Foundation for Alcohol Research and Education (FARE) – responses to questions on notice

1. Recommendations for groups and individuals that should be involved in a regulatory roundtable for festivals.

FARE recommends that any Regulatory Roundtable created to consult on liquor regulation, including the regulation of music festivals, has a strong representation from the health sector, including experts in public health and alcohol harm.

We recommend that the Committee consult with and recommend the inclusion of the following individuals on the Regulatory Roundtable:

- Dr Cailtin Hughes, National Drug and Alcohol Research Centre, University of NSW. Dr Hughes' prime focus is improving understanding of the effects of different legislative regimes and law enforcement approaches to drugs and alcohol. Her current research is looking at festival safety, drug-related policing in Australia and 30 other countries, and models for decriminalisation, diversion and depenalisation.
- Dr Claire Wilkinson, National Drug and Alcohol Research Centre, University of NSW. Dr Wilkinson's research focuses on preventing alcohol-related harms using public health, public policy and implementation science. Her current research is looking at alcohol cultures, alcohol availability trends, community impact of liquor licences, and the use of licensing and planning legislation to limit alcohol harm.
- Associate Professor Jason Ferris, Program Leader Research and Statistical Support Service (RASSS), Program leader Substance Use and Mental Health, Faculty of Medicine, University of Queensland. Advisory Council Member Queensland Mental Health Commission and member Queensland Festival Safety Coalition
- Professor Peter Miller, Professor of Violence Prevention and Addiction Studies at the School of Psychology, Deakin University. Peter is a leading expert on violence prevention, alcohol-related violence and late-night venues and precincts.

In addition to those outlined above, we would also recommend that a number of representatives from the NSW/ACT Alcohol Policy Alliance (NAAPA) be included in the Regulatory Roundtable, including but not restricted to:

- Australian Medical Association of NSW
- The Royal Australasian College of Physicians
- Australasian College of Emergency Medicine
- The Police Association of NSW
- The Australian Health Promotion Association

We support the involvement of the peak bodies from the music sector, festivals and local government, as well as NSW Health and Police.

Members of the alcohol industry should be excluded from the Regulatory Roundtable. FARE supports the position of the World Health Organization, that the "alcohol industry has no role in the formulation of alcohol policies".[1]

2. Clarification surrounding the recommendations for the *Gaming and Liquor Administration Amendment (Music Festivals) 2019*.

The CHAIR: With regard to the FARE submission, in recommendation 3 you say that the Regulation Committee should recommend the removal of the amendments made to the Gaming and Liquor Administration Regulation 2016 and the Gaming and Liquor Administration Amendment (Music Festivals) Regulation 2019. Pretty much you are saying that you want us to repeal those regulations.
Ms HEPWORTH: They should be the ones that pertain to the administrative review.
The CHAIR: I wanted to clarify that because I think that is where the Hon. John Graham may have been heading.
Ms HEPWORTH: We can exactly clarify the wording we put into that submission and check that there has not been a typo that has slipped in somewhere.
The CHAIR: That would be good.
The Hon. CATHERINE CUSACK: Are you saying that you have not been given the rationale and therefore you do not think it is necessary or are you actually saying that it has to be taken out? Are you opposed to it or do you just not support it?
Ms HEPWORTH: As a matter of principle, we would say that any decision taken by Liquor & Gaming should be subject to administrative review. That is our default position. There may be a fantastic reason that completely escapes me. If that was to come to light then yes, of course we would reconsider our position.
Ms DAY: We will try to find out the answer to that.

FARE wishes to clarify that it does not support the changes made to the *Gaming and Liquor Administration Regulation 2016* by the *Gaming and Liquor Administration Amendment (Music Festivals) Regulation 2019.* We do not seek repeal of the *Gaming and Liquor Administration Regulation 2016.*

We are unaware of any reasoning to explain why decisions made by ILGA in relation to music festival licences should not be subject to review by the Civil and Administrative Tribunal of New South Wales. In the absence of any specific reasoning for the exclusion in this case, as a matter of principle, FARE believes that all administrative decisions should be afforded due process and reviewed if requested by an applicant, local community member, or any other relevant stakeholder This is the process afforded to all other licence types As such FARE recommends the removal of the amendments made to Clause 7 of the Gaming and Liquor Administration Regulation.

Supplementary points

We would like to provide some supplementary information to the Committee in support of our recommendations.

The need for additional research

There is little published research on the harms of alcohol at music festivals. To our knowledge, the recent Global Drug Survey data report, *Australian music festival attendees who seek emergency medical treatment following alcohol and other drug use,* is the most up to date and comprehensive data set of drug harm (licit and illicit) among festival goers. We have attached a copy of the report and corresponding Drug Policy Modelling Program Bulletin (no. 28) for the Committee's reference. Additional research into this area will better allow festival organisers and regulators to manage and prevent alcohol harm at these large events.

It is likely that current research underestimates alcohol presentations to emergency medical treatment (EMT) and total alcohol harm at music festivals. For example, research published by Hutton et al in 2014 (and referenced in the NSW Health Guidelines for Music Festivals) on Australian music festivals, characterises alcohol and drug presentations as 'environmental', and does not record alcohol's impact on presentations in the 'illness' or 'injury', which solely relate to symptoms (e.g. headache, vomiting, sprains).[2] If alcohol-related illness or injury were categorised as being alcohol-related, the incidence of alcohol harm would be significantly higher.

Future research on music festival EMT presentations could draw from the Driving Change study. This study asks all people presenting to emergency departments in participating hospitals around Australia, about their alcohol use and when and where their last drink was.

FARE supports evidence-based policies that address licit and illicit drug use at music festivals. We support initiatives like DanceWize and support opportunities to provide brief interventions about licit and illicit substance use. We recommend that any policies or programs implemented to reduce alcohol and drug harm be evaluated by independent researchers. This will assist in building the evidence-base around harm minimisation at music festivals.

We recommend the Committee speak to the independent evaluation team of the Queensland late-night measures. This team investigated the impact of Queensland's talking alcohol-fuelled violence policies and have written a series of articles in *The Conversation* on their findings:

- Lessons from Queensland on alcohol, violence and the night-time economy
- Tighter alcohol licensing hasn't killed live music, but it's harder for emerging artists
- Queenslanders are among our heaviest drinkers on nights out, and changing that culture is a challenge
- Unwanted sexual attention plagues young women going out at night

While not in the music festival context, we believe there is relevance and lessons to be learnt from harm minimisation measures in night-time economies.

Poly-substance use and risky alcohol use

The Committee asked FARE about the substitution of alcohol for illicit substances. There is no evidence to suggest this is the case. Population level data and music festival specific data indicate a trend of poly-drug use. People engage in risky substance use behaviours concurrently rather than substituting between. Data from the National Drug Strategy Household Survey (NDSHS) shows that nearly 6 in 10 (58%) recent illicit drug users also drank alcohol in risky quantities (either for lifetime or single occasion harm).[3] This population trend of poly-drug use continues in the context of music festivals but with higher rates of risky drinking behaviours. The Global Drug Survey found four in five Australian music festival attendees that seek medical help are consuming an average of 15 standard drinks when using drugs, with most reporting they were 'already drunk' before taking MDMA.

Amendments to the *Liquor Regulation 2018*

We support in principle the introduction of a specific liquor licence for music festivals. We believe there is scope to improve upon the current licences and suggest the following additional amendments be made.

1. The Music Festival Licence should be constructed on a risk-based model

FARE supports the recommendations to establish a festival licence category from the Keeping people Safe at Music Festivals Expert Report (2018), however, we think there should be more than two risk

categories for music festivals. As outlined in our submission, a risk based licensing model should at a minimum include (1) the number of patrons and (2) the length of the festival – taking into consideration hours and consecutive days.

Uncertainty may be reduced if all music festivals with more than 2,000 attendees be subject to a music festival licence. This would avoid uncertainty and inconsistency surrounding who is subject to a music festival licence. This would also allow festival organisers to better anticipate costs and incorporate fees into the budget. Meanwhile lower risk festivals would pay a lower risk licence and would have less onerous Safety Management Plans made in conjunction with NSW Health.

To further incentivise low-risk behaviour, a modified version of the three strikes scheme for violent venues could be applied to music festival licences. Additional loading in the form of increased police and medical personnel could be applied for non-compliant festivals or festivals with previous history of violence and/or high-risk substance use resulting in serious illness or death.

2. Additional special licence conditions on alcohol availability

We support the requirement to develop a Safety Management Plan and support the NSW Health Guidelines for Music Festival Organisers.

In addition to the conditions on the sale and supply of high alcohol content and rapid intoxication beverages, we recommend that a limit on the number of alcoholic drinks that can be purchased at one time also be included in the special licence conditions – no more than four drinks per person. Many festivals do this voluntarily but it should be a requirement within the regulations.

3. Additional special licence conditions on alcohol promotions

We are also concerned that there has been no consideration given to the promotion and marketing of alcohol at music festivals. FARE supports restrictions on alcohol sponsorship and promotions at music festivals due to the increased risk of harm.

