

Recent use of 'capsules contents unknown' among a sample of people who frequently use ecstasy and other illicit stimulants in Australia

Authors: Georgia Kelly, Raimondo Bruno, and Amy Peacock
National Drug and Alcohol Research Centre, UNSW

Key findings:

- One in five participants (18%) in the 2018 EDRS reported recent (i.e., past six month) use of capsules contents unknown, an increase from lowest use reported in 2015 (7%; 10% in 2013 when monitoring first began).
- An increase in use of capsules contents unknown was recorded in most jurisdictions from 2013 to 2018. In 2018, 36% of the Tasmanian sample reporting recent use of capsules contents unknown, compared to 12% in the New South Wales and Queensland samples.
- In 2018, people who had used capsules contents unknown did so infrequently (median 2 days in past six months) and most (62%) reported using one capsule in a typical session.
- Without objective data on content, all drug consumption can essentially be considered use of an unknown substance. Whilst there are indications that people may modify their behaviour to reduce risk of harm (e.g., reduced quantity and frequency of capsules compared to where sold as a particular drug such as ecstasy), this trend raises concern regarding risk of harm.
- Future data collection will evaluate broader use of substances without communication of likely contents when sold, and adverse health events associated with use.

Background:

- People who use illicit drugs rely on the people who supply these substances as a primary source of information of the likely contents of the substance [1], particularly in the absence of drug checking facilities which provide objective data on contents. This information informs expectations of likely effects and implementation of harm reduction strategies (e.g., checking interactions with other drugs, dosing) by an individual to reduce risk of experiencing harm [2-3].
- Anecdotal reports in various jurisdictions in 2011/12 suggested a growing trend of purchasing 'capsules contents unknown' (i.e., where there is no exchange of information regarding likely contents of the capsule).
- These reports occurred at a time when data from people who use ecstasy and other illicit stimulants indicated that use of ecstasy capsules nationally was increasing (and use of ecstasy pills beginning to decline) [4].
- Number of new psychoactive substances (NPS) identified also proliferated in this period, and reports of consumption of NPS (including stimulant NPS such as mephedrone often sold in capsules) was growing [4].
- Use of 'capsules contents unknown' thus has caused significant concern with respect to the wide variety of substances that might be contained within, and elevated risk of harm.

Aims:

The aims of this bulletin are to explore:

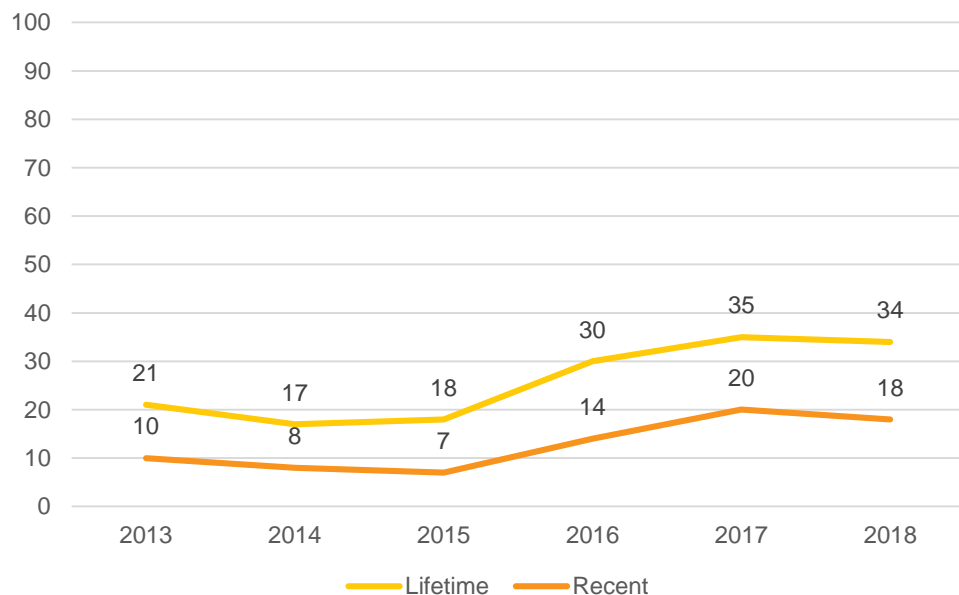
1. National and jurisdictional trends in use of 'capsules contents unknown' among a sentinel sample of people who regularly use ecstasy and other illicit stimulants.
2. Trends in quantity and frequency of use, as well routes of administration, amongst this group.

Method:

- Data were obtained between 2013-2018 from the Ecstasy and Related Drugs Reporting System (EDRS) interviews.
- Annual interviews are conducted in each capital city with a sentinel sample of people who regularly use ecstasy and other stimulants recruited through social media and word-of-mouth. Full details of the [methods for the annual interviews](#) are available for download.
- The structured face-to-face interviews include items on a range of topics; this bulletin is focused on recent (past six month) consumption of 'capsules contents unknown' (i.e., where no information is communicated regarding likely contents).

