

DRUG & ALCOHOL FINDINGS *Research analysis*

This entry is our analysis of a study considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original study was not published by Findings; click [Title](#) to order a copy. Free reprints may be available from the authors – click [prepared e-mail](#). The summary conveys the findings and views expressed in the study. Below is a commentary from Drug and Alcohol Findings.

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► Syringe disposal among people who inject drugs before and after the implementation of a syringe services program.

Levine H., Bartholomew T.S., Rea-Wilson V. et al.
Drug and Alcohol Dependence: 2019, 202, p. 13–17.

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Did Florida's first needle exchange programme result in fewer items of used injecting equipment being left in public places? The answer comes from a walkthrough of Miami neighbourhoods and interviews with people who inject drugs before and after the programme opened its doors.

SUMMARY A number of public health interventions have been created with the aim of minimising the unsafe disposal of used injecting equipment, including needle and syringe programmes, overdose prevention sites, passing state legislation designating pharmacies as permissible sites for people who inject drugs to access and properly dispose of syringes, and the provision of sharps containers to people who inject drugs.

In July 2016 the Florida Legislature passed the Infectious Disease Elimination Act, authorising Florida's first legal needle and syringe programme in response to reports of discarded syringes in public places, a rising rate of HIV, high rates of healthcare spending related to injecting drug use, and an increase in opioid-related deaths.

The featured study evaluated the impact of this needle and syringe programme by comparing the scale of the problem of discarded syringes in Miami neighbourhoods before and after the programme was established. Two key methods were employed:

- **Neighbourhood walkthroughs.** Researchers conducted visual inspections of a sample of neighbourhoods in order to count discarded syringes. Geographical regions called 'census block groups' were sorted by number of drug-related arrests, using data provided by the Miami Police Department. From the quarter of census block groups with the highest number of drug-related arrests, 775 were selected at random for inclusion in the study, and visual inspections were conducted in all publicly-accessible areas, including sidewalks, alleys, parks and parking lots. All syringes that were found during the walkthroughs were photographed and their coordinates mapped (or 'geocoded') via mobile phone. Walkthroughs occurred from July to December of 2009 and August to December of 2018.
- **Surveying people who inject drugs.** Researchers surveyed people who inject drugs in Miami via face-to-face interviews at two time points: pre-implementation in 2009 (448 respondents); and post-implementation in 2018 (482 respondents). People were eligible to participate if they were 18 years or older and had injected illicit drugs in the previous 12 months. There was a change in the demographics of people surveyed in 2009 and 2018. An analysis of the characteristics of participants indicated that the 2018 cohort was significantly more likely than the 2009 cohort to report current homelessness (84% vs. 50%).



Key points From summary and commentary

Without access to safe syringe disposal locations, people who inject drugs have few options and may leave their used injecting equipment in public places.

The featured study aimed to compare syringe disposal practices before and after Florida's first legal needle and syringe programme was established in 2016.

A walkthrough of Miami neighbourhoods indicated a 49% decrease in unsafe disposal after the needle and syringe programme was opened.

Main findings

A total of 149 syringes were found in Miami in 2018 compared to 328 in 2009, representing a 49% decrease in syringes found in public areas after the needle and syringe programme was established. The number of syringes found decreased from 4.9 per 1,000 people to 1.2 per 1,000 people in 2018, representing a 75% decrease after the implementation of the needle and syringe programme.

Based on the survey, people who inject drugs in 2018 were significantly less likely to report any improper disposal of syringes (70% vs. 97%) than in 2009. After the needle and syringe programme was established, 39% of people who inject drugs reported disposing their syringes using this service.

Participants in 2018 were significantly less likely to report disposing of syringes in public places (49% vs. 69%) and in rubbish bins (31% vs. 66%) compared to participants in 2009. They were also significantly more likely to dispose of syringes in a sharps container (15% vs. 4%) and to sell or give away syringes (23% vs. 13%).

There was a substantial difference in the proportion of syringes improperly disposed of in the past 30 days in 2009 (95%) versus 2018 (25%):

- In 2009, 334 (3%) syringes were disposed of in a sharps container.
- In 2018, 17,914 (57%) syringes were disposed of in a needle and syringe programme and 5,029 (16%) were disposed of in a sharps container.