The primary purpose of alcohol advertising is to increase sales, thereby increasing the amount of alcohol consumed either by more people or in greater amounts by existing drinkers.[4] There is clear and strong evidence that shows a positive correlation between exposure to alcohol advertising and increased consumption. The more alcohol advertising young people are exposed to the earlier they will begin to drink, and the more they will consume if they already drink.[5]

Health promotion messages are an important harm-reduction strategy, however, the current bombardment of alcohol sponsorship and promotions at festivals significantly reduces the impact of health messages. NSW's biggest music festivals – Tamworth Country Music Festival, Splendour in the Grass, Falls Festival and Bluesfest – are all-age family friendly festivals and all have alcohol companies as their major sponsors.

A recent article in the industry magazine Sponsorship News revealed Splendour in the Grass sponsors achieved record success in 2019 activations, meaning attendees were more likely to use a sponsor's product. [6] About 42,500 people attended the North Byron Parklands festival, and 81 per cent said that sponsor activations at the event made them more likely to use a brand. A further 65 per cent expressed more positive feelings towards them. Four out of five major sponsors of Splendour in the Grass are major alcohol brands – Smirnoff, Captain Morgan, Carlton Dry and Blossom Rose Cider. Activations are a key method for increasing consumption, Smirnoff's in 'The Wilds' activation from last year's festival, partnered with major Australian nightclubs, Captain Morgan delivered events and experiences on its ship precinct activation, and Carlton Dry hosted its

own precinct, creating a world inside a giant inflatable keg. These promotions have strong and evident appeal to young people.

There is clear and overwhelming evidence that alcohol marketing works. In order to minimise alcohol harm at music festivals, regulations must address the availability and promotion of alcohol. FARE supports the removal of alcohol marketing and sponsorship at music festivals. Non-alcohol sponsors are already moving into the festival market, such as Visa, The Iconic and Oppo, and we should continue to promote these healthier partnerships with music festivals.

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1 Chan, M. (2013). Re: Doctors and the alcohol industry: an unhealthy mix? British Medical Journal

2 Hutton, A. et al. (2014). Understanding the Characteristics of Patient Presentations of Young People at Outdoor Music Festivals. *Prehospital and Disaster Medicine*, 29(2): 160-166.

3 National Drug Strategy Household Survey. (2016). Data tables: chapter 4 alcohol and chapter 5 illicit use of drugs.

4 Pan American Health Organization. (2017). Technical note: Background on alcohol marketing regulation and monitoring for the protection of public health. Washington, D.C.: PAHO & WHO.

5 Anderson, P., De Bruijn, A., Angus, K., Gordon, R., & Hastings, G. (2009). Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. Alcohol and Alcoholism (44):229-43.

6 Sponsorship News (2019, 29 July). Splendour sponsors achieve record success in 2019 activations. Accessed 7 August 2019 https://www.sponsorshipnews.com.au/index.php/unauthorise?id=47952&type=article

Australian music festival attendees: A national overview of demographics, drug use patterns, policing experiences and help-seeking behaviour

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Context

The last 12 months has seen ongoing debate and policy activity across Australia about music festival safety, particularly in relation to drug use and drug-related harm. For example, the Australian Capital Territory has conducted its second pill testing trial at an Australian music festival, while New South Wales (NSW) established an Expert Panel on Music Festival Safety that led to a new offence for "drug supply leading to death"; expanded medical service provision on-site at festivals; increased funding for peer educators e.g. DanceWize NSW; and introduced an infringement notice to enable people detected in possession of drugs other than cannabis to pay an on-the-spot fine instead of being arrested and sent to court (NSW Government, 2018). Yet, there remain ongoing gaps in knowledge about the profiles and patterns of drug use and drug-related harms amongst festival attendees in Australia.

The existing research indicates that Australian festival attendees can be at risk of drug-related harms. For example, Lim et al. (2010) analysed the profiles of Melbourne Big Day Out participants over a four-year period and found that participants were more likely to have used illicit drugs than the general Australian population and that drug use was more common among men, older participants and those engaging in high-risk sexual behaviour. Hughes et al. (2017) used a national survey to show that drug law enforcement has a minimal deterrent effect on drug use and supply at Australian music festivals, but that specific modes of policing can lead to more harmful practices such as increasing drug purchasing within festival grounds. Grigg, Barratt & Lenton (2018a, 2018b) showed high rates (48%) of 'double dropping', that is, taking two tablets of Ecstasy/MDMA at once at Western Australian and Victorian festival settings, and how police deployment of drug detection dogs at festivals can increase internal concealment of drugs or hasty drug consumption on site of dogs. Additionally, in-depth interviews with Australian festival attendees revealed the negative social and emotional impacts of being screened by drug detection dogs (Malins, 2019).

The Global Drug Survey (GDS) has explored cross-national patterns of drug use and drug-related harms for the last 8 years (Barratt et al., 2017). GDS first included a question measuring festival attendance at the end of 2018 and led to capture of the largest sample of Australian festival attendees yet analysed. Herein we capitalise on this to provide insight into the national profiles of Australian festival attendees.

Objectives

This bulletin provides an overview of the demographic profiles, patterns of festival attendance and drug use, policing experiences and help-seeking behaviours of 5,155 Australian music festival attendees surveyed in late 2018. Specifically, it outlines:

1. Demographics (age, sex, residence, education, employment, criminal history)
2. Frequency and nature of festival attendance within and outside Australia
3. Frequency of illicit drug use and typical quantities consumed
4. Likelihood and nature of police encounters
5. Emergency Medical Treatment (EMT) seeking and level of interest in reducing drug use

For other information on EMT seeking by Australian festival attendees using the same dataset, including rates of EMT seeking by age and gender, circumstances surrounding EMT seeking and nature of events (including symptoms and hospitalisation) see Barratt et al. (2019).

The data source: 2019 Global Drug Survey

The data for this analysis were drawn from the 2019 Global Drug Survey. The Global Drug Survey (GDS) is the world's largest anonymous, annual web survey of psychoactive substance use: and has now been running for 8 years (see Barratt et al., 2017 for an overview). The survey is widely promoted through global news and media partner websites, social media networks such as Facebook and Twitter, and harm reduction agencies. All participants are self-selected, and all data are self-reported, hence, the results are not representative of the wider population of people who use drugs. But the survey provides a mechanism to recruit large numbers of otherwise hard-to-reach groups across multiple countries (Barratt et al., 2017).

The Global Drug Survey 2019 (GDS2019) ran from November to December 2018 and was open to anyone aged 16 and over who consented to participate. The survey included core modules on patterns of use of alcohol, tobacco, illicit drugs, pharmaceuticals, and new psychoactive substances as well as a new module on festival attendance.[1]

A total of 7,864 Australians participated in GDS2019. Of these 5,155 reported attending festivals in the last 12 months. The rest of the data reported in this bulletin pertains to this sample (n=5,155). Of those who reported their state/territory of residence (N=3,218), 38% reported NSW, 28% Vic, 14% Qld, 11% WA, 5% SA, 3% ACT, 2% Tas and 1% NT. Compared to the distribution of estimated residential population for 15-34 year olds in December 2018 (Australian Bureau of Statistics, 2019), the sample over-represented NSW while underrepresenting Qld, but was otherwise similar in distribution across jurisdictions. One important limitation, albeit common with prior studies such as Lim et al. (2010) is that analysis of drug use and EMT concern behaviour of festival attendees – but are not restricted to practices at festivals themselves.

[1] Respondents to GDS can skip questions if they do not wish to complete specific items. As a result of this format, missing data exist. In this bulletin we use complete case analysis (dropping any cases with missing data for that analysis). Ethics approval for this analysis was obtained by the University College London Research Ethics Committee (11671/001), the University of New South Wales Human Research Advisory Panel (HC17752) and the University of Queensland (2017001452/11671/001).

Demographic profiles: Who is going to Australian music festivals?

As outlined in Table 1, the majority of Australian music festival attendees sampled through the GDS2019 (n=5,155) were young (with a mean age of 22.39), male (54.8%), heterosexual (76%) and white (86.5%). They were well educated, with 42.8% having completed year 12 schooling and a further 29.5% having a university degree. Moreover, 85.6% were employed with full time (40.8%) or part time jobs (44.8%). Just over a third (36.3%) reported ever having been diagnosed with a mental health condition. Despite high levels of illicit drug use (see later section), few reported ever having received a criminal conviction (6.0%).

