, Urbanik M-M, Geldart R. [Experiences with compounding surveillance and social control as a barrier to safe consumption service access](#). *SSM - Qualitative Research in Health*. 2022;2:100055. doi:10.1016/j.ssmqr.2022.100055

Police and security in communities where overdose prevention centers are located seem to be an ever-present barrier for people who use drugs to access and utilize the many benefits of OPCs. Through 75 qualitative interviews from residents in Calgary, Canada, this paper aims to examine how people who use drugs navigate through police and security presence to access harm reduction services. Their findings suggest that having a police presence undercuts public health efforts in the area. Participants expressed that they have experienced displacement from communities where SCS's are located, increasing unsafe public drug use. The goal of this paper is to

acknowledge and emphasize the barriers and social controls that hinder consumption site access.

- Kryszajtys DT, Xavier J, Rudzinski K, Guta A, Chan Carusone S, Strike CJ. [Stakeholder preferences for supervised consumption site design, staff, and ancillary services: A scoping review of feasibility studies.](#) *Drug and Alcohol Dependence*. 2022;230:109179. doi:10.1016/j.drugalcdep.2021.109179

While it is known that overdose prevention centers are effective in preventing drug related harms for people who use drugs, this paper is centered around discussing the feasibility of OPC before their implementation. After reviewing 26 papers that met the literature review criteria, it was found that most papers highlighted location, design, hours of operation and how they might affect OPC utilization. This information will be particularly useful for consumption site planners who are looking to improve OPC implementation concerns in increasing utilization amongst people who use drugs.

- Perlmutter D, Wettemann C, Fockele CE, et al. [“Another tool in the toolkit”—perceptions, suggestions, and concerns of emergency service providers about the implementation of a supervised consumption site.](#) *International Journal of Drug Policy*. 2023;115:104005. doi:10.1016/j.drugpo.2023.104005

This paper takes into consideration the important viewpoint of emergency service providers, as they have an important role in overdose response in the overdose crisis. In-depth interviews were conducted with a myriad of emergency responders (22 in total), including firefighters, paramedics and social workers in King County, Washington, USA. Through thematic analysis, three major themes emerged. First was the perception of their own safety while responding to drug-related calls. Second was the use of the ED as a point of care for people who use drugs and how the emergency room does not provide adequate care for this group. Lastly, participants highlighted that they support the implementation of OPC's, as long as there continues to be a positive and collaborative relationship between overdose prevention centers and emergency service providers. That roles need to be clearly defined and that emergency service providers are not overwhelmed with calls from the OPC's. This study contributes to the growing literature on stakeholder perceptions and impacts on program implementation.

- Urbanik M-M, Maier K, Greene C. [A qualitative comparison of how people who use drugs' perceptions and experiences of policing affect supervised consumption services access in Two Cities](#). *International Journal of Drug Policy*. 2022;104:103671. doi:10.1016/j.drugpo.2022.103671

This paper highlights how critical it is to review the relationship between police and people who use drugs (PWUD), and how these interactions may influence decisions on users' willingness or ability to access OPC's. The main question to answer is: what are people who use drugs' feelings and perceptions of police presence near the OPC and how does it impact their access to the site? After reviewing data from 75 interviews conducted for a larger qualitative study that took place in two Canadian cities (Edmonton and Calgary, Alberta), they uncovered very contrasting viewpoints from users in both cities. In Edmonton, users felt safe going to the OPC and from police intervention, despite having a police presence nearby. On the other hand, those in Calgary experienced harassment, negative encounters, and fear of being arrested. The overarching result of this study is that the quality of policing in the community will influence perceptions and access of OPC's amongst PWUD's.

- Olding M, Boyd J, Kerr T, Fowler A, McNeil R. [\(Re\)situating expertise in community-based overdose response: Insights from an ethnographic study of overdose prevention sites \(OPS\) in Vancouver, Canada](#). *International Journal of Drug Policy*. 2023;111:103929. doi:https://doi.org/10.1016/j.drugpo.2022.103929

This study uses 20 months of ethnographic fieldwork conducted in Vancouver, BC over the span of under two years (July 2018 to March 2020), to examine how responders at an OPC utilize their expertise in responding to overdose. Ethnographic fieldwork focused on four OPC located in Vancouver's Downtown Eastside (DTES) and Downtown South neighborhoods. They found that responders became experienced in overdose response through practice and used their knowledge to provide care that was sound and responsive to the broader needs of people who use drugs. The authors suggest that OPCs became sites of collective knowledge and expertise around overdose management as teams of OPC responders developed their own understanding and knowledge base around overdose management and processes for managing uncertainty, sharing responsibilities and making decisions. The authors suggest that these findings should be used to further utilize the knowledge, experience and expertise of people who use drugs in overdose response - in order to build a more supportive environment and community.

- Greene C, Maier K, Urbanik M-M. [“It’s just not the same”: Exploring PWUD’ perceptions of and experiences with drug policy and SCS services change in a Canadian city.](#) *International Journal of Drug Policy*. 2023;111:103934. doi:10.1016/j.drugpo.2022.103934

The purpose of this qualitative study is to explore how the replacement of a brick and mortar overdose prevention center with a mobile overdose prevention site has affected people who use drugs’ experiences and perceptions of access to this particular harm reduction service. After conducting 50 interviews, the major contrast in use of the mobile OPS compared to the brick and mortar OPC was the significant reduction in smoking rooms, social activities and space, and concerns about its location. The findings of this study emphasized the benefits of having OPC embedded in communities and identified the barriers that people who use drugs encounter when certain elements of OPCs are removed or absent.

- Olding M, Boyd J, Kerr T, McNeil R. [“We just don’t have the space for it”: Geographies of survival and spatial triage in overdose prevention sites.](#) *Health & Place*. 2023;83:103067. doi:10.1016/j.healthplace.2023.103067

This study focuses on how overdose prevention sites located in Vancouver, Canada impact vulnerably housed people who use drugs in the area. Drawing on two years (2018–2020) of ethnographic fieldwork and interviews with 55 people who work at and/or use the OPC, they explored how OPC operators negotiated multiple uses of service space for everyday survival - to seek shelter, engage in mutual aid or generate income. To accommodate for the increase in client volume and effectively prevent impending overdose fatalities in the center, all while trying to keep social spaces accessible to the vulnerably housed - centers adopted “spatial triage”. Spatial triage refers to using rules and procedures to use the limited space available to address the most pressing threat to survival. While this process allowed for the delivery of services where it was needed the most, it had unintended consequences on access for services especially for women, Indigenous users and those who were unstably housed. This finding indicated a need for complementary structural changes and service innovations to reduce potential harms.

- Dertadian GC, Yates K. [“Overdose Has Many Faces”: The Politics of Care in Responding to Overdose at Sydney’s Medically Supervised Injecting Centre.](#) *Contemporary Drug Problems*. Published online October 31, 2022:009145092211347. doi:<https://doi.org/10.1177/00914509221134716>

The purpose of this study is to highlight that overdose prevention centers are effective for reasons beyond the medical reasons of providing sterile space with medical supervision present. Through qualitative interviews conducted at the Sydney Medically Supervised Injection Centre, this paper aims to demonstrate how overdose prevention centers do more than prevent overdoses and potentially change socio-political perceptions that influence injection site design, implementation, and utilization.

SCS Utilization

- Cassie R, Hayashi K, DeBeck K, et al. [Difficulty accessing supervised consumption services during the COVID-19 pandemic among people who use drugs in Vancouver, Canada](#). *Harm Reduction Journal*. 2022;19(1). doi:10.1186/s12954-022-00712-7

Although it is known that the COVID-19 pandemic has worsened the ever growing overdose epidemic in Canada, little is known about how the pandemic may have impeded services at overdose prevention centers. This study of 428 people who use drugs from two cohorts (VIDUS and ACCESS) identified the key reasons why 14% of participants were unable to access the sites. One main factor was site closures and/or shortened hours due to COVID-19 (42.9%). Another factor was having to wait too long for a site (39.3%). In addition, the study found that people who use drugs with markers of structural vulnerability and drug-related risks were more likely to experience difficulty accessing OPCs during the COVID-19 pandemic. The findings of this study places an emphasis on the need for strategic plans in places to address barriers to accessing overdose prevention centers as part of a pandemic response.

