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Supervised Consumption Sites and Economic Evidence: A Policy Brief

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Supervised Consumption Sites

Supervised consumption sites (SCS) refer to environments where people use drugs in an environment where they are observed by trained personnel, where sterile supplies are available, and where overdoses can be immediately treated. Supervised drug methods include injection, smoking / inhalation, and oral consumption. In systematic reviews, supervised injection was associated with: decreased risky injection practices that are associated with transmission of blood-borne infections; increased adoption of safer sex practices that can prevent transmission of sexually transmitted infections; increased treatment rates for skin and soft tissue infections; decreased public injection and public litter associated with injecting; increased referral to other social and health services, including treatment for substance use disorder.[1–4] Studies in Toronto and Vancouver have demonstrated decreased mortality in neighbourhoods that have implemented supervised consumption services.[5–7] An important policy consideration is whether SCSs represent a good use of health care resources. In this brief, we review studies that have conducted economic evaluations of supervised consumption sites. We start with a brief review of principles of economic evaluation.

Economic Evaluation in Health Care

Economic evaluations in health are formal methods of analyzing the relationship of costs to health effects, with a goal of informing health care policy decision.[8] Economic evaluation can use a variety of methods, as outlined below. A key principle underlying each method is that an intervention does not need to *save money* to be considered economically attractive – indeed very few interventions in health care are associated with cost savings. Rather, economic evaluations will examine the trade-off between the cost of an intervention and the effects.

The key question for an economic evaluation is whether the net effects (that is, benefits minus harms) are a good value for the costs that are incurred. Economic evaluations always consider whether the investment of resources is a good value *relative to another* option, which we will call the comparator. The comparator may be another intervention, or it could be the status quo condition. For example, we might examine the costs and effects of investing in a supervised consumption site relative to not having any sites – or we could assess the costs and effects of opening 5 sites for a city compared with opening 4. When the comparator is explicit, we can say which of two or more interventions represents the best value for money. Often, however, the comparator is implicit, in which case the decision about “value for money” uses an external reference standard.

Selected Economic Evaluation Methods

Below, we briefly review three economic evaluation methods that have been applied for the evaluation of supervised consumption sites.

Cost minimization *analysis* and *cost-offset analysis* are analyses in which the effectiveness of the interventions and comparators are assumed to be equivalent. The goal of these analyses is to find the strategy that minimizes costs.

Cost effectiveness analysis expresses the trade-off between the costs of an intervention to the non-financial outcomes as a ratio. The health effects could be measured as life years gained, hospitalizations averted, improvements in quality-of-life scores, or other metrics. To facilitate comparisons across different types of interventions, many cost-effectiveness analyses use the quality-adjusted life year (QALY) outcome, which combines data about survival and quality of life. The reference standards for an acceptable cost per QALY differs between countries and across time. In Canada, a cost per QALY below $50,000 is often considered good value for money.

Cost benefit analysis is closely related to cost effectiveness analysis, except that the health effects are valued in dollar amounts. The greatest limitation of cost benefit analysis is the requirement for health effects to be expressed in dollar amounts. Although cost-benefit analyses frequently report net costs, it is important to recognize that these are net costs after benefits have been monetized – they do not represent budgetary costs. Cost-benefit analyses report either the difference between costs and benefits or a ratio of cost to benefits. Sometimes, as in the studies cited below, the analyses report the inverse (the ratio of benefits to costs). In such analyses, a ratio greater than 1 indicates that the benefits are greater than the costs and the intervention is favourable.

A Review of Economic Evaluations of Supervised Consumption Sites

Behrends and colleagues published a systematic review of economic studies (including cost-offset studies, cost-effectiveness analyses, and cost-benefit analyses) comparing SCSs with at least one alternative.[9] They included studies set in North America that were published in English prior to December 2022. They included 16 studies,[10–25] of which 4 evaluated established single sites (3 in Vancouver[10,14,16] and 1 in Calgary[18]) and 7 evaluated scenarios of expanding sites in Vancouver or opening sites in other Canadian cities.[11–13,17,19–21] The other 5 studies analyzed the cost-effectiveness of opening sites in the United States.[15,22–25]

The studies used a variety of methods and approaches – 2 reported only cost-effectiveness analyses,[10,11] 5 reported only cost-benefit analyses,[12,22–25] 6 reported both cost-effectiveness and cost-benefit analyses,[13,14,17,19–21] and 3 reported a cost-offset analysis.[15,16,18] Of the 16 studies, 9 used a health care system perspective[10–12,15–17,19–21], 6 used a societal perspective,[13,14,22–25] and 1 used a payer perspective.[18] Only 3 studies used time horizons of 10 years or longer.[10,11,20]

The studies varied considerably in terms of outcomes examined, including Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV) infections averted, overdoses averted, life years gained, QALYs gained, skin and soft tissue infections averted, emergency department visits, and uptake of opioid agonist therapy (OAT). The studies also varied considerably in terms of the costs that were included, including SCS operating costs, costs of averted events – HIV and HCV infections, overdose and overdose deaths, wound infections – and the cost of OAT referrals.