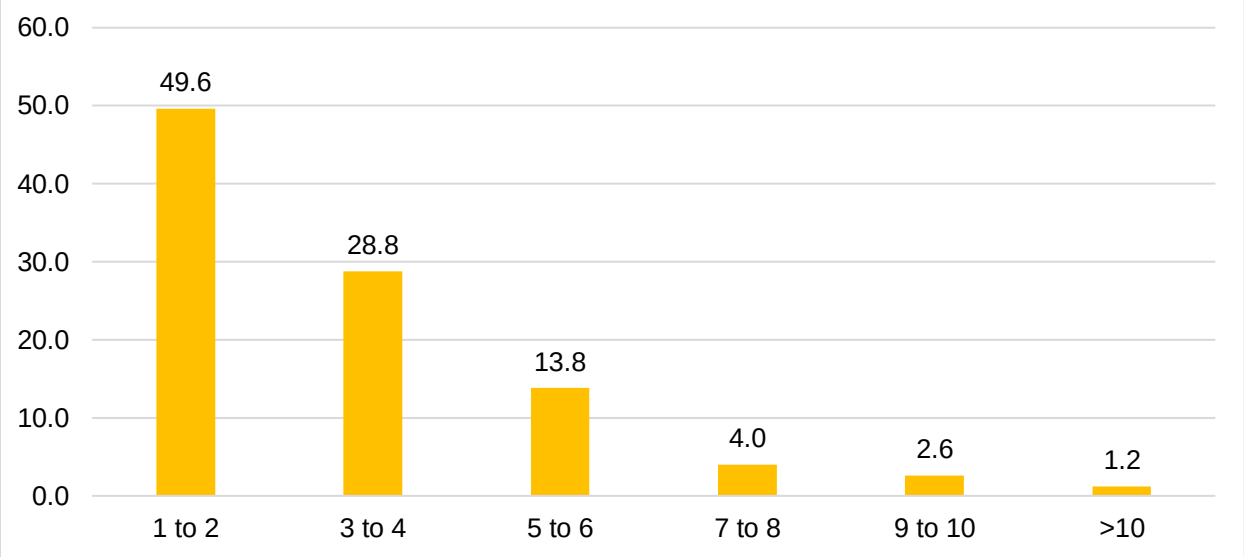
Table 1: Demographics of GDS2019 Australian Music Festival Attendees (n=5,155)

Characteristic	Proportion
Age	Mean: 22.39, SD=6.16. Range 16-70
Gender	54.8% male, 44.3% female, 0.8% non-binary
Residence	73.5% city, 22.2% regional. 4.3% rural/remote
Sexual orientation	76.0% heterosexual, 16.9% bisexual, 7.1% other
Ethnicity	86.5% white, 6.4% mixed, 2.4% Asian, 1.6% Indigenous, 3.1% other
Highest qualification attained	42.8% year 12, 12.9% a college certification, 23.3% undergraduate degree and 6.3% a postgraduate degree
Employment	85.6% paid employment, 7.1% unemployed looking for work, 7.4% unemployed not looking for work
Lifetime history of diagnosis with a mental health condition	36.3%
Lifetime history of a criminal conviction	6.0%

Frequency and nature of festival attendance

It is often assumed that people going to festivals are 'hardcore' or regular attendees, but the GDS2019 data indicate that almost half (49.6%) of the Australian festival attendees reported going to only 1-2 festivals per year. A further 28.8% reported going to 3-4 festivals, 13.8% to 5-6 festivals and 7.8% to more than that (see Figure 1). The majority can thus be deemed infrequent attendees. Most (89.3%) went only to festivals within Australia, but 8.9% reported going to festivals in Australia and abroad, and a further 1.8% only to festivals outside of Australia. When asked about what types of festivals people went to, the most commonly reported were live music with bands (67.7%) and live DJs (60.1%). In contrast, dance festivals (21.1%) and psychedelic festivals (17.2%) were less common.

Figure 1: Number of festivals attended in the last 12 months (% of respondents)



Drug use patterns of Australian music festival attendees

Almost all respondents (99.7%) reported they had used a drug (including alcohol) in the last 12 months and 98.4% reported they used an illicit drug. This reflects the nature of the GDS sample. As outlined in Table 2, the most commonly used drugs amongst these Australian music festival attendees were alcohol, MDMA, cannabis and cocaine, reported by 96.6%, 79.5%, 74.0% and 69.1% of the sample respectively in the last 12 months. But looking at the frequency of use shows that while alcohol consumption was common, with 44.1% reporting using alcohol weekly or more often, and 64.3% having a typical amount of equal to or more than 5-6 standard drinks (defined as a binge amount by the National Health and Medical Research Council (NHMRC) guidelines; NHMRC, 2009), most people used illicit drugs infrequently. For example, the GDS2019 sample of Australian festival attendees reported using MDMA, cannabis and cocaine on a median of 10, 30 and 5 days respectively in the last 12 months. The frequency is less than amongst sentinel surveys of Australian regular stimulant users, such as the 2018 Ecstasy and related Drug Reporting System (EDRS) survey, where respondents reported MDMA, cannabis and cocaine use on a median of 24, 96 and 6 days respectively in the last 12 months (Peacock et al., 2018).[2]

The typical quantities consumed by these Australian music festival attendees in a day of use are outlined in Table 2, including a median of 2 MDMA pills/caps or 0.3 grams of MDMA powder, 0.5 grams of cocaine and 0.3 grams of meth/amphetamine. We note that this excludes atypical amounts which may be larger (see for example Hughes et al. (2014) which showed that in a heavy or binge session the maximum quantities of MDMA consumed in Australia were 3.5 grams (WA), 5.4 grams (Vic) and 6.7 grams (NSW)). Nevertheless, here we see the typical amounts consumed are near identical with that reported in the 2018 EDRS survey of people who regularly consume stimulants: 2 MDMA pills or 0.3 grams of MDMA powder, 0.5 grams cocaine and 0.25 grams methamphetamine (Peacock et al., 2018).

[2] EDRS data was converted from six-monthly to yearly estimates for comparability.

Table 2: Rates of use, frequency and typical amounts consumed, by type (n=5,155)

Drug type	Rates of use in last 12 months	Frequency	Typical amount per day of use
Alcohol	95.6%	4.4% never, 12.5% monthly or less, 38.8% 2-4 times/month, 33.7% 2-3 times/week, 10.6% ≥4 times/week	9.5% 1-2 standard drinks, 23.3% 3-4, 23.7% 5-6, 20.6% 7-9 & 22.9% 10 or more standard drinks
MDMA	79.5%	10 days per year	2 pills/caps or 0.3 grams powder
Cannabis	74.0%	30 days per year	5 grams
Cocaine	69.1%	5 days per year	0.5 grams
Amphetamine	39.2%	3 days per year	0.3 grams
Ketamine	38.6%	4 days per year	0.3 grams
LSD	38.1%	3 days per year	1 tab
Magic mushrooms	24.8%	2 days per year	5 mushrooms
Methamphetamine	6.9%	5.5 days per year	0.3 grams
GHB	3.9%	2.5 days per year	6 millilitres

Likelihood and nature of police encounters

Almost three quarters of respondents (74.5%) reported they encountered police in relation to their drug use in the last 12 months, and 68.5% reported drug dog encounters at festivals specifically. Drug-related police encounters were more commonly reported amongst NSW festival attendees compared to those from other states/territories. For example, 78.6% of NSW respondents reported any drug-related police encounter in the last 12 months compared to 71.6% of non-NSW respondents ($\chi^2_{(1)} = 10.48$, $p<0.01$), and police drug detection dog encounters at music festivals were even more common amongst NSW festival goers: 79.2% versus 61.7% amongst non-NSW festival attendees respectively ($\chi^2_{(1)} = 43.52$, $p<0.001$).

Comparing those policed versus those not policed indicated several significant demographic and behavioural differences. Specifically, those reporting drug-related police encounters in the last 12 months were younger (mean age 22.86 compared to 23.71 for those not policed: $F_{(1,2311)}=6.90$, $p<0.05$) and more frequent festival attendees (49.9% compared to 37.0% of those not policed ($\chi^2_{(1)} = 29.23$, $p<0.01$). They were also significantly more likely to report last 12-month consumption of MDMA, cocaine, methamphetamine, LSD, magic mushrooms and ketamine. For example, 91.6% of Australian festival attendees who were policed reported MDMA consumption versus 85.5% of those not policed ($\chi^2_{(1)} = 14.64$, $p<0.001$). There was no significant difference in last 12-month use of alcohol, cannabis, GHB or amphetamine.

Emergency medical treatment and help-seeking behaviour

Access to emergency medical treatment was uncommon, with only 6.4% of GDS2019 Australian festival attendees who engaged in recent drug use reporting accessing some form of emergency medical treatment in the last 12 months (see Table 3). However, 62.0% reported a desire to use lower amounts of any substance in the next 12 months and 16.0% reported they wanted help to do so. Practices differed by drug type. For example, of the most commonly used substances EMT was most commonly sought for alcohol and MDMA (for more details see Barratt et al., 2019), but amphetamine and methamphetamine were most commonly cited in relation to a desire to use less, followed by alcohol and cannabis (with 41.0%, 58.7%, 39.5% and 36.7% respectively). Relatively small numbers reported a desire for help in achieving this goal.

Table 3: Rates of EMT access and help-seeking behaviour amongst festival attendees

Drug type	EMT access in last 12 months [i]	Desire to use less in next 12 months [i]	Desire for help to use less in next 12 months [i]
Alcohol	4.4%	39.5%	13.7%
MDMA	2.5%	30.5%	9.4%
Cannabis	0.9%	36.7%	15.0%
Cocaine	0.7%	27.7%	8.3%
Amphetamine	1.0%	41.0%	4.3%
Ketamine	0.4%	20.0%	1.0%
Methamphetamine	4.3%	58.7%	22.5%
GHB	4.1%	31.0%	#
Any drug type	6.4%	62.0%	16.0%

i Of those reporting using that drug in the last 12 months. # Data suppressed due to sample size.