- Gubskaya, E., Kennedy, M.C., Hayashi, K. et al. [The impact of the COVID-19 pandemic on access to supervised consumption programs](#). *Subst Abuse Treat Prev Policy* 18, 16 (2023). <https://doi.org/10.1186/s13011-023-00521-6>

In Canada, overdose prevention centers have increasingly been implemented in communities as a response to the overdose epidemic. Amid the dramatic rise in overdose deaths, the COVID-19 pandemic was also happening. The question the authors of this paper had was how has the pandemic affected access to these sites? Using data that was collected through ACCESS and VIDUS - two-cohort studies of 428 people who use drugs during June through December 2020, the goal was to examine individual, social and structural factors that resulted in a decrease in OPC visits since the pandemic. Despite only 14% of all participants identifying a decrease in overall site visitation, 66% stated that they “did not want” to access the sites in the last

six months of 2020. The finding of this study is used to justify continuous efforts to remove barriers impacting access to OPCs (especially for those at increased risk of fentanyl exposure) during public health crises.

- Nassau T, Kolla G, Mason K, et al. [Service utilization patterns and characteristics among clients of integrated supervised consumption sites in Toronto, Canada.](#) *Harm Reduction Journal*. 2022;19(1). doi:10.1186/s12954-022-00610-y

The objective of this paper is to compare and describe access and use of overdose prevention centers in different contexts in Toronto, Canada. This includes the local community and private public health services. A cross-sectional study was conducted using data collected between November 2018 and March 2020 from 469 people who inject drugs in Toronto. Participants were classified as either clients who went to OPCs at harm-reduction sites or went to OPCs at community health center. Their findings showed that more users (65%) utilized harm reduction sites and their onsite harm reduction services, and participants of this particular type of OPC are more likely to be younger and inject fentanyl. Those who used the harm reduction site OPC were more likely to access harm reduction services at the site, while those who used the OPC at the community health clinic were more likely to access non harm reduction services at the site.

Addressing Community Impacts

- Panagiotoglou D. [Evaluating the population-level effects of overdose prevention sites and supervised consumption sites in British Columbia, Canada: Controlled interrupted time series.](#) *PLOS ONE*. 2022;17(3). doi:10.1371/journal.pone.0265665

This study uses the BC Centre for Disease Control's Provincial Overdose Cohort of all overdose events between 1 January 2015 and 31 December 2017 to evaluate the population-level effects of overdose prevention centers on acute use of health services and mortality. In this timeframe, 25 sites opened across the British Columbia in response to the opioid epidemic. Significant declines in overdose events, emergency service use, and ED visits were noted as a result of these site openings. On the other hand, it was observed that there were no significant changes in monthly hospitalizations and mortality.

- Khair S, Eastwood CA, Lu M, Jackson J. [Supervised consumption site enables cost savings by avoiding emergency services: a cost analysis study](#). *Harm Reduction Journal*. 2022;19(1). doi:<https://doi.org/10.1186/s12954-022-00609-5>

This is a cost analysis study taken in Calgary, Canada to evaluate the emergency service costs that were avoided from emergency overdose management at overdose prevention centers (OPCs). The proportion of clients who have overdosed at the SCS had decreased during the program's operation. The capacity to manage overdoses on site at the OPC increased to 98%. Each overdose that was managed at the OPC saved \$1600, with a total savings of over \$2.3 million through the span of the program. In the end, the study shows OPCs as a form of overdose management produces significant healthcare savings, making it sustainable and proving that this harm reduction intervention is effective in reducing overdose incidents and deaths.

Program Recommendations and Considerations

- Dogherty E, Patterson C, Gagnon M, et al. [Implementation of a nurse-led overdose prevention site in a hospital setting: Lessons learned from St. Paul's Hospital, Vancouver, Canada](#). *Harm Reduction Journal*. 2022;19(1). doi:[10.1186/s12954-022-00596-7](https://doi.org/10.1186/s12954-022-00596-7)

In 2018, St. Paul's Hospital in Vancouver, Canada opened an outdoor OPC to service inpatients and outpatients. However, two years later, it was relocated - this resulted in an access gap for St. Paul's Hospital patients, which was only worsened by the COVID-19 pandemic. To address this problem, a nurse-led OPC was opened in 2021. This paper focuses on the steps to implement the nurse-led OPC, the magnitude of impact, and the lessons they learned. Between February 1, 2021 and October 23, 2021, the OPC recorded 1612 visits for the purpose of injection, for an average weekly visit number of 42. A total of 46 overdoses were recorded in that 9-month period. A total of 37 (80%) required administration of naloxone and 12 (26%) required a code blue response. Many lessons were learned including keeping stakeholders involved, ensuring that staff are properly trained and supported, and making much needed improvements to their tracking systems to properly collect and evaluate patient data. Lastly, they identified a safety barrier that other papers have indicated, which is the lack of social space which is utilized by patients who need to stay there longer after injection.

- Giglio RE, Mantha S, Harocopos A, et al. [The nation's first publicly recognized overdose prevention centers: Lessons learned in New York City](#). *Journal of Urban Health*. 2023;100(2):245-254. doi:[10.1007/s11524-023-00717-y](https://doi.org/10.1007/s11524-023-00717-y)

Due to the dire need to address the opioid epidemic in New York, collaboration between one of the NYC SSP providers, OnPoint, and the City of New York, pushed to successfully open OPC services in the city in November of 2021. Legal risks were assessed by both the city and the provider. This case study outlines the sequence of events that resulted in New York City supporting OnPoint to open the first two publicly recognized OPCs in the nation, including lessons learned to inform other jurisdictions considering offering such services. There were four major lessons learned according to the authors. First was to focus on the strong scientific evidence base for OPCs and anticipate opposition. Second, was to identify prospective OPC sites early and intentionally foster relationships between potential program operators and key government players. Third, was to do the work to lay the foundation for political and community support. Lastly, develop a multi-level communications strategy that is sustainable well after the site is opened.

- Ivsins A, Warnock A, Small W, Strike C, Kerr T, Bardwell G. [A scoping review of qualitative research on barriers and facilitators to the use of supervised consumption services](#). *International Journal of Drug Policy*. 2023;111:103910. doi:10.1016/j.drugpo.2022.103910

Using qualitative studies from 1997 to 2022, this paper reviews the major themes that emerged from 42 papers. Four primary themes emerged from their analysis: the influence of OPCs on health and wellbeing among people who use drugs (PWUD), the environment of the OPC can serve as a facilitator and barrier to use, social resources can shape the context within which PWUD benefit from the site, and varying forces at play both support and harm PWUD in relation to their experiences with OPCs. The findings of this study provide insights that have the ability to inform further research and drive PWUD-centered approaches to OPC implementation and service delivery.

- Miller NM, Campbell C, Shorter GW. [Barriers and facilitators of Naloxone and safe injection facility interventions to reduce opioid drug-related deaths: A qualitative analysis](#). *International Journal of Drug Policy*. 2023;117:104049. doi:10.1016/j.drugpo.2023.104049

This is a qualitative analysis aimed to identify barriers to introducing naloxone and overdose prevention centers in the Republic of Ireland and Northern Ireland. Twenty three interviews were conducted with a variety of experts, staff and policymakers. It seems that the most significant barriers to implementing this intervention in Ireland is stigma from the media, health centers, and the community. In addition, policing and intimidation resulted in a lack of people carrying naloxone. This intimidation includes the threat of violence towards those who used drugs, specifically in Northern Ireland. In

essence, an increase in social and political empathy and acceptance is necessary to move forward in implementing overdose prevention centers. The authors suggest this could be done through anti-stigma campaigns as well as policy changes. The goal is to change community perceptions of the use of the site, decrease potential violence and intimidation from law enforcement to ultimately increase site uptake and naloxone carriage.

- Yoon GH, Levenson TW, Davoust MJ, et al. [Implementation and sustainability of safe consumption sites: a qualitative systematic review and thematic synthesis](#). *Harm Reduction Journal*. 2022;19(1). doi:<https://doi.org/10.1186/s12954-022-00655-z>

According to the authors of this paper, while there is growing evidence supporting overdose prevention centers' harm reduction strategies, there is a lack of information highlighting the contextual factors that may support or bar the implementation and sustainability of these interventions. This is a systematic review of existing qualitative studies - 10 studies met the criteria for inclusion. Overall, studies described how OPCs can keep drug use out of public view while fostering a sense of inclusion and acceptance for participants, thus encouraging PWUD utilization. Most studies also described how involving PWUD and peer workers in OPC operation supported implementation and sustainability.