Of the studies that used a cost-benefit approach, all reported a ratio of benefits to costs. Across studies, the reported ratios for establishing new single SCSs (existing or

hypothetical) were all above 1, with a range of 2.32 to 5.12, indicating that the monetary value of the benefits are greater than the costs (that is, the SCS has positive economic benefits).[12–14,17,19–21]

Cost-benefit analysis was also used to determine how many sites are economically attractive by analyzing at what number of sites the ratio drops below 1. The included studies suggested up to 2 sites in Ottawa, 3 in Montreal, and 4 in Saskatchewan would be good value for money.[19–21]

Of the studies that used a cost-effectiveness approach, only 2 evaluated costs per life year or QALY gained.[10,11] These studies found that the Vancouver sites was associated with cost savings and that Toronto and Ottawa would benefit from multiple sites.

Of the three studies that used a cost-offset approach, two reported net cost savings from SCSs (one from averted HIV infections in Vancouver[16] and another from averted ambulance and emergency department visits in Calgary[18]). A New York-based analysis calculated potential cost offsets from averted health care costs but did not calculate net costs.[15]

Additional Studies

We extended Behrend's search strategy to studies published up to May 4, 2026. We screened 601 potentially relevant studies. We identified 5 articles for full text screening, of which we included 2. We also identified another article from our files.

Bailey and colleagues, in an article that is not yet published but available as a preprint, estimate the potential cost offsets in the United States related to averted overdoses and HIV and HCV infections.[26] They estimated that if 0.25% of all injections in the United States occurred at an SCS, $11.92 billion would be saved. If 1% of all injections were in an SCS, $47.7 billion would be saved.

Padmanabhan and colleagues used a microsimulation model to estimate the costs, outcomes, and cost-effectiveness of a hypothetical SCS in Denver, focusing on averted infectious endocarditis, skin and soft tissue infections, and fatal and non-fatal overdoses over 10 years.[27] The authors evaluated SCSs that service current clients of harm reduction services or SCSs that reach people not currently using services. Either SCS scenario was associated with improved survival and cost savings.

Bowring and colleagues used cost-benefit analysis to study a range of harm reduction interventions in the Australian Cape Territory.[28] This study was distinct in that it examined a range of harm reduction scenarios, including drug checking services, needle and syringe distribution, prescribed safer opioid supply, OAT expansion, take-home naloxone, and technological interventions (virtual monitoring and hotlines). The authors found that the interventions had a range of cost-benefit ratios, with the highest ratios for take-home naloxone, OAT, and technological interventions followed by SCSs. These results suggest that, within a health investment portfolio, allocating resources to SCSs is an economically efficient decision.

Limitations

One limitation of many published studies is that they based operating costs on the Insite model in Vancouver. Insite is a large, free-standing site that is not integrated into existing health services. In contrast, many sites in Ontario, for example, were integrated into existing health services, potentially foregoing the need for large capital and overhead costs. The number of booths and hours also varied considerably across sites. The optimal model for each site, and associated costs, are likely best determined on a site-by-site basis.

Another significant limitation is that many evaluations were conducted before the large-scale introduction of fentanyl into the unregulated drug supply and the associated large increases in overdose-related deaths. Other changes, such as the widescale shift from injection to inhalation, may also affect the cost-effectiveness of SCSs and underscore the need for SCSs models to adapt to real-world patterns of drug use. Similarly, HCV treatment costs have increased over time. As such, many of these studies have likely under-estimated the economic benefits of SCSs.

Conclusions

Economic evaluations have consistently concluded that SCSs represent good value for money. This finding is robust across a wide range of studies that used multiple different methods and were conducted in diverse contexts. Of relevance for Canadian jurisdictions, **most of these studies were in Canadian settings, which makes them readily generalizable for Canadian policy.** Nevertheless, the determination that a specific SCS represents a good investment will depend on local patterns of drug use, the composition of the unregulated drug supply, the local epidemiology of HIV, HCV, and skin and soft tissue infections, and the operating costs and characteristics of specific sites. **Because many studies were done before the change in the composition of the unregulated drug supply, the published analyses are likely conservative – that is, they likely underestimate the cost-effectiveness of SCSs in the current context and underestimate the optimal number of SCSs in a jurisdiction. For several jurisdictions, it is likely cost-effective to have multiple sites.**

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