Early findings from novel methods of surveillance for novel synthetic opioids and other psychoactive substances within Supervised Injecting Facilities

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Introduction: Australia is yet to see consistent signals of fentanyl-contaminated heroin, despite widespread emergence in other countries. Since 2017, we have monitored for fentanyl through urinalysis of samples from people who inject heroin. This study aimed to extend this work to monitor for fentanyl and other novel psychoactive substances (NPS).

Methods: We tested two new methods of monitoring for fentanyl in the illicit drug market. (1) Drug checking with fentanyl test strips (FTS) with laboratory confirmation, paired with surveys on perceptions of drug checking with clients from the Sydney Safer Injecting Facility (SIF). (2) Laboratory testing of injecting equipment associated with opioid overdoses that required naloxone at the Sydney and Melbourne SIFs.

Results: Drug checking with FTS (n=40) showed four positive FTS results, with two able to be sent to the laboratory where they were both classified as false positives. Survey results (n=35) indicated greater support for drug testing if completed after rather than before drug use (p=0.013, Fischer's exact test). Equipment testing occurred following 37 overdoses that required naloxone, with heroin or compounds involved in heroin manufacture identified in all of these samples. Fentanyl and other NPS were not identified in any samples following overdose.

Conclusion: In the context of few signs of fentanyl-contaminated heroin and the high FTS false positive rates in our study, the role of routine FTS drug checking and syringe testing is unclear. This could change rapidly should signals of increased prevalence of fentanyl emerge.

Implications for Translational Research: False positives with FTS remain a concern, yet findings from this research can inform the feasibility and development of a rapid response should signals of fentanyl in the heroin market emerge in Australia. Understanding the drivers of false positives, such as adulterants, may aid with test interpretation.

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