- Suen LW, Wenger LD, Morris T, Majano V, Davidson PJ, Browne EN, Ray B, Megerian CE, Lambdin BH, Kral AH. [Evaluating oxygen monitoring and administration during overdose responses at a sanctioned overdose prevention site in San Francisco, California: A mixed-methods study](#). *International Journal of Drug Policy*. 2023 Aug 27;104165. doi: 10.1016/j.drugpo.2023.104165. Epub ahead of print. PMID: 37652815.

This study used descriptive statistics and qualitative data from a sanctioned OPC in San Francisco, California to assess the role and use of oxygen in responding to overdoses at an overdose prevention center. The results showed that in 46 weeks of the OPC operating in 2022, 333 overdoses were successfully reversed by staff. Oxygen became an available tool 18 weeks after the site was opened and after this was the case, 91.5% of overdose responses (248/333) involved oxygen, more than half of these (147) required both oxygen and naloxone. Qualitative interviews with staff at the OPC revealed that the use of oxygen improved the experience for staff and clients alike when responding to an overdose - specifically with the avoidance of withdrawal. The use of oxygen was a learning process and there were challenges involved, including

sometimes not having sufficient oxygen to respond to overdoses and navigating complex and strained relationships with EMS due to city regulations in regards to requiring a 911 call every time naloxone is administered. The authors suggest that ensuring sites have enough oxygen, staffing and removing the aforementioned 911 call requirements could prove successful for implementing OPCs elsewhere.

Other

- Naeem AH, Davis CS, Samuels EA. [The Importance of Federal Action Supporting Overdose-Prevention Centers](#). *New England Journal of Medicine*. 2022;386(21):1965-1967. doi:<https://doi.org/10.1056/nejmp2119764>

This commentary lays out the various ways the federal government can support overdose prevention centers, both in statements and in policy - specifically through providing a memo that declares non interference in operating sites and amending the Controlled Substances Act, which currently enacts prohibitions of funding these sites.

- Pasman E, Brown S, Agius E, Resko SM. [Support for Safe Consumption Sites Among Peer Recovery Coaches](#). *J Behav Health Serv Res*. 2023 Jul 10. doi: 10.1007/s11414-023-09846-3. Epub ahead of print. PMID: 37430133.

This study used a survey to assess support for overdose prevention centers (OPCs) amongst 260 peer recovery coaches (PRCs) in Michigan, people who provide services for those using substances who have a history of recovery. The survey was conducted from July-September 2021 and the results found that 49% of peer recovery coaches supported the idea of OPCs. PRCs who identified as men had greater odds of supporting OPCs than women PRCs. Black and people of color PRCs had lower odds of supporting OPCs than white PRCs. The authors suggest that it is important to get PRCs support for OPCs as they are a key player in providing services to people who use drugs and they suggest that education as well as addressing structural components like structural racism is necessary in order to improve the support amongst PRCs subgroups.



Scientific Update

Annotated Bibliography
2020-2022

**Overdose Prevention Centers/Supervised Consumption Sites Bibliography
2020-Summer 2022**

2018-2022 updates by: Ashanti Bruce, Winnie Ho, Allie Mikolanis, Samiha Rao

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Health-Related Outcomes (Overdose Prevention, Harm Reduction, Assisted Injection)

Brooks, Hannah L, Cassandra Husband, Marliiss Taylor, Arthur Sherren, and Elaine Hyshka. 2020. "Supporting the Full Participation of People Who Use Drugs in Policy Fora: Provision of a Temporary, Conference-Based Overdose Prevention Site." *International Journal of Drug Policy* 84 (October): 102878. <https://doi.org/10.1016/j.drugpo.2020.102878>.

This paper was about the implementation of a temporary overdose prevention site (OPS) at a 2018 National Drug Policy Conference in Canada, painting a picture of how the space was used. 17 people visited the site 29 times during the OPS' 3-day duration, with an average of 10 visits per day. People consumed drugs in 26 (90%) of the visits, and when people did not come to consume drugs, they picked up consumption supplies. There were no overdoses recorded in the OPS.

Harocopos Alex, Brent E. Gibson, Nilova Sahal, Michael T. McRae, Kailin See, Sam Rivera, and Dave A. Chokshi. "First 2 Months of Operation at First Publicly Recognized Overdose Prevention Centers in US." *JAMA Network Open* 5 (2022):e2222149. doi:10.1001/jamanetworkopen.2022.2214

Between November 30, 2021, and January 31, 2022, at OnePoint NYC, "613 individuals used [overdose prevention center (OPCs)] services 5975 times across 2 sites. Most individuals identified as male (78.0%), and 55.3% identified as Hispanic, Latino, or Latina. The mean (range) age was 42.5 (18-71) years... In self-reported data, the drug most commonly used across 2 sites was heroin or fentanyl (73.7%) and the most frequent route of drug administration at the OPC was injection (65.0%)... More than half of individuals using OPC services (52.5%) received additional support during their visit. This included, but was not limited to naloxone distribution, counseling, hepatitis C testing, medical care, and holistic services (eg, auricular acupuncture)." No fatal overdoses occurred on site or among patients who were transported to hospitals.

Kennedy, Mary Clare, Kanna Hayashi, M.-J. Milloy, Miranda Compton, and Thomas Kerr. 2022. "Health Impacts of a Scale-up of Supervised Injection Services in a Canadian Setting: An Interrupted Time Series Analysis." *Addiction (Abingdon, England)* 117 (4): 986–97. <https://doi.org/10.1111/add.15717>.

When overdose prevention sites (OPS) expand, communities more frequently use supervised injection sites (SIS) and participate in addiction treatment. At the same time, public injection and syringe sharing decrease.

Khair, Shahreen, Cathy A. Eastwood, Mingshan Lu, and Jennifer Jackson. 2022. "Supervised Consumption Site Enables Cost Savings by Avoiding Emergency Services:

A Cost Analysis Study." *Harm Reduction Journal* 19 (1): 32.
<https://doi.org/10.1186/s12954-022-00609-5>.

In this study of an SCS, researchers found that, between 2017-2020, 10% of its clients were not coming to use drugs. This underscores how communities rely on SCS for resources, care, and referrals, beyond just consumption. The number of people who frequent the SCS has increased, but the need for ambulance responses to overdoses have decreased. In fact, the site handles 98% of overdoses, and in 2019, they managed 698 without relying on emergency services.

"Each overdose that is managed at the SCS produced a benefit of \$1622 for January 2020. The benefit of averting the cost of ambulance and emergency department care ranges between \$39,739 and \$74,612 per month, from November 2017 to January 2020... Overall, there were \$2,364,876 cost savings produced from the overdoses that were managed at the SCS site, by avoiding the need for ambulance and emergency department services, over the life of the program to date. These costs use the minimum billing fee for the payer and exclude overdose-related hospitalization costs and, thus, likely underestimate total costs saved."

Kolla, Gillian, Kathleen S. Kenny, Molly Bannerman, Nick Boyce, Leigh Chapman, Zoë Dodd, Jen Ko, and Sarah Ovens. 2020. "Help Me Fix: The Provision of Injection Assistance at an Unsanctioned Overdose Prevention Site in Toronto, Canada." *International Journal of Drug Policy* 76 (February): 102617.
<https://doi.org/10.1016/j.drugpo.2019.102617>.

This study analyzes injection assistance at an SCS. They found that "receiving assistance to inject is relatively common, and occurred during 8.3% of visits to the site." This practice is traditionally believed to be dangerous: previous research found that people who received injection assistance had higher overdose rates in non-supervised settings. However, this study found no association between assisted injection and overdoses at an SCS.

SCSs that ban injection assistance do not stop people who inject drugs (PWID) from the practice; the bans just move the behavior back onto streets and out of SCSs. SCSs are staffed with trained personnel to reverse overdoses, making them the safest place to engage in the practice. Banning injection assistance, leaving the practice unsupervised, may disproportionately impact women. Women are "more likely to receive assistance injecting at the SCS, and that they had 2.23 times the odds of overdosing when receiving injection assistance." There is not a similar association between injection assistance and overdoses among men.

Lambdin, Barrot H., Peter J. Davidson, Erica N. Browne, Leslie W. Suen, Lynn D. Wenger, and Alex H. Kral. 2022. "Reduced Emergency Department Visits and Hospitalisation with Use of an Unsanctioned Safe Consumption Site for Injection Drug Use in the United States." *Journal of General Internal Medicine*, January, 1–8.
<https://doi.org/10.1007/s11606-021-07312-4>.

"People using the SCS were 27% less likely to visit the emergency department, had 54% fewer emergency department visits, were 32% less likely to be hospitalized, and spent 50% fewer nights in hospital."

