

Acceptability of prospective wearable biosensors as an overdose intervention tool among two samples of Australians who regularly use illicit drugs

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Introduction: *There has been an increase in drug-related deaths globally. While efforts to reduce fatal overdoses have expanded, they typically rely on witnesses being present when overdoses commonly occur alone. Wearable biosensors represent a field of emerging technologies with potential to overcome limitations of current overdose responses. This study aims to investigate the acceptability of specific design features of a prospective wearable biosensor device (e.g., a wristband) as an overdose intervention tool.*

Methods: *Australians who regularly (\geq monthly) use ecstasy and/or other illicit stimulants (N=708; Ecstasy and Related Drugs Reporting System (EDRS)) or inject illicit drugs (N=820; Illicit Drugs Reporting System (IDRS)) were surveyed between April-June 2023. Participants were asked about likelihood to wear a device with features including: health alerts to the wearer, alerts to a nominated friend or family member during overdose, alerts to emergency services during overdose, and automatic naloxone delivery during overdose. They were also asked about concerns or reasons for not using such a device.*

Results: *One-third of IDRS respondents were unlikely to accept any features; 35% accepted all features, and 32% had mixed acceptance. One-quarter (27%) of EDRS respondents were unlikely to accept any features; 34% accepted all features, and 39% had mixed acceptance. Alerts to the wearer was the most accepted feature (58%-62%), while automatic naloxone delivery was the least (50%-54%). Data privacy was the most commonly reported concern across both samples (21-26%).*

Discussions and Conclusions: *Findings suggest that wearable biosensors were broadly accepted as overdose intervention tool, but design features and privacy concerns may influence uptake.*

Implications for Practice or Policy: *Wearable biosensors have the potential expand harm reduction solutions. To optimise uptake, they should be co-designed with people who use drugs to ensure their needs and concerns are addressed.*

Disclosure of Interest Statement:

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