Results:

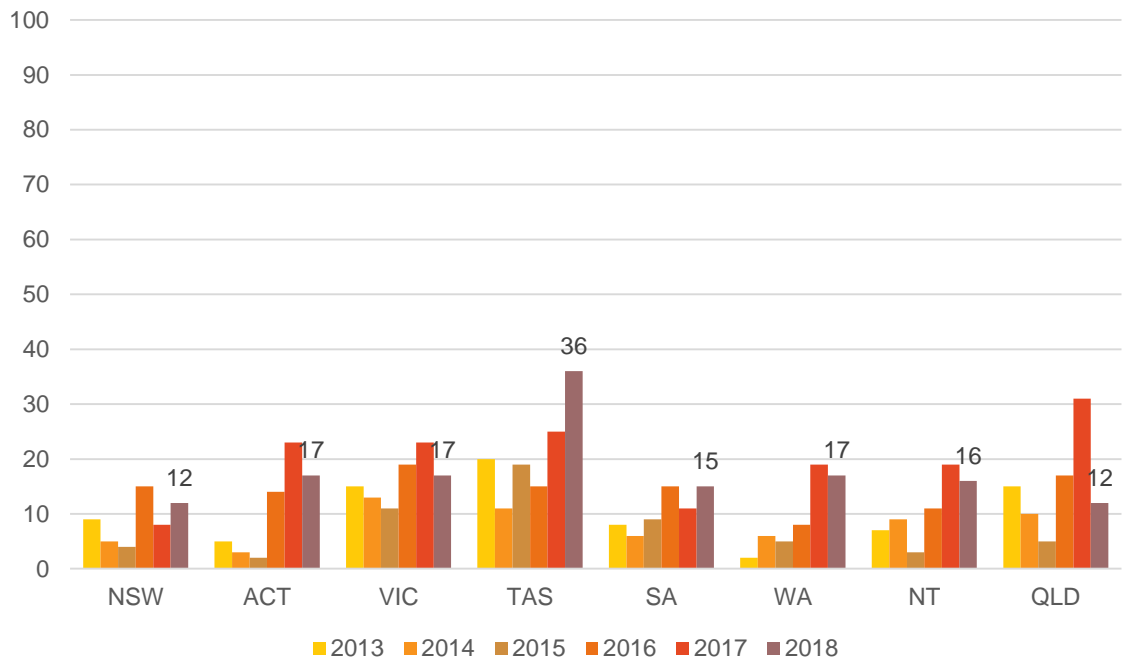
Figure 1. Recent (past six month) and lifetime use of 'capsules contents unknown', nationally, 2013-2018



Recent and lifetime use:

Figure 1 shows that the percentage of participants reporting recent and lifetime use followed a similar trend, with the highest rate of consumption in 2017 at 20% and 35% respectively. Recent use of capsules contents unknown increased from 7%-10% in 2013-2015 to 20% in 2017, with 18% reporting recent use in 2018. Lifetime use increased to 35% in 2017 from 18-21% in 2013-2015 (34% in 2018).

Figure 2. Recent use of 'capsules contents unknown', by jurisdiction, 2003-2018



Recent use by jurisdiction:

Figure 2 demonstrates the trend over time in the recent use of capsules with unknown contents across each of the jurisdictions. The percentage reporting recent use in all jurisdictions except Queensland have increased from 2013, when the questionnaire item was first introduced to EDRS. Tasmania in particular has demonstrated a sharp increase in the rate of consumption, from 11% in 2014 to 36% in 2018. In 2018, recent use was highest in Tasmania (36%) and lowest in New South Wales (12%) and Queensland (12%).

Table 1. Patterns of past six month use of capsules contents unknown, nationally, 2013-2018

	2013 (n=69)	2014 (n=63)	2015 (n=53)	2016 (n=113)	2017 (n=156)	2018 (n=142)
Frequency						
Median days of consumption	2 (IQR 1-4)	2 (IQR 1-2)	2 (IQR 1-2)	1 (IQR 1-2)	2 (IQR 1-3)	2 (IQR 1-2)
% Weekly or more frequent consumers	1%	3%	0%	1%	1%	1%
Quantity (per session)						
Median capsules in a typical session	N/A	N/A	N/A	1 (IQR 1-2)	1 (IQR 1-2)	1 (IQR 1-2)
% ≥2 capsules in an average session	N/A	N/A	N/A	28%	22%	38%
Median capsules in maximum session	N/A	N/A	N/A	1 (IQR 1-2)	1 (IQR 1-2)	1 (IQR 1-2)
% ≥2 capsules in a maximum session	N/A	N/A	N/A	36%	30%	50%
Route of administration						
% Swallowed	89%	94%	87%	92%	92%	97%
% Snorted	11%	14%	15%	14%	14%	12%
% Inject	0%	0%	0%	0%	0%	0%
% Smoke	0%	0%	0%	0%	1%	0%
% Shelve	N/A	N/A	N/A	0%	1%	1%

Patterns of use:

Table 1 shows that, across the years, participants have typically reported using capsules with contents unknown for a median of 2 days in the past six months. Very few participants report weekly or more frequent use of capsules with contents unknown.