Levengood, Timothy W., Grace H. Yoon, Melissa J. Davoust, Shannon N. Ogden, Brandon D. L. Marshall, Sean R. Cahill, and Angela R. Bazzi. "Supervised Injection Facilities as Harm Reduction: A Systematic Review." *American Journal of Preventive Medicine* 61, no. 5 (2021): 738–749.

This paper reviewed 22 studies about the impacts of SCSs on health and community outcomes, like overdose and crime rates. It found that "The strongest evidence suggests that SIFs may help reduce overdose morbidity and mortality and improve access to addiction treatment. An increase in crime, an often-cited concern of SIF opponents, was not observed to be associated with SIFs in most included studies, and crime was actually found to decrease in 2 studies."

Olding, Michelle, Andrew Ivsins, Samara Mayer, Alex Betsos, Jade Boyd, Christy Sutherland, Coco Culbertson, Thomas Kerr, and Ryan McNeil. 2020. "A Low-Barrier and Comprehensive Community-Based Harm-Reduction Site in Vancouver, Canada." *American Journal of Public Health* 110 (6): 833–35.
<https://doi.org/10.2105/AJPH.2020.305612>.

"From September 2017 to August 2019, there were 128,944 visits to the Overdose Prevention Site, and staff responded to and reversed 770 overdoses. No overdose deaths occurred on-site."

Panagiotoglou, Dimitra. 2022. "Evaluating the Population-Level Effects of Overdose Prevention Sites and Supervised Consumption Sites in British Columbia, Canada: Controlled Interrupted Time Series." *PLOS ONE* 17 (3): e0265665.
<https://doi.org/10.1371/journal.pone.0265665>.

When analyzing an SCS in Canada, researchers found "an absolute difference of 6.19 fewer paramedic attended events per 100,000 (23.5% relative decrease) by twelve months post-implementation compared with expected rates." Similarly, there were "11.11 fewer emergency department visits per 100,000 (39.0% relative decrease) than expected at twelve months post-implementation."

Roux, P, M Jauffret-Roustide, C Donadille, L Briand Madrid, C Denis, I Célérier, C Chauvin, et al. 2022. "Impact of Drug Consumption Rooms on Non-Fatal Overdoses, Abscesses and Emergency Department Visits in People Who Inject Drugs in France: Results from the COSINUS Cohort." *International Journal of Epidemiology*, June, dyac120. <https://doi.org/10.1093/ije/dyac120>.

Drug consumption rooms (DCRs) minimize skin and soft tissue infections among PWID because they provide sterile equipment, so PWID don't have to reuse materials. They also decrease ED visits among PWID.

"We found that the percentage of participants who reported an overdose was 3% and 1% in DCR-unexposed and DCR-exposed participants, respectively. ...We found that the percentage of participants who reported an abscess was 14% and 3% in DCR-unexposed and DCR-exposed participants, respectively. In terms of ED visits, the respective percentages were 41% and 17%."

Rowe, Adrianna, Andrew Chang, Emily Lostchuck, Kathleen Lin, Frank Scheuermeyer, Victoria McCann, Jane Buxton, et al. 2022. "Out-of-Hospital Management of Unresponsive, Apneic, Witnessed Opioid Overdoses: A Case Series from a Supervised Consumption Site." *CJEM*, June. <https://doi.org/10.1007/s43678-022-00326-9>.

This study focuses on how the SCS intervened in the cases of overdoses or unresponsive patients. They found that "over a 6 year period at an urban supervised consumption site, all witnessed, apneic and unresponsive opioid overdoses were managed with noninvasive ventilation and oxygen [and naloxone], with none requiring chest compressions. All patients with complete follow-up were discharged alive and neurologically intact from their care episode." PWUD received the care they needed at the SCS, so they did not require an ED visit.

Shorter, Gillian W, Magdalena Harris, Andrew McAuley, Kirsten MA Trayner, and Alex Stevens. 2022. "The United Kingdom's First Unsanctioned Overdose Prevention Site; A Proof-of-Concept Evaluation." *International Journal of Drug Policy* 104 (June): 103670. <https://doi.org/10.1016/j.drugpo.2022.103670>.

"In nine months of operation, 894 injection events were recorded at the service. Overdose prevention site volunteers reported [responding] to 9 overdose events involving 8 individuals: 7 opioid overdoses, and 2 involving powder cocaine. First aid was provided, and an ambulance called on two occasions, with one of these canceled in agreement with the patient, emergency dispatcher, and service. Those whose overdose involved opioids were given naloxone (one nasally, the others via injection). There were no deaths, and no reports of other adverse medical incidents."

Tran, Vincent, Sharon E Reid, Amanda Roxburgh, and Carolyn A Day. 2021. "Assessing Drug Consumption Rooms and Longer Term (5 Year) Impacts on Community and Clients." *Risk Management and Healthcare Policy* 14 (November): 4639–47. <https://doi.org/10.2147/RMHP.S244720>.

This is a systematic review of other studies about drug consumption rooms (DCRs). Data suggested that DCRs "helped reduce injecting-related harms... DCRs/SIFs facilitate drug treatment, access to health services and cessation of drug injecting. Local residents and business owners reported less public drug use and public syringe disposal following the opening of a DCR/SIF."

Wares, Joanna R., Jing Dong, Jana L. Gevertz, Ami Radunskaya, Kendra Vine, Doug Wiebe, and Sara Solomon. 2021. "Predicting the Impact of Placing an Overdose Prevention Site in Philadelphia: A Mathematical Modeling Approach." *Harm Reduction Journal* 18 (October): 110. <https://doi.org/10.1186/s12954-021-00559-4>.

This paper is about a hypothetical OPS, but focuses on how a model like the one they pioneer can help predict impact on local communities given geographic placement. In this case, they examined the proposed OPS in Philadelphia's Kensington neighborhood and found that it would disproportionately benefit White and Hispanic people who used opioids given proximity to the site (within 1.5 miles of the site). While the paper is theoretical, their methodology may be interesting in trying to argue for the measurable outcomes that would happen if an OPS is opened.

"What is evident is that the proposed site is more likely to benefit White opioid users as they represent over 80% of fatal overdoses that occurred within 1.5 miles of the proposed OPS (even though only 69.7% of fatal overdoses are in the White population). Similarly, the site also disparately benefits Hispanic opioid users as they represent over 30% of fatal overdoses that occur within 1.5 miles of the proposed site (even though only 12.8% of fatal overdoses are in the Hispanic population)."

"In this case, the model predicts that the OPS would reduce the fatal overdose rate by approximately 6 and 7 deaths per year while increasing the nonfatal overdose rate by about the same amount. This increase in nonfatal overdoses occurs because the overall overdose rate does not change but instead, overdoses that occur in the OPS that would have been fatal are revived."

Participant and Staff Experiences

Kerman, Nick, St Manoni-Millar, Luc Cormier, Tali Cahill, and John Sylvestre. "It's Not just Injecting Drugs": Supervised Consumption Sites and the Social Determinants of Health." *Drug and Alcohol Dependence* 213, (Aug 01, 2020): 1. doi:<https://doi.org/10.1016/j.drugalcdep.2020.108078>.

This article highlights how supervised consumption sites SCSs support PWUD, beyond hygienic equipment and medical care. SCSs also have the capacity to improve PWUD's social determinants of health (SDOH). PWUD are vulnerable to SDOH inequities, which may have negative health impacts for them. SCSs address these needs by providing social connectedness, emotional support, security, housing (via social networks at SCSs) and healthcare (via information from SCS staffs). By connecting them with a community, SCSs create social capital for PWUD, which is associated with increased harm reduction practices and can introduce them to new resources and opportunities. In this way, SCSs benefit the holistic health of PWUD and are not just limited to encouraging safer consumption, but safer lives.

Kosteniuk, Brynn, Ginetta Salvalaggio, Ryan McNeil, Hannah L. Brooks, Kathryn Dong, Shanell Twan, Jennifer Brouwer, and Elaine Hyshka. 2021. "You Don't Have to Squirrel Away in a Staircase': Patient Motivations for Attending a Novel Supervised Drug Consumption Service in Acute Care." *International Journal of Drug Policy* 96 (October): 103275. <https://doi.org/10.1016/j.drugpo.2021.103275>.

PWUD perceive a "hospital-based SCS as a safer environment, in contrast to other areas of the hospital, where they would otherwise consume drugs. Participants described attending the SCS because they viewed it as a sanctioned drug use space that enabled them to reduce a number of drug-related risks."