Australian festival attendees reporting any EMT access tended to be younger (mean age 21.15, compared to 22.62 for those not reporting EMT, $F_{(1,4354)}=14.50$, $p<0.001$). For details see Barratt et al. (2019). In contrast, Australian festival attendees indicating they wanted to use less were older (mean age 22.95 compared to 21.84 for those not wanting to use less, $F_{(1,4441)}=33.67$, $p<0.001$). They were also more likely to be male (57.4% compared to 50.6% of those not wanting to use less, ($\chi^2_{(1)}=19.42$, $p<0.001$), to report ever having been diagnosed with a mental health condition (37.6%, compared to 33.7% of those not wanting to use less, ($\chi^2_{(1)}=4.91$, $p=0.02$) and to attend festivals frequently (51.1% compared to 48.3% of those not wanting to use less ($\chi^2_{(1)}=3.33$, $p=0.04$). There is no evidence that EMT or help-seeking behaviour was associated with higher policing encounters or encounters with drug dogs at festivals specifically.

Implications

Analysis of 5,155 Australian music festival attendees recruited over November to December 2018, shows that most festival attendees are infrequent attendees, and they are a young, white, educated, professional population. Alcohol, MDMA, cannabis and cocaine are the most commonly consumed drugs by these Australian festival attendees, but patterns of use vary significantly particularly between alcohol and illicit drugs, with frequent consumption of alcohol (often at binge levels), but low typical frequency and modest amounts of illicit drugs consumed. Most illicit drug use amongst this population thus appears occasional and relatively non-problematic.

Nevertheless, we see some evidence of drug-related harms, most notably, 6.4% of all sampled festival attendees who had engaged in recent drug use reported at least one emergency medical treatment in the last 12 months. Added to that is evidence of high reported interest in a desire to reduce drug use (mainly in relation to meth/amphetamines, alcohol and cannabis). We also see high rates of mental health diagnosis, with just over a third reporting ever having had a mental health diagnosis.

The data reinforce the high rates of police encounters by Australian festival attendees and drug detection encounters specifically at music festivals. This is particularly the case in NSW: consistent with the findings of Hughes et al. (2017) and Agnew-Pauley and Hughes (2019). It is also consistent with our recent cross-national analyses that showed that across 26 countries Australia had one of the highest rates of drug detection dog encounters with people who use drugs (Hughes et al., 2018). While we found no evidence that policing encounters were associated with EMT or a desire to use less, the high rates of policing is nevertheless a concern, given the known harms/risks that can occur from this at festival settings e.g. encouraging double dropping (Dunn & Degenhardt, 2009; Grigg et al., 2018a; Malins, 2019), encouraging a change in what drugs are consumed (Dunn & Degenhardt, 2009) and/or switching to buying drugs within festival grounds (Hughes et al., 2017; Grigg et al., 2018a). GDS2020 will further explore the impacts of drug detection dogs and searches at venues on risk taking behaviours of participants, taking into account different legal and regulatory contexts, across the globe.

These findings raise a number of implications. First in a context where there is often understandable focus on the harms from illicit drugs, it reminds us that most patterns of illicit drug use amongst Australian festival attendees appear occasional and non-problematic (see also Lai et al., 2013). Second, mindful of the risks of harm and interest in reducing drug use, it suggests that the festival setting could be a good opportunity to educate, inform and refer on interested attendees to drug or alcohol education or treatment. This reinforces the benefits of peer educators such as the Dancewize team, on-site drug checking services and targeted education/harm reduction. Third, it adds to calls about how to better balance public health and safety at Australian music festivals, such as through reducing deployment of drug detection dogs, expanding police drug diversion programs and/or removal of criminal penalties for use and personal possession of illicit drugs (Hughes et al., 2019). This is particularly in light of research showing that removing or lessening criminal penalties for use and possession can lead to significant public health, criminal justice system, social and economic benefits, including increasing health service engagement (Benfer et al., 2018; Hughes et al., in press).

Finally, it reinforces that alcohol remains the biggest contributor to drug related harm at Australian music festivals and should be a priority area for festival safety. The high rates of binge alcohol consumption and the fact that over a third wanted to drink less means that we need to better support young people to make positive choices. A new Drinks Meter app, developed by GDS and funded by NSW Health, may be one tool for doing so.

Suggested citation

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July 2019

Australian music festival attendees who seek emergency medical treatment following alcohol and other drug use

A Global Drug Survey data report

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A Global Drug Survey data report

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EXECUTIVE SUMMARY

Across 2018 and 2019 there have been a series of drug-related deaths at Australian music festivals. These tragedies have highlighted a lack of current and localised information about the circumstances surrounding acute harm events following drug use among Australian festivalgoers.

This report analyses data from the Global Drug Survey from late 2018, at the onset of the last Australian summer music festival season. We recruited a large sample of Australian festivalgoers (N = 4,391), all of whom (a) reported being residents of Australia, (b) reported attending one or more festivals in the last 12 months, and (c) answered at least one question about seeking emergency medical treatment (EMT)[1] in the last 12 months. This report provides information to assist the 2019 NSW Coronial Inquest into the drug-related deaths of music festival attendees pertaining to EMT seeking, including rates of EMT by drug type among Australian festivalgoers, and descriptions of the circumstances surrounding EMT, including symptoms and hospitalisations.

280 respondents reported seeking EMT at least once in the last 12 months; this equates to 6.4% of our respondents. But rates of EMT seeking varied according to the last drug consumed. For example, alcohol ranked highest with 4.30[2] per 100 last-year consumers reporting seeking EMT after alcohol use, followed by MDMA (2.50), LSD (1.48), cannabis (0.96) and cocaine (0.67).

Females aged 16-20 were the most likely to report seeking EMT, followed by males 16-20, whereas older respondents of both genders reported seeking EMT at a comparatively lower rate. This trend held for alcohol, MDMA and LSD, but not for cocaine (where males and females aged 21 plus reported higher rates of EMT) or for cannabis (with similar rates across all ages/genders).

A broad array of information was gathered about the circumstances surrounding EMT. For example, for those seeking EMT following alcohol consumption the median reported standard alcoholic drinks consumed was 15 (range 1-72), with 60% reporting either consuming only alcohol or combining alcohol and tobacco only. The most commonly mentioned symptoms here were nausea/vomiting (45%), accident/trauma (40%) and passing out/unconscious (37%), with 65% reporting being admitted to hospital as part of their last EMT following alcohol.

For those seeking EMT following MDMA consumption, the median quantity consumed during the session was 3 pills (range 0.5 to >10) or 0.4g (range 0.1 to 1.5g).[3] Most (81%) reporting combining MDMA with another psychoactive substance (alcohol and/or other illicit drugs). The most common symptoms experienced were confusion (40%), anxiety/panic (40%) and very low mood in the days afterwards (40%), with 48% reporting being admitted to hospital as part of their last EMT following MDMA.

Comparing symptoms across drug types indicates some differences. For example, more anxiety and confusion post LSD, more nausea/vomiting and passing out post alcohol, and more palpitations, extreme sweating and overheating post MDMA, while hospitalisation was more likely to follow the use of LSD and alcohol than MDMA.

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[1] 'Emergency medical treatment' was not further defined in the question wording.

[2] To simplify expression, we provide the percentage of respondents reporting EMT following the use of drugs as a rate per 100.

[3] Note that knowledge or perception of strength/dose was not measured.

The analyses show that circumstances of seeking EMT following alcohol and other drug use are complex and unlikely to be attributable to one factor alone. But the analyses refute some potential explanations. For example, greater frequency of festival attendance (i.e., increased exposure) is unlikely to be a driver of increased reporting of EMT needs, and so any harm-reduction messages need to target both frequent and sporadic attendees of music festivals. In contrast, being both young and female may elevate the risk of acute drug-related harms. That said, we do not know for certain why being young and female is associated with elevated risk, although differences in body mass, consumption patterns and hormones that moderate stimulant drug sensitivity may play a role.

Profiling Australian festivalgoers requiring emergency medical attendance identified behavioural risk factors that tailored interventions could target, such as polydrug use, taking large doses, and not knowing the content/purity of drug(s) consumed. Having said that, people's capacity to modify their behaviour depends to an extent on whether they have accurate knowledge about the drugs they are taking. Expanded access to peer-run harm-reduction services like DanceWize may help better educate festivalgoers who take illegal drugs. These services would ideally be informed by, or work alongside, on-site forensic analysis of drugs (drug checking). Brief interventions that engage festivalgoers to re-consider their drinking practices are also warranted, given that in this dataset, the most prevalent substance resulting in the need for emergency services was alcohol. Attention to the broader risk environment, particularly policing and criminal statute of the laws surrounding drug taking at Australian festivals, is also warranted.[4]

[4] As we discuss in the accompanying bulletin (Hughes, Barratt, Ferris, & Winstock, 2019a).

