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Drug checking interventions can track the nature and size of the discrepancy between self-report and actual drugs consumed

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Miller et al.'s paper 'Drug use in Australian nightlife settings: Estimation of prevalence and validity of self-report' (1) contributes to enhancing drug trend monitoring techniques by validating self-reports of drug use in nightlife settings with oral swabs. Table 3 of Miller et al. shows large discrepancies between self-reported drug use pre-interview and oral swab test results. For example, of the 101 participants reporting methamphetamine use pre-interview, only 48 (48%) returned a positive oral swab test for methamphetamine. Conversely, 123 (66%) of participants who reported prior consumption of meth/amphetamine, cocaine, opiates, cannabis or benzodiazepines and were swabbed (n=186) did not return a positive oral swab test.

How can we interpret these findings? Miller et al. report that these results suggest that "self-reported drug use may not be reliable in this context" (1, p. 1). While it is true that nightlife attendees may not have reported their drug use accurately, the oral swab test (designed for roadside screening for recent use of five drug classes) may also be unreliable in this context (2). Miller et al. also argue that these discrepancies reflect "a potential lack of knowledge of the drug that is being used" (1, p. 7). Given the increasing global availability of novel or new psychoactive substances (NPS) (3), and the ease with which NPS may be misrepresented as better-known drugs, consumers may have been using substances other than those detectable by the swab test.

Miller et al. note that drug checking or pill testing offers a potential response to this problem because it allows consumers to identify what substance they are taking. They then dismiss drug checking as unable to determine the chemical structure of a substance on-site due to its reliance on colour reagent testing. To make this point, Miller et al. refer to two studies, both over a decade old (4, 5).

A review of the more recent literature shows more sophisticated techniques are now available for on-site testing. For example, in Switzerland (6), field laboratories with high pressure liquid chromatography capacity provide quantitative results while the client engages in a brief intervention. In Spain and Portugal (7, 8), drugs are tested

on-site with thin layer chromatography (TLC) or gas chromatography-mass spectrometry (GC-MS). Furthermore, drug checking does not need to be limited to on-site testing. For example, in the Netherlands, off-site testing is incorporated into the drug monitoring system using colour reagent tests confirmed by laboratory tests including TLC and GC-MS as indicated (9).

As we have argued elsewhere (10), drug checking services can provide important information about drug market trends; that is, they can tell us the nature and size of the discrepancy between what people think they are taking and what they are actually taking. Recent reports of clusters of seriously drug-affected patients overwhelming the resources of Australian hospitals after taking unidentified substances demonstrates the importance of this information for informing public health responses (10, 11). Contemporary drug checking does have a place in drug monitoring, while also providing much-needed opportunities for harm reduction.

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