Olding, Michelle, Andrew Ivsins, Samara Mayer, Alex Betsos, Jade Boyd, Christy Sutherland, Coco Culbertson, Thomas Kerr, and Ryan McNeil. 2020. "A Low-Barrier and Comprehensive Community-Based Harm-Reduction Site in Vancouver, Canada." *American Journal of Public Health* 110 (6): 833–35. <https://doi.org/10.2105/AJPH.2020.305612>.

Peer staff at this overdose prevention site (OPS) were confident that they could assess clients' tolerances and "prevent overdoses by advising people to start with lower doses." Some peer staff expressed that their employment "alleviated pressure" to use criminalized means to generate income. The OPS also offered drug-checking services, and the people who used them reported "feeling more knowledgeable about the drugs they consumed and desired increased

availability of and specificity from the drug-checking technology.” The OPS was near an opioid agonist (methadone, buprenorphine) treatment center, and their proximity facilitated connections between their clients and services.

Oudshoorn, Abe, Michelle Sangster Bouck, Melissa McCann, Shamiram Zendo, Helene Berman, Jordan Banninga, Marlene Janzen Le Ber, and Zayya Zendo. 2021. “A Critical Narrative Inquiry to Understand the Impacts of an Overdose Prevention Site on the Lives of Site Users.” *Harm Reduction Journal* 18 (January): 6. <https://doi.org/10.1186/s12954-020-00458-0>.

This source has qualitative anecdotes about experiences of individuals in the Vancouver overdose prevention site (OPS). Participants’ shared that the OPS gave them access to health professionals, clean facilities and equipment, and naloxone. They also did not feel rushed in their injections because they did not fear law enforcement interventions. Beyond these physical benefits, participants appreciated the social connections and lack of stigma at the OPS. The site benefits when participants benefit: participants volunteer at the OPS, making it “a jumping off point for civic engagement.

Crime and Public Safety-Related Outcomes

Davidson, Peter J., Barrott H. Lambdin, Erica N. Browne, Lynn D. Wenger, and Alex H. Kral. 2021. “Impact of an Unsanctioned Safe Consumption Site on Criminal Activity, 2010–2019.” *Drug and Alcohol Dependence*, January, 108521. <https://doi.org/10.1016/j.drugalcdep.2021.108521>.

This study “found no evidence that interpersonal crime-related reports (i.e., those relating to assault, burglary, larceny theft, and robbery) increased in the area around the SCS” right after the SCS was implemented.”

Kennedy, Mary Clare, Kanna Hayashi, M-J Milloy, Jade Boyd, Evan Wood, and Thomas Kerr. 2020. “Supervised Injection Facility Use and Exposure to Violence among a Cohort of People Who Inject Drugs: A Gender-Based Analysis.” *International Journal of Drug Policy* 78 (April): 102692. <https://doi.org/10.1016/j.drugpo.2020.102692>.

SIF usage protects men PWID from violence more than women. This makes sense because more than 60% of violence among men involve violence from strangers and police officers, compared to 40% among women. SIFs create an environment for PWID, particularly men, to consume drugs without fear of violent encounters.

Kral, Alex H., Barrot H. Lambdin, Lynn D. Wenger, Erica N. Browne, Leslie W. Suen, and Peter J. Davidson. 2021. “Improved Syringe Disposal Practices Associated with Unsanctioned Safe Consumption Site Use: A Cohort Study of People Who Inject Drugs

in the United States." *Drug and Alcohol Dependence*, October, 109075.
<https://doi.org/10.1016/j.drugalcdep.2021.109075>.

Unsanctioned safe consumption sites decrease the amount of improperly disposed syringes because they are disposed of in biohazard containers on-site.

Livingston, James D. 2021. "Supervised Consumption Sites and Crime: Scrutinizing the Methodological Weaknesses and Aberrant Results of a Government Report in Alberta, Canada." *Harm Reduction Journal* 18 (1): 4.
<https://doi.org/10.1186/s12954-020-00456-2>.

This a useful rebuttal overall to a specific report claiming that SCS raised the rates of crime around Alberta. It found "major methodological limitations with respect to its criminological components, including that crime was poorly operationalized and measured, change in crime was inadequately assessed, and the effect of SCSs on crime was not ascertained."

Sherman, Susan G., Saba Rouhani, Rebecca Hamilton White, Noelle Weicker, Miles Morris, Kristin Schneider, Ju Nyeong Park, and Colleen Barry. 2022. "Acceptability of Overdose Prevention Sites in the Business Community in Baltimore, Maryland." *Journal of Urban Health : Bulletin of the New York Academy of Medicine*, May, 1–10.
<https://doi.org/10.1007/s11524-022-00647-1>.

This research found that businesses in neighborhoods that experience high levels of drug activity support OPSs. It also found that "OPS support and more empathetic attitudes towards PWUD were driven by personal experiences, with living near your workplace and having recently witnessed an overdose at work being significantly associated with OPS support." Supporters thought that OPSs would reduce drug-related deaths and benefit the entire community.

Urbanik, Marta-Marika, Katharina Maier, and Carolyn Greene. 2022. "A Qualitative Comparison of How People Who Use Drugs' Perceptions and Experiences of Policing Affect Supervised Consumption Services Access in Two Cities." *International Journal of Drug Policy* 104 (June): 103671. <https://doi.org/10.1016/j.drugpo.2022.103671>.

This study compared two cities where police presence was heavily visible near SCSs. In Calgary, police were present near the SCS and harassed PWUD trying to use it. In this case, law enforcement acted as a barrier to SCS access. In Edmonton, police were present near the SCS, but they did not engage in behavior that deterred PWUD from using it. In that case, PWUD saw the SCS as a place of refuge from police.

Willingness to Utilize SCS

Ickowicz, Sarah, Cameron Grant, Ekaterina Nosova, Jade Boyd, Rupinder Brar, M-J Milloy, Kanna Hayashi, and Seonaid Nolan. 2020. "Factors Associated with the Use of Supervised Consumption Facilities among Women Who Inject Drugs in a Canadian Setting." *Journal of Addiction Medicine* 14 (5): e226–32.

<https://doi.org/10.1097/ADM.0000000000000646>.

"Higher intensity patterns of drug use, including daily heroin and crystal methamphetamine injection, injecting in public and binge injection, as well as homelessness to be associated with SCF use among women." In summary, SCF (supervised consumption facilities) appealed to highest risk users.

Kenney, Shannon R., Bradley J. Anderson, Genie L. Bailey, Debra S. Herman, Micah T. Conti, and Michael D. Stein. 2020. "Examining Overdose and Homelessness as Predictors of Willingness to Use Supervised Injection Facilities by Services Provided Among Persons Who Inject Drugs." *The American Journal on Addictions*, June, 10.1111/ajad.13065. <https://doi.org/10.1111/ajad.13065>.

This study was conducted in Massachusetts with 184 participants in short term opioid withdrawal management inpatient treatment about their interest in using a SIF. They measured willingness based on the provision of specific services and if that willingness difference between overdose history and homelessness. They found that the most appealing characteristic of an SIF would be protection from police, followed by connection to treatment, and provision of clean syringes. Only a little over half would go if the SIF offered fentanyl testing services.

Khezri, Mehrdad, Mohammad Karamouzian, Hamid Sharifi, Nima Ghalekhani, Fatemeh Tavakoli, Soheil Mehmandoost, Fatemeh Mehrabi, et al. 2021. "Willingness to Utilize Supervised Injection Facilities among People Who Inject Drugs in Iran: Findings from 2020 National HIV Bio-Behavioral Surveillance Survey." *International Journal of Drug Policy* 97 (November): 103355. <https://doi.org/10.1016/j.drugpo.2021.103355>.

Iranian PWID report high willingness to use SIFs. Willingness is higher among PWID who have experienced homelessness, food insecurity, incarceration, non-fatal overdose, and HCV sero-positivity. PWID who primarily inject stimulants, share syringes, inject publicly, and use other harm reduction services were also more likely to report willingness to use SIFs.

Klein, Kathryn S., Sara N. Glick, and Pia M. Mauro. 2020. "Anticipated Use of a Supervised Drug Consumption Site among Syringe Services Program Clients in King County, Washington: Assessing the Role of Opioid Overdose and Injection Behavior." *Drug and Alcohol Dependence* 213 (August): 108121. <https://doi.org/10.1016/j.drugalcdep.2020.108121>.