While the median number of capsules with unknown contents consumed at a given time has remained consistent, there has been an increasing number of participants reporting use of more than one capsule at a time. This number increased from 28% in 2016 to 38% in 2018, with earlier years not reporting on this item.

There is consistency in the primary route of administration amongst consumers across the years, with approximately nine in ten reporting swallowing and just over one in ten each year report snorting.

Discussion:

The percentage of the EDRS sample reporting recent use of 'capsules contents unknown' increased from 2013 to 2018. This trend coincides with an increase in the use of ecstasy capsules (50% in 2013 to 72% in 2018) among the EDRS sample, simultaneous to a decline in the consumption of ecstasy pills (100% in 2003; 78% in 2017; 75% in 2018). The current findings could indicate a preference in the form of substance (i.e., for capsules), noting that EDRS participants report perceived greater purity of ecstasy crystal and capsules over pills .

Within the population of participants who reported use of capsules contents unknown, 85% also reported using ecstasy capsules. However, the median number of capsules consumed in a typical session was less for capsules contents unknown (median one capsule in a typical session of use) than ecstasy capsules (median two capsules) [4]. In addition, the median number of days of ecstasy capsule consumption in the past six months was six days, while median frequency of capsules with unknown contents was two days [4]. This indicates that in the absence of information regarding the likely contents of a substance, people who use these drugs may take precautionary measures to reduce risk (i.e., lower quantity and frequency of use).

The increase in the use of capsules with unknown contents is of particular concern as the illicit drug market is unregulated and is continually evolving with new psychoactive substances which often have greater potency than traditional drugs [5-6]. In the absence of substance checking services, it is pivotal for consumers to engage in information exchange regarding their (likely) substance to implement harm reduction methods such as a decrease in frequency or quantity of consumption [7]. Research into the demographics of people who use capsules with unknown contents (or other substances in the absence of communication of likely contents) could be conducted to identify target populations for messaging around harm reduction, as well as broader practices and harms from consuming substances in the absence of communication regarding likely content.

Suggested citation:

Kelly, G., Bruno, R., & Peacock, A. (2019). Recent use of 'capsules contents unknown' among a sample of people who frequently use ecstasy and other illicit stimulants in Australia. Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.

References:

1. Jacinto C, Duterte M, Sales P, Murphy S. Maximising the highs and minimising the lows: Harm reduction guidance within ecstasy distribution networks. *International Journal of Drug Policy*. 2008;19(5):393-400.
2. Seetohul LN, Pounder DJ. Four Fatalities Involving 5-IT. *Journal of Analytical Toxicology*. 2013;37(7):447-51.
3. Wood DM, Button J, Lidder S, Ramsey J, Holt DW, Dargan PI. Dissociative and sympathomimetic toxicity associated with recreational use of 1-(3-trifluoromethylphenyl) piperazine (TFMPP) and 1-benzylpiperzine (BZP). *Journal of medical toxicology : official journal of the American College of Medical Toxicology*. 2008;4(4):254-7.
4. Peacock A, Gibbs, D., Karlsson, A., Uporova, J., Sutherland, R., Bruno, R., Dietze, P., Lenton, S., Alati, R., Degenhardt, L., & Farrell, M. Australian Drug Trends 2018: Key findings from the National Ecstasy and Related Drugs Reporting System (EDRS) Interviews. Sydney: National Drug and Alcohol Research Centre, University of New South Wales; 2018.
5. Tyndall JA, Gerona R, De Portu G, Trecki J, Elie M-C, Lucas J, et al. An outbreak of acute delirium from exposure to the synthetic cannabinoid AB-CHMINACA. *Clinical Toxicology*. 2015;53(10):950-6.
6. Adams AJ, Banister SD, Irizarry L, Trecki J, Schwartz M, Gerona R. "Zombie" Outbreak Caused by the Synthetic Cannabinoid AMB-FUBINACA in New York. *New England Journal of Medicine*. 2016;376(3):235-42.
7. Fitzgerald JL. Mapping the experience of drug dealing risk environments: An ethnographic case study. *International Journal of Drug Policy*. 2009;20(3):261-9.

Acknowledgements:

The following researchers and research institutions contribute to EDRS:

- Dr Rachel Sutherland, Ms Antonia Karlsson, Ms Julia Uporova, Ms Daisy Gibbs, Ms Georgia Kelly, Professor Louisa Degenhardt, Professor Michael Farrell, and Dr Amy Peacock, National Drug and Alcohol Research Centre, University of New South Wales;
- Ms Amy Kirwan, Ms Cristal Hall and Professor Paul Dietze, Burnet Institute Victoria;
- Ms Callula Sharman and Associate Professor Raimondo Bruno, School of Medicine, University of Tasmania;
- Ms Jodie Grigg and Professor Simon Lenton, National Drug Research Institute, Curtin University, Western Australia;
- Dr Caroline Salom, Institute for Social Science Research, The University of Queensland.
- We would also like to thank past and present members of the research team.

Other acknowledgements:

- The people who regularly use ecstasy who participated in the EDRS surveys.