The authors' conclusions

A walkthrough of Miami neighbourhoods before and after Florida's first needle and syringe programme was established revealed a considerable decrease in syringes being disposed of unsafely. While it is possible that this study method undercounted the number of publicly-discarded syringes in 2018 – a time when areas of Miami might have been 'cleaned up' as they were becoming gentrified – additional confidence in the findings comes from: (1) the findings being corroborated by the survey of people who inject drugs; and (2) the selection of areas most affected by drug use being driven by Miami Police Department data.

A limitation of the study is that other factors could have contributed to better syringe disposal practices over the nearly ten-year study period.

FINDINGS COMMENTARY Needle and syringe programmes are the [cornerstone](#) of harm reduction in the UK. The primary intervention for reducing injecting-related transmission of hepatitis C and other blood-borne viruses, they work by providing people who inject drugs with sterile injecting equipment, as well as infection-prevention and support services (1 2). They also seek to mitigate the environmental effects of public injecting, including used injecting equipment being left in public places.

The featured study conveyed the positive impact of giving people who inject drugs a safe place to dispose of injecting equipment. Not only did the total number of discarded syringes and number of discarded syringes per 1,000 people decrease between 2009 and 2018, but people who inject drugs were significantly less likely to report disposing of syringes in public places and rubbish bins, and significantly more likely to dispose of syringes in a sharps container.

An [earlier study](#) by the same group of researchers exploited policy differences between two US cities, San Francisco and Miami, to test whether needle and syringe programmes could help reduce the number of used needles and syringes being left unsafely in public places. In 2008 and 2009 when the study was conducted, San Francisco had four dedicated needle and syringe programmes and pharmacies were able to provide up to 10 syringes without a prescription, whilst needle exchanges were still illegal in Miami. Some public areas in Miami had large numbers of discarded syringes, with four areas having over 10 syringes according to visual inspections. Overall, people who inject drugs in Miami were on average 34 times more likely to leave syringes in public places than those in San Francisco. However, looking not just at public places, but all unsafe disposal including in the rubbish, there was much less difference in the total number of syringes reportedly disposed of unsafely.

In Victoria (Canada), political conditions were such that a natural experiment could be created around the withdrawal of a needle exchange service rather than, in the featured study, the opening of a needle exchange service. Until June 2008, Victoria had a comprehensive extended hours needle exchange at a fixed site in the city, when neighbourhood pressure led to closure. A study [investigated](#) the consequences of the closure – contrasting trends in the sharing of injecting equipment before and after the closure with what happened during the same period in Vancouver which had no such disruption in services. Though not statistically significant, in Victoria the proportion having shared injecting equipment rose from 9.5% in early 2008 just before the closure to 20% in late 2010, while in Vancouver the proportion remained relatively steady at under 10%.

Injecting in public places is a high-risk practice associated with an inability to inject in a sterile way, both due to unhygienic environments and difficulty maintaining personal hygiene, *and* hasty, unsafe injecting practices due to the threat of being seen by the public or police. Drug consumption rooms seek to offer an alternative, [providing](#) hygienic and supervised spaces for people to inject or otherwise consume illicit drugs. When counted at the [end of 2018](#), there were 117 sanctioned drug consumption rooms in 11 countries around the world – some [introduced](#) primarily in response to the “public harms” of public injecting (eg, environmental impact of publicly-discarded syringes), and others primarily in response to “private harms” (eg, overdose deaths and blood-borne viruses).

Compelling evidence about the impact of drug consumption rooms on litter and public disorder comes from Vancouver (Canada), where acceptance of the facility among residents and workers [had been generated](#) by the distressing sight of public injecting and injecting-related litter, and despite a large local needle exchange, risky injecting, disease and overdose deaths had remained high. After the facility opened there was a [significant reduction](#) in people seen injecting in public places from a [daily average](#) of 4.3 to 2.4. Also roughly halved were discarded syringes and injecting-related litter in the surrounding area. In Barcelona a [fourfold reduction](#) was reported in the number of unsafely disposed syringes being collected in the vicinity of safer injecting facilities from a monthly average of over 13,000 in 2004 before they opened to around 3,000 in 2012 after they opened ([source paper](#) in Spanish).

What makes drug consumption rooms distinct from and more disruptive than other harm reduction approaches such as needle exchanges, is that they employ staff who *bear witness* to illicit drug use, as opposed to staff who advise and provide resources but are ultimately absent for the act of drugtaking. This enables the dissemination of specific (rather than generic) harm reduction advice [based on](#) direct observation of “consumption patterns, risky dosages and improper handling of equipment”. For more information on the arguments and evidence for and against drug consumption rooms, see the Effectiveness Bank [hot topic](#), “Time for safer injecting spaces in Britain?”

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