More than 80% of this study's participants anticipated using an SCS. Nearly 67% were affected by an overdose (either directly or indirectly) or reported injecting publicly. Overdose experience and public injection behavior were both associated with anticipated SCS; the latter was more strongly associated than the former. Further, people who primarily used opioids were more likely to anticipate SCS use than people who primarily used methamphetamine.

"Our findings indicate that SCS services would be used by people situated in higher risk environments; therefore, specialized services at the SCS could aid in reducing overdose events, fatalities, and other harms."

Rouhani, Saba, Rebecca Hamilton White, Ju Nyeong Park, and Susan G. Sherman. 2020. "High Willingness to Use Overdose Prevention Sites among Female Sex Workers in Baltimore, Maryland." *Drug and Alcohol Dependence* 212 (July): 108042. <https://doi.org/10.1016/j.drugalcdep.2020.108042>.

"Most women (77%) reported being likely to use an OPS given the chance. Willingness was significantly elevated among women who: identified as sexual minorities (97%), reported recent homelessness (82%), sexual violence (92%), heroin use (83%), injection drug use (82%) or receptive syringe sharing (82%). A majority (58 %) reported that they would still use an OPS if identification or registration was required, though only 16 % would travel >30 min for services. Women anticipated using services daily (42%) or more (30%), and consistently throughout the day (55 % morning; 46 % afternoon; 50 % evening; 46 % late night). Common barriers included: transportation (45 %), concerns about arrest (41 %), confidentiality (26 %) and privacy (22 %)."

Trayner, Kirsten M.A., Norah E. Palmateer, Sharon J. Hutchinson, David J. Goldberg, Samantha J. Shepherd, Rory N. Gunson, Emily J. Tweed, et al. 2021. "High Willingness to Use Drug Consumption Rooms among People Who Inject Drugs in Scotland: Findings from a National Bio-Behavioural Survey among People Who Inject Drugs." *The International Journal on Drug Policy* 90 (April): 102731. <https://doi.org/10.1016/j.drugpo.2020.102731>.

"The majority of PWID overall in Scotland (75%) were willing to use a DCR...Willingness was greater among PWID who reported (compared to those who did not report) injecting heroin (76%), cocaine injecting (79%), homelessness (86%), public injecting (87%) and an overdose (80%)."

Addressing Community Concerns

Bancroft, Morgan, and Esben Houborg. 2020. "Managing Coexistence: Resident Experiences of the Open Drug Scene and Drug Consumption Rooms in Inner Vesterbro, Copenhagen." *Contemporary Drug Problems* 47 (3): 210–30. <https://doi.org/10.1177/0091450920912495>.

This study found that, for local support for DCRs to continue, DCRs should collaborate with different community stakeholders. For example, “all apartment buildings have information sheets with direct hotlines to DCRs as well as the local police. Regular information meetings are arranged, allowing residents to obtain information on recent drug scene developments or vent frustrations. NGOs operate in the area, providing opioid overdose reversal training. Taken together, these important measures indicate that local authorities view the local DCRs and the drug scene as integrated parts of the area. They also highlight the importance of establishing and sustaining cooperation between various stakeholders, most importantly DCR staff and police.”

Munoz Sastre, Maria Teresa, Lonzozou Kpanake, and Etienne Mullet. 2020. “French People’s Positions on Supervised Injection Facilities for Drug Users.” *Substance Abuse Treatment, Prevention, and Policy* 15 (October): 79.
<https://doi.org/10.1186/s13011-020-00321-2>.

Communities are more willing to host SCSs if they are introduced as medical centers, rather than as welcoming locations for PWUD. The types of drugs allowed did not impact people’s opinions.

Socia, Kelly M., Rebecca Stone, Wilson R. Palacios, and John Cluverius. 2021. “Focus on Prevention: The Public Is More Supportive of ‘Overdose Prevention Sites’ than They Are of ‘Safe Injection Facilities.’” *Criminology & Public Policy* 20 (4): 729–54.
<https://doi.org/10.1111/1745-9133.12566>.

“The major policy takeaways are that (1) proponents of these facilities should refer to them using labels that highlight overdose prevention (“overdose prevention site”), rather than safe drug use (“safe injection facility”) and (2) discussions about local facilities should be placed in the context of both the national and local opioid epidemic to help mitigate NIMBY concerns.”

Program Recommendations and Considerations

Boyd, Jade, Jennifer Lavalley, Sandra Czechaczek, Samara Mayer, Thomas Kerr, Lisa Maher, and Ryan McNeil. ““Bed Bugs and Beyond”: An Ethnographic Analysis of North America’s First Women-Only Supervised Drug Consumption Site.” *The International Journal on Drug Policy* 78, (04, 2020): 1.
doi:<https://doi.org/10.1016/j.drugpo.2020.102733>.

This article studies the first women-only (transgender and nonbinary inclusive) SCS in North America, and it analyzes how gender-responsive SCSs can benefit PWUD who are women and other marginalized genders. It adopts an intersectional approach, acknowledging that PWUD who are not cisgender males experience unique forms of oppression, and it sheds light on how SCSs

have the potential to support them. This specific SCS, SisterSpace, has creative and welcoming interior design to make everyone there feel like they belong. Its all-women staff also offers food and hygiene products unrelated to drug use to meet their clients' needs. Their diverse staff is intentionally culturally-supportive, accommodating different cultural practices that may surround an individual's substance use. Because gender-responsive SCSs allow PWUD to not just feel safe in their drug consumption, but also in their multifaceted identities, they are a critical part of creating equitable harm reduction resources.

Collins, Alexandra B., Jade Boyd, Kanna Hayashi, Hannah L. F. Cooper, Shira Goldenberg, and Ryan McNeil. 2020. "Women's Utilization of Housing-Based Overdose Prevention Sites in Vancouver, Canada: An Ethnographic Study." *The International Journal on Drug Policy* 76 (February): 102641. <https://doi.org/10.1016/j.drugpo.2019.102641>.

Housing-based overdose prevention sites (HOPS) are important to overdose response, but they create a new setting for safer consumption. HOPS are social environments (with guests and crowded spaces) and have restrictions (prohibited smoking and surveillance). Consequently, women may not feel safe at HOPS and may choose to use alone in their rooms—increasing their risk of fatal overdose. This emphasizes a need to reconsider safety from gendered perspectives.

Davidson, Peter J., Lynn D. Wenger, Barrot H. Lambdin, and Alex H. Kral. 2022. "Establishment and Enforcement of Operational Rules at an Unsanctioned Safe Drug Consumption Site in the United States, 2014–2020." *American Journal of Public Health* 112 (S2): S166–72. <https://doi.org/10.2105/AJPH.2022.306714>.

Rules at this SCS were largely created by service users, rather than external pressures. This bottom-up rule-making allowed service users to take ownership of their space, and their regulations rapidly responded to their community's needs. By removing external restrictions, SCSs can operate by flexible rules that are "highly responsive to the social and public health needs of people who use drugs." Any regulation of SCSs should be flexible to maximize the involvement of PWUD.

Kryszejtys, David T., Jessica Xavier, Katherine Rudzinski, Adrian Guta, Soo Chan Carusone, and Carol J. Strike. 2022. "Stakeholder Preferences for Supervised Consumption Site Design, Staff, and Ancillary Services: A Scoping Review of Feasibility Studies." *Drug and Alcohol Dependence* 230 (January): 109179. <https://doi.org/10.1016/j.drugalcdep.2021.109179>.

This study found that PWUD and stakeholders have similar recommendations for SCS models: "In general, PWUD and stakeholders recommended SCS be

integrated within or near other social and health services. There was also support across both groups for mobile SCS, multiple versus a single SCS, women only hours or service supports, allowing consumption of many types of drugs, referrals to a vast range of health and social services, referrals for opioid agonist treatment, distribution of harm reduction equipment, access to basic supplies, access to a drug checking service, onsite nurses, staff with experience working with PWUD and staff specialized in providing support for specific groups such as youth or Indigenous people.”

However, PWUD were more supportive of private cubicles and creating separate spaces for smoking and injecting; stakeholders were more supportive of police presence and surveillance. PWUD supported standalone SCSs, while stakeholders preferred them to be incorporated into treatment or social services.

Montero-Moraga, Jose María, Amaia Garrido-Albaina, Maria Gabriela Barbaglia, Mercè Gotsens, Diego Aranega, Albert Espelt, and Oleguer Parés-Badell. 2020. “Impact of 24-Hour Schedule of a Drug Consumption Room on Service Use and Number of Non-Fatal Overdoses. A Quasiexperimental Study in Barcelona.” *International Journal of Drug Policy* 81 (July): 102772. <https://doi.org/10.1016/j.drugpo.2020.102772>.