CONTENTS

INTRODUCTION

Between Sep 2018 and Jan 2019, five young people died after attending music festivals in NSW. While there has been much policy deliberation surrounding these events, including establishment of a 2018 NSW Government Inquiry into Festival Safety and a 2019 NSW Coroner's Inquest into festival related deaths, these tragedies have highlighted a lack of current and localised information about the circumstances surrounding acute harm events following drug use among Australian festivalgoers.

The Global Drug Survey (GDS) has been exploring the link between drug use patterns and risk of harms for the last eight years. GDS first included a question measuring festival attendance in 2018, and this inclusion led to the capture of a large sample of Australian festivalgoers, including rates of emergency medical treatment (EMT) seeking, and circumstances surrounding EMT. We provide this report at the request of the NSW Coroner's office to better inform the understanding of the complex interplay of individual risk factors, including consumption patterns at festivals, and the risk of harm.

AIMS

We have conducted analysis on Global Drug Survey data with the aim of providing current descriptions of a large sample of Australian festivalgoers to assist the 2019 NSW Coronial Inquest into the drug-related deaths of music festival attendees, pertaining to EMT seeking. This report provides:

1. Rates (per 100 respondents and per 1000 episodes of use) of EMT by drug type among Australian festivalgoers, for the whole sample and by age/gender subgroups;
2. Demographic, festival and drug use characteristics that predict EMT presentation, for the five drug types from samples with >1000 respondents: alcohol, MDMA, LSD, cocaine and cannabis;
3. Descriptions of EMT events following the use of alcohol, MDMA, and LSD (where the number of EMT events described was >10); including amounts consumed, length of session of use, polydrug use, symptoms, transport to hospital and whether the negative event changed the respondent's drug use behaviour since the event.

For other information about the demographics, drug use patterns, policing experiences and help-seeking behaviours of Australian festivalgoers using the same dataset, please see Hughes et al. (2019a).

METHODS

DATA

Global Drug Survey (GDS) is the largest anonymous cross-sectional web survey of individuals who use or have used alcohol and other drugs. GDS is committed to make drug use safer, regardless of the legal status of the drug, through sharing data and promoting honest conversations about drug use (Lancet Editorial, 2018). GDS uses an anonymous, confidential, encrypted platform and is promoted by media and harm reduction partners in Europe, North America, South America, and Australasia. Full details about the composition of the survey, history of GDS, and recruitment and sampling information are available elsewhere (Barratt et al., 2017). GDS does not adopt a probability-based sampling method and thus cannot claim to be fully representative of the target population of this report. However, previous work has shown that GDS is able to recruit a similar sample of recent cannabis and alcohol users in terms of age and gender, compared to general household surveys conducted in Australia, the United States and Switzerland (Barratt, et al., 2017). GDS has previously used its data to describe rates of seeking EMT following the use of drugs including cannabis and synthetic cannabinoid receptor agonists (SCRAs) (Winstock, Lynskey, Borschmann, & Waldron, 2015; Winstock & Barratt, 2013). The survey took place between November–December 2018, collecting anonymous data from respondents around the world, and was available in 19 languages. Ethical approval was obtained from the University College London (11671/001), University of Queensland (2017001452) and University of New South Wales (HC17769) Research Ethics Committees.

SAMPLE

For this report, we analysed a subsample that included residents of Australia who reported attending one or more festivals in the last 12 months and who answered at least one question about seeking EMT in the last 12 months (N = 4,391). The median age was 21 years (Interquartile range [IQR] 19-24; range 16-70). 55% identified as male, 44% as female, and 1% as other gender. Of those who reported their state/territory of residence (N = 3,218), 38% reported NSW, 28% Vic, 14% Qld, 11% WA, 5% SA, 3% ACT, 2% Tas and 1% NT. Compared to the distribution of estimated residential population for 15-34-year-olds in December 2018 (Australian Bureau of Statistics, 2019), the sample overrepresented NSW while underrepresenting Qld, but was otherwise similar in distribution across jurisdictions. Due to the small numbers seeking EMT, analysis pertains to all Australian festivalgoers, rather than those in NSW alone.

MEASURES

The question items for data analysed in this report are as follows:

Attendance at festivals: 'How many festivals have you been to in the last 12 months?'. In this report we included all Australian respondents who reported attending at least one festival in the last 12 months.

Emergency medical treatment (EMT) was measured by asking the following sets of questions for each drug type: 'In the last 12 months have you sought emergency medical treatment[5] following the use of [drug type]?'. Yes/No. If yes, 'In the last 12 months how many times have you sought emergency medical treatment following the use of [drug type]?'. If yes to

[5] 'Emergency medical treatment' was not further defined in the question wording.

seeking EMT, 'Would you be happy to tell us more about what happened?'. Yes/No. If yes, respondents were instructed to 'Please answer the following questions thinking about the last time you sought emergency treatment following the use of [drug type].' Further series of questions asking about the last EMT incident were tailored for each drug type.

Frequency of use was available in the following format for all drugs except alcohol[6] and new psychoactive substances: 'During the last 12 months, on how many days have you used [drug type]? For example: Daily=365, Twice weekly = 104, Weekly = 52, Monthly = 12'

Use of drugs in the last 12 months: 'When did you last use the following drugs?', where the answer for each drug type is either 'in the last 30 days', or 'between 31 days and 12 months'.

Drug types measured:

- Alcohol
- Cannabis
- LSD
- Magic mushrooms
- Cocaine
- Heroin
- MDMA
- Amphetamine powder
- Methamphetamine
- Ketamine
- Synthetic cannabinoid receptor agonists (SCRAs)
- GHB/GBL (gamma hydroxybutyrate/gamma butyrolactone)
- New psychoactive substances (NPS)

ANALYSIS

Respondents to GDS can skip questions if they do not wish to complete specific items. As a result of this format, missing data to questions exist. For the purposes of this report we have primarily used complete case analysis (dropping any cases with missing data for that analysis). However, we conservatively imputed '1' (representing 1 time in the last 12 months) where respondents had previously indicated they had used that drug in the last 12 months but did not indicate how many times. In the case of subgroups where n<10, we have not reported on these in as much detail, due to the instability of descriptions based on smaller numbers.

We also cleaned the dataset to ensure that where there was conflicting evidence, data were harmonised. For example, if in one question, the respondent reported being 'drunk' when taking MDMA, but failed to report drinking alcohol in the polydrug use question for MDMA, we recoded the latter response to 'yes'. In this case it is possible that some respondents did not consider alcohol to be a 'drug' and so failed to notice it in one question but did respond when asked directly about being 'drunk'.

[6] Frequency of alcohol use was measured in a categorical format.

Rates of EMT were calculated as per the below formulae:

$$\textbf{Rate per person} = \frac{\textbf{Total respondents who sought EMT following [drug] in last the 12 months (a)}}{\textbf{Total respondents who used [drug] in the last 12 months (b)}}$$

$$\textbf{Rate per episode} = \frac{\textbf{(a) x Number of episodes sought EMT following [drug] in the last 12 months (c)}}{\textbf{(b) x Number of days used [drug] in the last 12 months (d)}}$$

Rates per person are calculated for all drug types. We were unable to calculate rates per episode of use for some drug types, including alcohol, NPS, and GHB, as data for (c) or (d) were not included in the survey. Rates were calculated for the whole sample and also for 4 groups: (1) Males aged 16-20 years, (2) Females aged 16-20 years, (3) Males aged 21+ years, and (4) Females aged 21+ years. We chose the cut-off between age groups of 20 years because the median age of the sample was 21 years, so this cut-off generated the most even groups between each gender. The full sample (N = 4,391) also contained 1% (N = 38) who identified as non-binary or different gender. These respondents are included in analysis of the full sample, but not analysed separately due to the small sample size. Comparisons between groups were conducted using chi square tests and median tests using a p value of .05.

RESULTS

The following results should be interpreted with limitations in mind. First, because the GDS is a purposive sample, we do not know how representative the findings are of the general population or more specifically, Australian festivalgoers. Second, one important limitation, albeit common with some prior studies of similar populations (Lim, Hellard, Hocking, Spelman, & Aitken, 2010) is that analysis of drug use and EMT concern behaviour of festivalgoers, but are not restricted to practices at festivals themselves. That is, the drug taking and EMT seeking described below may pertain to activities outside of festival settings. Further limitations are described in the discussion. Nevertheless, this sample is the largest of its kind, and due to its size, has enabled us to profile relatively rare events among Australian festivalgoers.

