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Safe injection facilities save lives

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Provision of sterile injecting equipment to people who inject drugs has long been a cornerstone of HIV-prevention programmes, with pragmatic public health approaches leading policy development.[1] Cheap, effective, and safe needle-and-syringe exchanges and related approaches to the reduction of drug-related harms have impressive records of success in reducing morbidity and mortality, controlling disease spread, and facilitating access to other health services for people who use drugs.[2–4] But these approaches have proven difficult to implement in multiple settings, largely because of political, legal, and moral objections.[1] Supervised injection facilities have faced similar challenges,[5] and to see why is not difficult. Such facilities are a logical progression from other harm-reduction measures. By providing people who inject with safe and medically supervised settings in which to use drugs, these facilities aim to address important health issues beyond the provision of equipment: reduction in sharing, safe disposal of used equipment, and, most crucially, the opportunity to reduce drug-overdose fatalities.

Drug overdoses are a major cause of morbidity and mortality in people who inject heroin or other opioids.[6,7] Overdoses are also seen in people who inject cocaine and those who use mixed or multiple substances. In *The Lancet*, Brandon Marshall and co-workers[8] report a reduction in overdose mortality rates associated with North America's first safe-injection facility. Results of their population-based assessment are impressive: an overall 35% reduction in overdose fatalities in the affected community. But the political battle about this facility has been intense, and is by no means over.[5,9] The Conservative Government of Steven Harper has appealed a lower court ruling, which affirmed the facility's right to exist, to Canada's Supreme Court, which will hear the case in May, 2011. Let us hope evidence prevails.

How strong is the evidence for the reduction in mortality reported by Marshall and colleagues? It could be argued that the findings were the result of an observational assessment rather than those from a randomised trial. This point is important, because a randomised trial was deemed to be unethical in this instance.[10] But, in the emerging domain of implementation science, also known as operational research, programme assessments in public health are increasingly being done and reported with methods other than controlled trials.[11] The Vancouver group has much experience of working with those at risk in the city's Downtown Eastside, the high-density area for substance misuse. The group also has an extensive and enviable level of integration with British Columbia's public-sector institutions. Both these factors seem to have been crucial to the success of the assessment. The

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group's intimate knowledge of context—what we might call deep epidemiology—allowed comparison of this community with other districts of the urban core.

Mortality data came from the provincial coroner's registry of all unnatural or unexplained deaths.[8] (The median age of overdose death in British Columbia was 40 years, so the years of productive life lost are substantial.) With coroner's data on mortality throughout the observational period, census data, and a careful assessment of distance from the facility based on usage data from another study, Marshall and co-workers constructed a person-years-at-risk analysis of overdose mortality. Although a modest but not statistically significant reduction was noted across the census tracts in the study period in areas that were distant from the supervised injection facility, a statistically significant fall of 35% (p=0·048) was observed in those census tracts within 500 m of the facility. For public health interventions for which randomised trials might be unfeasible, unethical, or otherwise unlikely to take place, findings from well-done implementation science are arguably the highest attainable standard of research that we might achieve. Furthermore, when mortality is the outcome, as it was in this observational assessment, these results might be sufficient for sound and timely decision making.

This intervention also has a human-rights dimension, as does the legal controversy now surrounding it. A lower-court decision in favour of the supervised injection facility argued that closing the site would undermine Canada's Charter of Rights and Freedoms to life, liberty, and security of the person.[5] Marshall and colleagues' report adds credence to this argument, because an intervention that reduces preventable deaths from overdose certainly helps to realise the rights to life and to security.

Supervised injection facilities clearly have an important part to play in communities affected by injection drug use. They should be expanded to other affected sites in Canada, on the basis of the life-saving effects identified in Vancouver. Moreover, such facilities should be taken to scale more broadly—wherever drug overdoses are a substantial cause of preventable losses of life. That such a move will be politically fraught in other settings is virtually assured. All the more reason, then, to begin action now.

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I declare that I have no conflicts of interest.

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Stillbirths: breaking the silence of a hidden grief

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A baby is born dead. A mother, who has waited many months to hold the child she has felt growing and taking form inside her, cradles a lifeless body. A father, who has been anticipating the joy of the birth and a future for his child, is faced with death. The extraordinary journey that they have all been on together through months of pregnancy comes to a shattering and heartbreaking end.

Across the globe, around 3 million babies are stillborn every year—more than 8200 babies a day. These are shocking statistics, but there is also a shocking lack of awareness that it is happening. There are twice as