This paper, based in Spain, is about the barriers that not having 24-hour access could entail. They concluded that there may be an increase in overdose risk at night, when DCRs may be closed.

“There were 1,089 clients in the 15-hour period and 1,262 in the 24-hour period. There were no sociodemographic differences in the clients between periods. During nighttime, there was a higher proportion of women (17%) and homeless people (47%) than during daytime (12% and 30%, respectively). Injected cocaine use was more frequent during nighttime (34%) than during daytime (25%) and injected heroin use was less frequent during nighttime (17%) than during daytime (24%). There was a non-significant increase in non-fatal overdose risk during nighttime. However, when we analyzed heroin use alone, the increase in non-fatal overdose risk was significant.”

Pauly, Bernadette, Bruce Wallace, Flora Pagan, Jack Phillips, Mark Wilson, Heather Hobbs, and Joann Connolly. 2020. “Impact of Overdose Prevention Sites during a Public Health Emergency in Victoria, Canada.” *PLoS ONE* 15 (5): e0229208. <https://doi.org/10.1371/journal.pone.0229208>.

OPs can facilitate social connection between its participants, but this benefit is not inherent to them. OPs must intentionally facilitate spaces for PWUD to build relationships by reflecting “drug culture and practices of service users.” The OPs that most effectively create welcoming and social spaces are often community-led and developed; still, OPs tend to be “highly gendered and

racialized, pointing to the need for culturally and gender appropriate OPS." OPSs should also consider the consumption experience of PWUD. Instead of focusing solely on minimizing the harms of use, they should "acknowledge pleasure in the design and delivery of consumption services and sites."

Pijl, Em, Tracy Oosterbroek, Takara Motz, Erin Mason, and Keltie Hamilton. 2021. "Peer-Assisted Injection as a Harm Reduction Measure in a Supervised Consumption Service: A Qualitative Study of Client Experiences." *Harm Reduction Journal* 18 (January): 5. <https://doi.org/10.1186/s12954-020-00455-3>.

Peer-assisted injection programs would make SCSs even more effective. It shows that peer-assisted injection participants were more likely to frequent the facility, citing that it was safer, and carried less risk of overdose. They also emphasize the fact that these relationships are often driven by generosity, desire to help others, and especially, on the side of injection providers, to be especially attentive to safety and proper technique to ensure less risk.

Roxburgh, Amanda, Marianne Jauncey, Carolyn Day, Mark Bartlett, Shelley Cogger, Paul Dietze, Suzanne Nielsen, Julie Latimer, and Nico Clark. 2021. "Adapting Harm Reduction Services during COVID-19: Lessons from the Supervised Injecting Facilities in Australia." *Harm Reduction Journal* 18 (1): 20. <https://doi.org/10.1186/s12954-021-00471-x>.

The paper is largely about how an Australian site adapted to restrictions during COVID-19 and responding to overdose procedures (i.e. how to provide oxygen with aerosolization risk concern). The below statistic was pulled to provide an outcome, but the paper is useful for an implementation science and COVID-19 adaption angle.

"Since opening in 2001, the MSIC in Sydney has supported over 1.1 million injecting visits and responded to over 10,000 overdoses... these services are important not only in mitigating comorbidities associated with non-fatal overdose, and in reducing the number of injections that occur in public places, but also in averting fatal overdose, highlighted by the fact that neither facility has ever had a single fatality."

Samuels, Elizabeth A., Dennis A. Bailer, and Annajane Yolken. "Overdose Prevention Centers: An Essential Strategy to Address the Overdose Crisis." *JAMA Network Open* 6 (2022): e2222153. doi:10.1001/jamanetworkopen.2022.22153.

An Invited Commentary on the need for legal above-ground OPCs in the United States to address the overdose crisis., highlighting OnPoint NYC's work as an important example.

Speed, Kelsey A., Nicole D. Gehring, Katherine Launier, Daniel O'Brien, Sandy Campbell, and Elaine Hyshka. 2020. "To What Extent Do Supervised Drug Consumption Services Incorporate Non-Injection Routes of Administration? A Systematic Scoping Review Documenting Existing Facilities." *Harm Reduction Journal* 17 (October): 72.
<https://doi.org/10.1186/s12954-020-00414-y>.

This article is a systematic review of 48 European SCSs that facilitate non-injection drug consumption. Their care resembles that of SCSs that only facilitate injections. However, they also have ventilated rooms and outdoor areas for inhalation and shorter time limits on individuals who are not injecting.

Urbanik, Marta-Marika, and Carolyn Greene. 2021. "Operational and Contextual Barriers to Accessing Supervised Consumption Services in Two Canadian Cities." *International Journal of Drug Policy* 88 (February): 102991.
<https://doi.org/10.1016/j.drugpo.2020.102991>.

Barriers to SCS access include wait times, time limits, restrictions on injection assistance, and client bans. Some individuals also experience different contextual barriers: perceptions that naloxone use is unnecessary or fear of police surveillance. SCS-users may work to counter the contextual barriers.



Scientific Update

Annotated Bibliography
2018-2020

BIBLIOGRAPHY UPDATE (2018-2020)

Overdose Prevention Programs/Supervised Consumption Services

Behrends, Czarina N., et. al. "Estimated impact of supervised injection facilities on overdose

fatalities and healthcare costs in New York City." *Journal of Substance Abuse Treatment* 106 (2019): 79-88. <https://doi.org/10.1016/j.jsat.2019.08.010>

This study estimates the potential impact on opioid overdose fatalities and healthcare system costs of implementing SIFs in NYC. Opioid overdoses cost the healthcare system an estimated \$41 million per year for emergency medical services, emergency department visits, and hospitalizations. Implementing one SIF is estimated to save \$0.8–\$1.6 million, and four SIFs saves \$2.9–\$5.7 million in annual healthcare costs from opioid overdoses. Implementing SIFs in NYC would save lives and healthcare system costs, although their overall impact may be limited depending on the geographic characteristic of the local opioid epidemic. In cities with geographically dispersed opioid epidemics such as NYC, multiple SIFs will be required to have a sizable impact on the total number of opioid overdose fatalities occurring each year.

Davidson, Peter J., Andrea M. Lopez, and Alex H. Kral. "Using drugs in un/safe spaces: impact of perceived illegality on an underground supervised injecting facility in the United States." *International Journal of Drug Policy* 53 (2018): 37-44.

Supervised injection facilities (SIFs) are spaces where people can consume pre-obtained drugs in hygienic circumstances with trained staff in attendance to provide emergency response in the event of an overdose or other medical emergency, and to provide counselling and referral to other social and health services. Over 100 facilities with formal legal sanction exist in ten countries, and extensive research has shown they reduce overdose deaths, increase drug treatment uptake, and reduce social nuisance. No facility with formal legal sanction currently exists in the United States, however one community-based organization has successfully operated an 'underground' facility since September 2014. Twenty three qualitative interviews were conducted with

people who used the underground facility, staff, and volunteers to examine the impact of the facility on peoples' lives, including the impact of lack of formal legal sanction on service provision. Participants reported that having a safe space to inject drugs had led to less injections in public spaces, greater ability to practice hygienic injecting practices, and greater protection from fatal overdose. Constructive aspects of being 'underground' included the ability to shape rules and procedures around user need rather than to meet political concerns, and the rapid deployment of the project, based on immediate need. Limitations associated with being underground included restrictions in the size and diversity of the population served by the site, and reduced ability to closely link the service to drug treatment and other health and social services. Unsanctioned supervised injection facilities can provide a rapid and user-driven response to urgent public health needs. This work draws attention to the need to ensure such services remain focused on user-defined need rather than external political concerns in jurisdictions where supervised injection facilities acquire local legal sanction.

Hood, J.E., et. al. "The projected costs and benefits of a supervised injection facility in Seattle, WA, USA." *International Journal of Drug Policy* 67 (2019): 9-18.
<https://doi.org/10.1016/j.drugpo.2018.12.015>

We utilized local estimates and other data sources deemed appropriate for our setting to implement a mathematical model that assesses the impact of a hypothetical SIF on overdose deaths, non-fatal overdose health service utilization, skin and soft tissue infections, bacterial infections, viral infections, and enrollment in medication assisted treatment (MAT). We estimated the costs and savings that would occur on an annual basis for a small-scale pilot site given current overdose rates, as well as three other scenarios of varying scale and under-lying overdose rates. If Seattle experienced elevated overdose rates and Seattle SIF program were scaled up, the health benefits and financial value would be considerably greater. This analysis suggests that a SIF program in Seattle would save lives and result in considerable health benefits and cost savings.