RATES OF SEEKING EMERGENCY MEDICAL TREATMENT

Overall, there were 280 respondents (6.4% of the Australian festivalgoer sample) who reported seeking EMT following the use of any drug (including alcohol). Table 1 and Figure 1 show rates of EMT by drug type. Two thirds (186 of 280) of those who reported seeking EMT did so following the consumption of alcohol. The highest rates of seeking EMT were recorded for SCRAs and heroin, but in both cases, the absolute number of people reporting use was too low to have confidence in the data. Among drug types with numbers of last-year consumption greater than n = 1,000, alcohol ranked highest with 4.30 per 100 last-year consumers reporting seeking EMT, followed by MDMA (2.50), LSD (1.48), cannabis (0.96) and cocaine (0.67). Because exposure to different drugs varies (i.e., some drugs are used more frequently by consumers than others), we have adjusted the rates of seeking EMT by exposure to give an estimate of the risk per episode of use. Adjusting for exposure for the drugs used by at least 1000 people, LSD ranked highest at 2.39 per 1000 episodes of use, following by MDMA (1.87), cocaine (0.72) and cannabis (0.15). SCRAs, heroin and methamphetamine rates adjusted for exposure were also high, but should be interpreted with caution.

Table 1: Rates of seeking emergency medical treatment among Australian festivalgoers by drug type

Drug type	Any EMT (a)	Any use (b)	Rate per 100 people	Number of EMT episodes (c)	Number of use episodes (d)	Rate per 1000 episodes
Alcohol	186	4326	4.30	259	n/a	n/a
Cannabis	23	2392	0.96	33	226977	0.15
MDMA	51	2044	2.50	61	32706	1.87
Cocaine	11	1639	0.67	14	19346	0.72
LSD	17	1146	1.48	18	7541	2.39
Ketamine	3	813	0.37	3	8734	0.34
Magic mushrooms	1	679	0.15	1	3506	0.29
Amphetamine powder	7	672	1.04	8	8135	0.98
Methamphetamine	6	139	4.32	7	5827	1.20
NPS	4	114	3.51	4	n/a	n/a
GHB/GBL	3	73	4.11	n/a	886	n/a
SCRAs	3	32	9.38	3	615	4.88
Heroin	2	21	9.52	4	1642	2.44
Any drug type	280	4391	6.38	n/a	n/a	n/a

Note: Formal definitions of each variable (a, b, c, d) can be found in the analysis section, p. 8. People were able to report seeking EMT after multiple drug types, although the median number reported among this subgroup of n = 280 was 1. Rates per episode of use are unavailable for alcohol, NPS and GHB/GBL. We have not calculated the rate per episode of use for any drug type because it is not possible to discern whether episodes of use are additive. For example, EMT events reported are likely to include polydrug use and therefore be counted twice if added together.

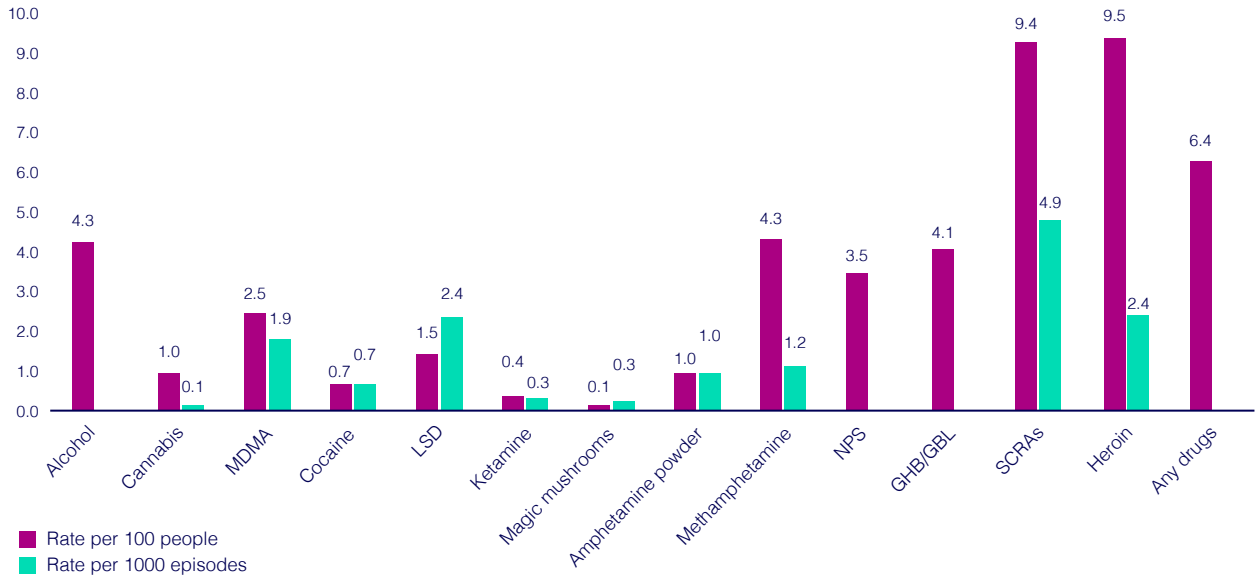

Figure 1: Rates of EMT by drug type

RATES OF EMT BY AGE/GENDER GROUP

Herein we look at rates of EMT by age/gender for any drug, as well as for the most commonly noted – alcohol, MDMA, LSD, cocaine and cannabis – from samples of >1000 (refer to Table 1 for total number of respondents). Figure 2 shows the rates of EMT per person for any drug type for each age/gender group. Females aged 16-20 reported seeking EMT at the highest rate of 8.6%, followed by males 16-20 at 7.3%, with both genders for the older groups reporting EMT seeking at a similar and comparatively lower rate.

Figure 3 shows the same figures for alcohol consumption specifically. These follow a similar pattern, with young females reporting EMT following alcohol consumption at the highest rate.

Figures 4-7 provide both the rates per person and the rates adjusted by exposure (the latter rates could not be calculated for Figures 2-3).

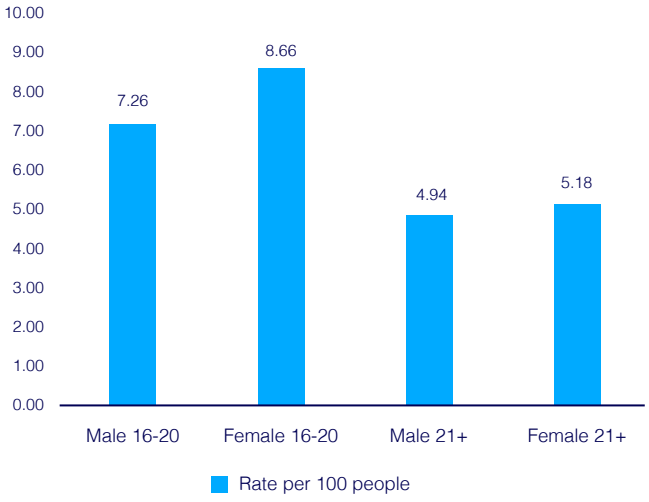

Figure 2: Rates of EMT per person for any drug type (including alcohol) by age/gender group

Figure 4 shows rates of EMT following cannabis use by age/gender group. For cannabis, rates were similar across age/gender subgroups. When calculated by exposure, rates of seeking EMT following cannabis were very low across all groups.

Figure 5 shows rates of EMT following MDMA use by age/gender group. 1 in 25 females aged 16-20 (or 4%) reported seeking EMT following MDMA use in the last 12 months. When adjusted for exposure, females 16-20 still had the highest

years have the second highest rate when adjusted by exposure.

Figure 6 shows rates of EMT following LSD use by age/gender group. In this case males aged 16-20 were most likely to report seeking EMT following LSD use. When rates of EMT are measured by exposure, LSD use is more likely to be associated with EMT for both gender groups aged 16-20 years.

Figure 7 shows rates for cocaine, which follows a different pattern to all other drugs, with both genders in the older groups reporting seeking EMT at a greater rate than younger groups, albeit at low rates compared with MDMA, LSD and alcohol.

