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AMONG PEOPLE WHO REGULARLY INJECT OPIOIDS IN SYDNEY AND MELBOURNE**

Journal title; **DRUG AND ALCOHOL REVIEW**

First published: **01 Nov 2021**

which has been published in final form at

<https://onlinelibrary.wiley.com/doi/DOI: 10.1111/dar.13384>

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Limited evidence via urinalysis of unintentional fentanyl use among people who regularly inject opioids in Sydney and Melbourne

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Introduction and Aims: Given high numbers of deaths from fentanyl analogues in North America, this study aimed to monitor unintentional fentanyl consumption in Australia.

Design and Methods: Clients from two medically supervised injecting facilities who used heroin within the past two days completed rapid urine drug screens (UDS) paired with surveys (n=861). Samples were screened using BTNX Rapid Response™ fentanyl urine strip tests with a norfentanyl detection level of 20 ng/mL, and cross-reactivity to numerous fentanyl analogues. Test strip positive and negative samples (i.e. controls) were then analysed using liquid chromatography coupled with tandem mass spectrometry. There were nine waves of data collection in Sydney (n=355, 2017-2020), and seven in Melbourne (n=506, 2018-2020).

Results: Participants were demographically similar to the overall client base (median age 43, 72% male). Two-percent reported intentional use of fentanyl, mostly through fentanyl patches. Of the 861 rapid UDS conducted, 17 yielded positive results. Eight of these (all from Melbourne) were not explained by self-reported fentanyl use in the past three days. Of these eight UDS positives, confirmatory laboratory analysis was conducted on six, with four deemed to be false positives, and two confirmed for the presence of fentanyl. This represents the first confirmation of unintended use of fentanyl type substances in this cohort.

Discussions and Conclusions: We found limited evidence of unintentional fentanyl use amongst people who regularly inject heroin, suggesting that at this point in time, there appears to be very little fentanyl in the Australian drug market.

Implications for Practice or Policy: This study demonstrates the feasibility of quick onsite testing to cost-effectively screen large samples for fentanyl; however the high false positive rate emphasises the need for confirmation of positive tests through advanced analytical techniques. Ongoing UDS could continue as an early-warning strategy to monitor for unexpected fentanyl in the heroin market.