Karamouzian, M., Dohoo, C., Forsting, S., McNeil, R., Kerr, T., & Lysyshyn, M. "Evaluation of a Fentanyl Drug Checking Service for Clients of a Supervised Injection

Facility, Vancouver, Canada." Harm Reduction Journal 15 (2018).

DOI:<http://dx.doi.org/10.1186/s12954-018-0252-8>

This cross-sectional study evaluates a drug checking intervention for the clients of a supervised injection facility (SIF) in Vancouver. Logistic regression models were constructed to assess the associations between drug checking results and dose reduction or drug disposal. Crude odds ratios (OR) and 95% confidence intervals (CI) were reported. Although only a small proportion of visits resulted in a drug check, a high proportion (~ 80%) of the drugs checked were contaminated with fentanyl. Drug checking at harm reduction facilities such as SIFs might be a feasible intervention that could contribute to preventing overdoses in the context of the current overdose emergency.

Kennedy, Mary Clare, Kanna Hayashi, M-J Milloy, Evan Wood, Thomas Kerr. "Supervised injection

facility use and all-cause mortality among people who inject drugs in Vancouver, Canada: A cohort study." PLOS Medicine, (2019).

<https://doi.org/10.1371/journal.pmed.1002964>

Therefore, we examined the relationship between frequent SIF use and all-cause mortality among PWID in Vancouver, Canada. We observed a high burden of premature mortality among a community-recruited cohort of PWID. Frequent SIF use was associated with a lower risk of death, independent of relevant confounders. These findings support efforts to enhance access to SIFs as a strategy to reduce mortality among PWID. Further analyses of individual-level data are needed to determine estimates of, and potential causal pathways underlying, associations between SIF use and specific causes of death.

Kral, Alex H., and Peter J. Davidson. "Addressing the nation's opioid epidemic: lessons from an unsanctioned supervised injection site in the US." Am J Prev Med 53, no. 6 (2017): 919-922.

After a year of planning and preparation, a social service agency located in an undisclosed urban area in the U.S. opened an unsanctioned supervised injection site in September 2014. In the first 2 years of operation, there were 2,574 injections by over 100 participants. This proof-of-concept evaluation has brought up a number of potential benefits for people who use the site and the

surrounding community. Supervision of injections by trained staff ensures that overdoses are identified and responded to immediately. It also provides opportunities for real-time education about safer injection practice, potentially reducing the future incidence of soft tissue infection and other injection-related morbidities. Being able to inject in a clean, well-lit space equipped with sterile equipment, where there is no need to rush due to fear of detection, may also reduce injection-related injury and disease. By contrast, more than 80% of people who used the site reported having to always, often, or sometimes rush injections when injecting outside the site. More than 90% of people using the site reported that, if not for the site, they would have been injecting in a public restroom, street, park, or parking lot. As such, this site has averted over 2,300 instances of public injection in the neighborhood during a 2-year period.

Kral, Alex H., and Peter J. Davidson. "Evaluation of an Unsanctioned Safe Consumption Site in the United States." *N Engl J Med* 383 (2020): 589-590. [Link](#)

Nearly 70,000 people in the United States die each year from a drug overdose. Opioid-involved overdose deaths may be preventable by the timely administration of naloxone. Eleven countries have responded to health concerns regarding people who use drugs by opening sanctioned safe consumption sites; however, no such sites exist yet in the United States. Safe consumption sites provide a space for people to bring preobtained drugs and use them with sterile supplies under clean conditions and with safe disposal of used drug equipment. These sites provide monitoring by staff equipped and trained in the use of naloxone to reverse overdose. Most sanctioned sites can also provide related services, including voluntary screening for infectious diseases, peer counseling, wound care, and referral to other social and medical services, such as substance use treatment. Observational studies from sites outside the United States show that sanctioned safe consumption sites improve the health of people who use the sites by reducing overdose mortality, infectious disease risk, and drug use and by facilitating access to health and social services.

León, Casey., Cardoso, L., Mackin, S., Bock, B., & Gaeta, J.M. "The Willingness of People Who Inject Drugs in Boston to Use a Supervised Injection Facility." *Substance Abuse* 39.1 (2018): 95-101. DOI: [10.1080/08897077.2017.1365804](https://doi.org/10.1080/08897077.2017.1365804)

This study explores willingness of people who inject drugs in Boston to use a SIF and examines factors associated with willingness. Most respondents (91.4%) reported willingness to use a SIF. Respondents with substance use behavior reflecting high risk for overdose were significantly more likely to be willing to use a SIF. Respondents with behaviors that contribute to the public health burden of injection drug use were also significantly more likely to be willing to use a SIF. Results indicate that this intervention would be well utilized by individuals who could most benefit from the model. As part of a broader public health approach, SIFs should be considered to reduce opioid overdose mortality, decrease public health burden of the opioid crisis, and promote access to addiction treatment and medical care.

Madah-Amiri, D., Skulberg, A.K., Braarud, A., Dale, O., Heyerdahl, F., Lobmaier, P. & Clausen, T. "Ambulance-Attended Opioid Overdoses: An Examination Into Overdose Locations and the Role of a Safe Injection Facility." *Substance Abuse* 40.3 (2018): 383-388. DOI: [10.1080/08897077.2018.1485130](https://doi.org/10.1080/08897077.2018.1485130)

We used prospective data from ambulance journals in Oslo, Norway, to describe the patterns, severity, and outcomes of opioid overdoses and compared these characteristics among various overdose locations. We also examined what role a safe injection facility may have had on these overdoses. Our findings suggest that the opening hours at the safe injection facility and the overdose location may impact the likelihood of ambulance transport for further treatment.

Magwood, Olivia, Ginetta Salvalaggio, Michaela Beder, Claire Kendall, Victoire Kpade, Wahab

Daghmach, Gilbert Habonimana, et al. "The effectiveness of substance use interventions for homeless and vulnerably housed persons: A systematic review of systematic reviews on supervised consumption facilities, managed alcohol programs, and pharmacological agents for opioid use disorder." *PLoS One* 15, (2020). <https://doi.org/10.1371/journal.pone.0227298>

We performed a systematic overview of reviews examining the effects of selected harm reduction and pharmacological interventions on the health and social well-being of people who use substances, with a focus on homeless populations. Supervised consumption facilities reduce overdose and improve access to care, while pharmacological interventions may play a role in reducing

harms and addressing other morbidity. High quality evidence on managed alcohol programs is limited.

Mrazovac, A., O'Boyle, J., Watts, C. et al. Public Knowledge of and Support for Supervised Injection

Sites in a Metropolitan Canadian Region. *Int J Ment Health Addiction* 18 (2020): 236–256. <https://doi.org/10.1007/s11469-019-00130-0>

To determine the public's knowledge of and support for supervised injection sites (SIS) in Waterloo Region and to assess the impact of educational pamphlets on attitudes towards harm reduction. Thematic analysis highlighted 10 key issues: logistics of SIS regarding its effectiveness and oversight, humanitarian issues concerning personal experience and human rights, additional considerations addressing concerns and misconceptions, and proposing alternatives. Public Health Information: Brief, targeted education (< 5 min) is effective in changing attitudes. Public Policy, Education, and Accountability: Citizens want to be engaged in addressing the opioid crisis through public discourse, planning, and implementing more comprehensive, long-term solutions.

Wallace, Bruce, Flora Pagan, Bernadette (Bernie) Pauly. "The implementation of overdose prevention

sites as a novel and nimble response during an illegal drug overdose public health emergency." *International Journal of Drug Policy* 66 (2019): 64-72. <https://doi.org/10.1016/j.drugpo.2019.01.017>

In this paper, we examine the implementation of OPSs as a novel and nimble response to prevent overdose deaths as a result of injection drug use. The rapid implementation of OPSs provides an international example of an alternative to lengthy and often onerous sanctioning processes for supervised consumption services (SCSs). Overdose prevention sites provide an example of a novel service design and nimble implementation process that combines the benefits of state-sanctioned injection services with community-driven implementation. Such evidence questions the continued acceptability of governments' restrictive sanctioning processes, which have limited expansion of SCSs internationally and the implementation of services that are not necessarily aligned with the needs of PWUD.