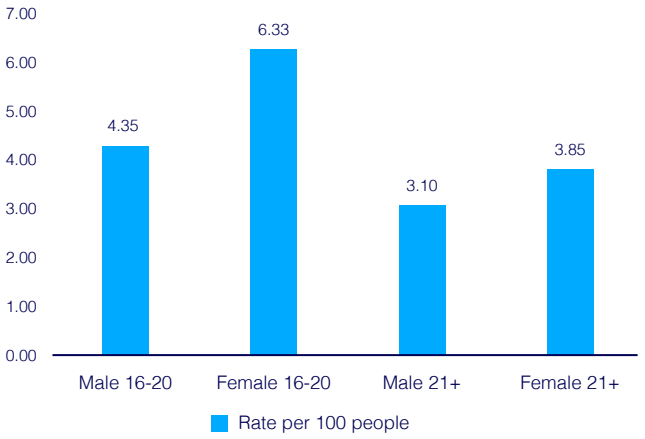

Figure 3: Rates of EMT following alcohol consumption by age/ gender group

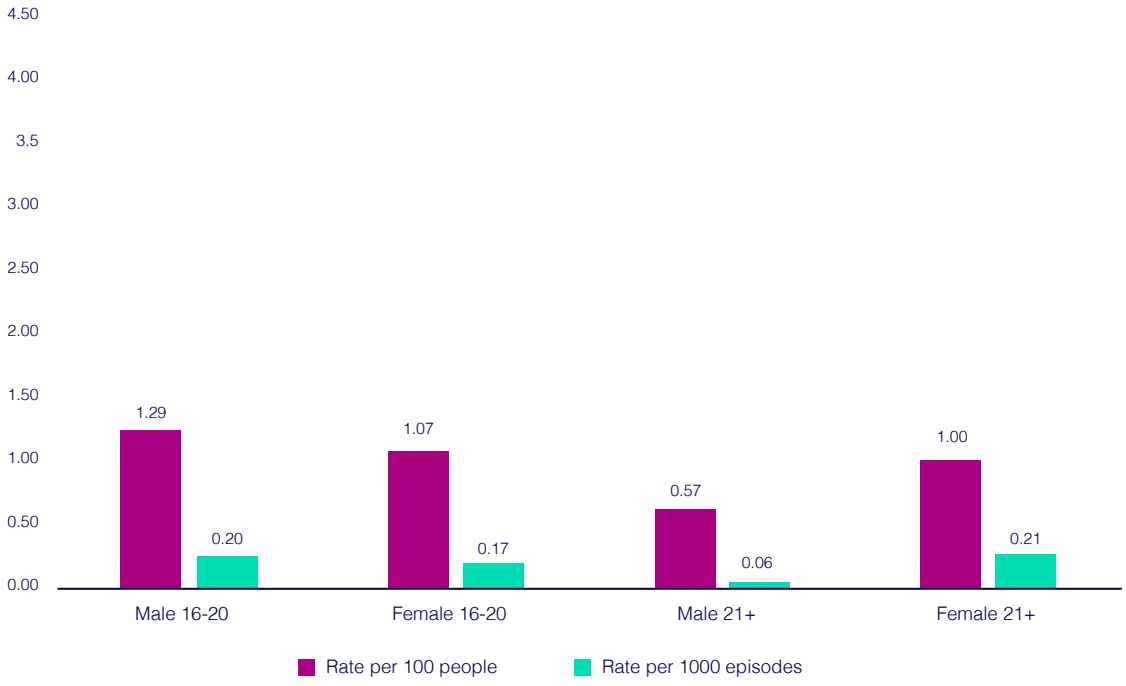

Figure 4: Rates of EMT following cannabis use by age/gender group

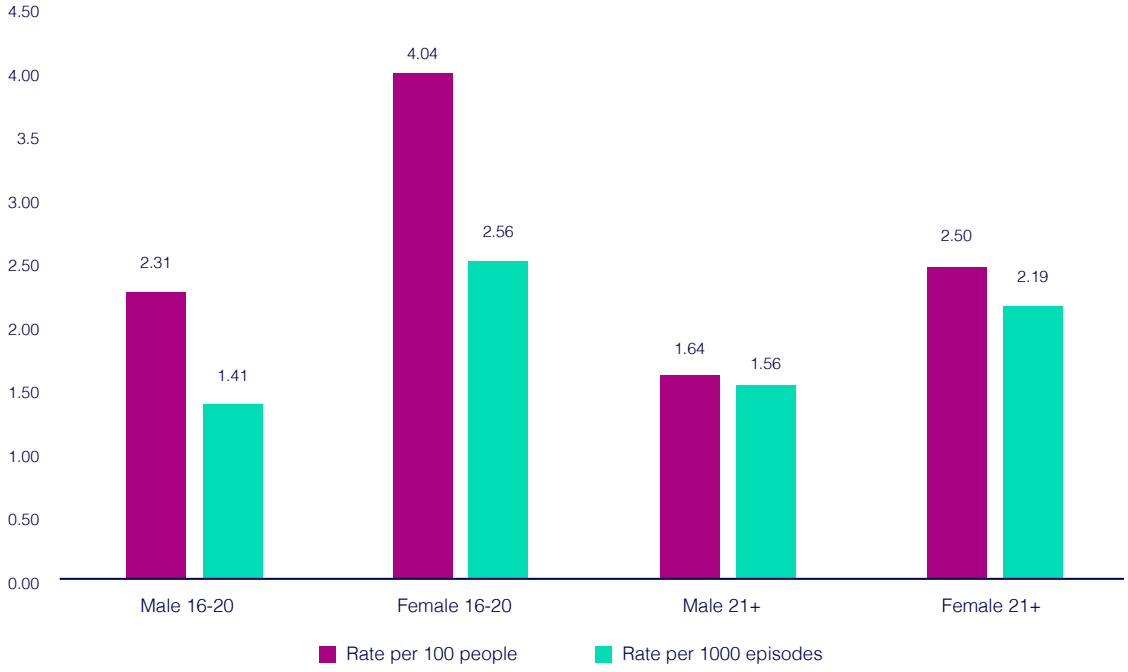

Figure 5: Rates of EMT following MDMA use by age/gender group

Note: The question asked respondents about 'Ecstasy/MDMA/Molly' use.

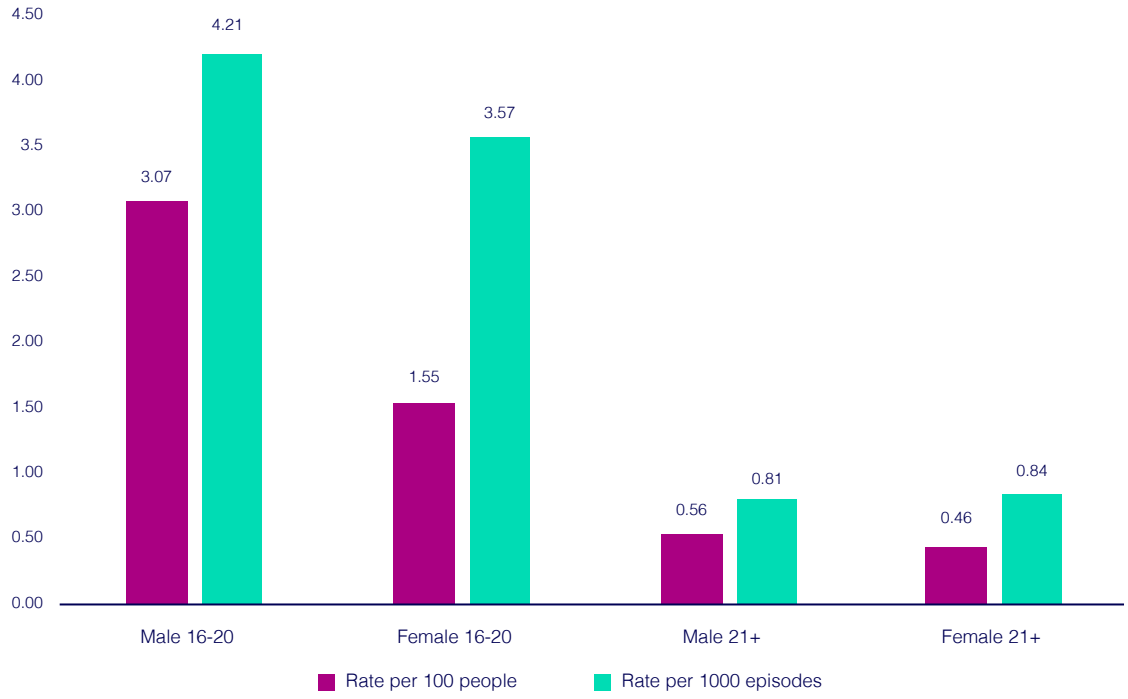

Figure 6: Rates of EMT following LSD use by age/gender group

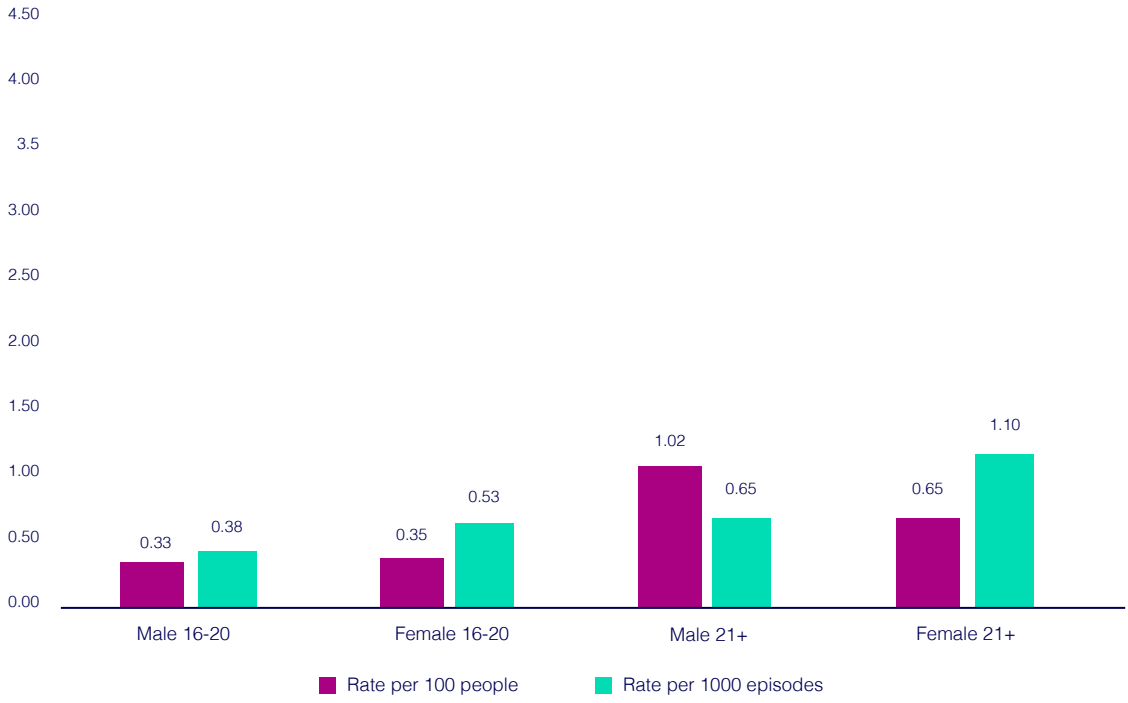

Figure 7: Rates of EMT following cocaine use by age/gender group

CHARACTERISTICS THAT PREDICT EMT PRESENTATION

We compared the characteristics of those who reported seeking EMT following alcohol consumption with the remainder of the sample that reported alcohol consumption in the last 12 months (but no EMT seeking). EMT seekers were more likely to be younger (median age 20 vs 21; $\chi^2_{(1)} = 7.50$, p = 0.006) and more likely to be female (53% vs 44%; $\chi^2_{(1)} = 4.96$, p = 0.026). Both EMT seekers and non-EMT seekers reported the same median number of festivals attended in the last 12 months (median of 3).

Comparing the characteristics of those seeking EMT following MDMA consumption with other last-year MDMA consumers who did not seek EMT, we again found that EMT seekers were more likely to be younger (median age 20 vs 21; $\chi^2_{(1)} = 5.02$, p = 0.025) and more likely to be female, although this latter comparison did not reach statistical significance (59% vs 46%; $\chi^2_{(1)} = 3.25$, p = 0.071). Both groups reported the same median number of festivals attended in the last 12 months (median of 3). EMT seekers reported a greater number of days of MDMA use in the last 12 months than those who reported MDMA use but did not seek EMT (median days of use 14 vs 10; $\chi^2_{(1)} = 5.39$, p = 0.020).

A similar pattern was found for cannabis EMT seekers, who were a median age of 20, younger than other last-year cannabis users, although not statistically significant (median age 20 vs 21; $\chi^2_{(1)} = 3.47$, p = 0.063). Gender ratios were similar between groups. Cannabis EMT seekers reported attending less festivals in the last 12 months compared to other cannabis consumers (median 1 vs 2; $\chi^2_{(1)} = 4.69$, p = 0.030). Number of days of cannabis use was not significantly different between groups.

Again, among last-year LSD consumers, those who reported seeking EMT were significantly younger, reporting a median age of 18 years compared with 21 among the remainder of the sample ($\chi^2_{(1)} = 4.45$, p = 0.035). Other characteristics were similar between the LSD groups.

There were no statistically significant differences between those who reported seeking EMT following cocaine use and other last-year cocaine consumers.

EMT EVENTS FOLLOWING ALCOHOL

Of the 186 respondents who reported seeking EMT following the use of alcohol, 132 were willing to provide more information about the last time they did this. The median reported standard alcoholic drinks consumed was 15 (range 1-72). The median length of drinking session was 5 hours (range 1->24 hours). When asked about other drugs consumed with alcohol during the EMT event, 60% reported either consuming only alcohol or combining alcohol and tobacco only. Of the n = 52 who combined alcohol with drugs other than tobacco, the most commonly mentioned were MDMA, cannabis and cocaine. The most commonly mentioned symptoms associated with alcohol use were nausea/vomiting (45%), accident/trauma (40%) and passing out/unconscious (37%; see Figure 8 below for all symptoms). 65% reported being admitted to hospital as part of their last EMT following alcohol. 48% reported reducing their alcohol consumption after seeking EMT following alcohol use.

EMT EVENTS FOLLOWING MDMA

Of the 51 respondents who reported seeking EMT following the use of MDMA, 28 were willing to provide more information about the last time they did this. When asked what form of MDMA they consumed at the last EMT event, 50% reported only pills/tablets, 31% only powder/crystal and 19% reported both forms. For those who took pills, the median number consumed during the session was 3 pills (range 0.5 to >10). For those who took powder/crystal, the median amount consumed was 0.4g (range 0.1 to 1.5g)[7]. Of the 20 respondents who were able to estimate the length of their session of MDMA use, 55% reported the session was 6 hours long (range 6-36 hours).

When asked about other drugs consumed with MDMA during the last EMT event, most (81%) reported combining MDMA with another psychoactive substance. These 81% all reported drinking alcohol with MDMA, and when asked how much alcohol they drank, the median reported standard drinks consumed was 8 (range 2-13). Most of those who drank alcohol with MDMA (16 of 21) reported that they were 'already drunk' when they consumed MDMA on this occasion. Of the n = 12 who combined MDMA with other drugs (excluding alcohol/tobacco), the most commonly mentioned were cannabis, amyl nitrite, cocaine and ketamine. The most commonly mentioned symptoms associated with MDMA use were confusion (40%), anxiety/panic (40%) and very low mood in the days afterwards (40%; see Figure 8 below for all symptoms). 48% reported being admitted to hospital as part of their last EMT following MDMA.

Respondents answered some additional questions about the last time they sought EMT following MDMA use. 64% reported obtaining all of their MDMA from a 'trusted dealer or source' while 32% did not, and 4% were unsure or couldn't remember. While 32% reported that they had tried that particular batch of MDMA before, the majority had not (64%), while 4% could not recall. While 28% reported starting the session with a smaller 'test dose' of MDMA, most (72%) did not start their MDMA session in this way. The majority (56%) also reported that they took a larger than usual dose of MDMA on that occasion. When asked if they believed their MDMA was adulterated, most did not (52%), around a third did (36%) and the rest were unsure (12%). When asked how much water they drank on that occasion, the most common response was .5 L (36%) or 1 L (20%). 16% reported that they drank no water at all. When asked whether they felt physically and/or mentally drained before starting to use MDMA, most reported that they felt fine (64%), while the remainder (36%) reported feeling physically and/or mentally drained prior to consumption of MDMA.

[7] One respondent gave the response of 7.5g. This data is likely to be an error, unless the powder/crystal was of unusually low purity. The next highest reported amount of powder/crystal consumed was 1.5g, as reported here.

When asked whether they had tried to find out about the content and purity of their MDMA before consumption at the last EMT event, over half of the sample had not tried to do so in any way (55%). The most common ways they had tried to find out content and purity information was to talk with friends who had already taken it (27%), check websites like pillreports.com (18%) and check online forums (9%). One respondent reported that a friend/dealer tested the MDMA at a testing facility, while no-one reported attending a drug checking facility themselves.

In response to their last EMT event following MDMA, 46% reported that they had changed the way they used MDMA to reduce harms, such as considering safer use strategies. 29% said the event had not changed their MDMA use, while 25% reported cutting down MDMA use and 8% reporting quitting MDMA use altogether.

EMT EVENTS FOLLOWING LSD

Of the 17 respondents who reported seeking EMT following the use of LSD, 14 were willing to provide more information about the last time they did this. The median number of doses of LSD consumed was 2 (range 1-5). Most (69%) reported that the length of their LSD session was 6 hours (range 6-24 hours). Most (79%) reported consuming other drugs with LSD. 43% reported drinking alcohol, consuming a median of 4.5 standard drinks (range 2-10). Among those reporting illegal drug use with LSD, the most commonly mentioned drugs were cannabis, ketamine and MDMA. The most commonly mentioned symptoms associated with LSD use were confusion (64%), anxiety/panic (64%), seeing/hearing things/hallucinations (50%) and paranoia/suspiciousness (50%; see Figure 8 below for all symptoms). 79% reported admission to hospital during their last EMT following LSD.

Respondents were asked to reflect on why they thought that their most recent use of EMT following LSD had happened. 64% said that they were 'not in the right place (setting)', 57% attributed the event to 'mixing with other drugs', 29% said that they 'took too much', 29% were 'not in the right mood (mindset)', and 21% believed that what they took was 'not LSD'. In response to their last EMT event following LSD, 64% reported cutting down on LSD use, while 29% reported no change in LSD use.

SYMPTOMS AND HOSPITALISATION

Figure 8 compares the symptoms reported for the last EMT event following alcohol (n = 128), MDMA (n = 25) and LSD (n = 14). EMT events related to other drugs were not profiled due to numbers less than 10. The percentages of respondents who reported that symptom are shown in Figure 8. Note that water intoxication and overheating were only asked of people reporting EMT following the use of MDMA. The symptom profiles are consistent with what would be expected for each drug type, with LSD presentations typically related to anxiety, confusion, hallucinations and accident/trauma; MDMA presentations typically related to anxiety, confusion, depressed mood, hallucinations, extreme sweating, paranoia and palpitations; and alcohol presentations typically related to vomiting, accident/trauma and passing out/unconscious. Seeking EMT following LSD was the most often reported to result in hospitalisation (79%), followed by EMT for alcohol (65%) then for MDMA (48%).

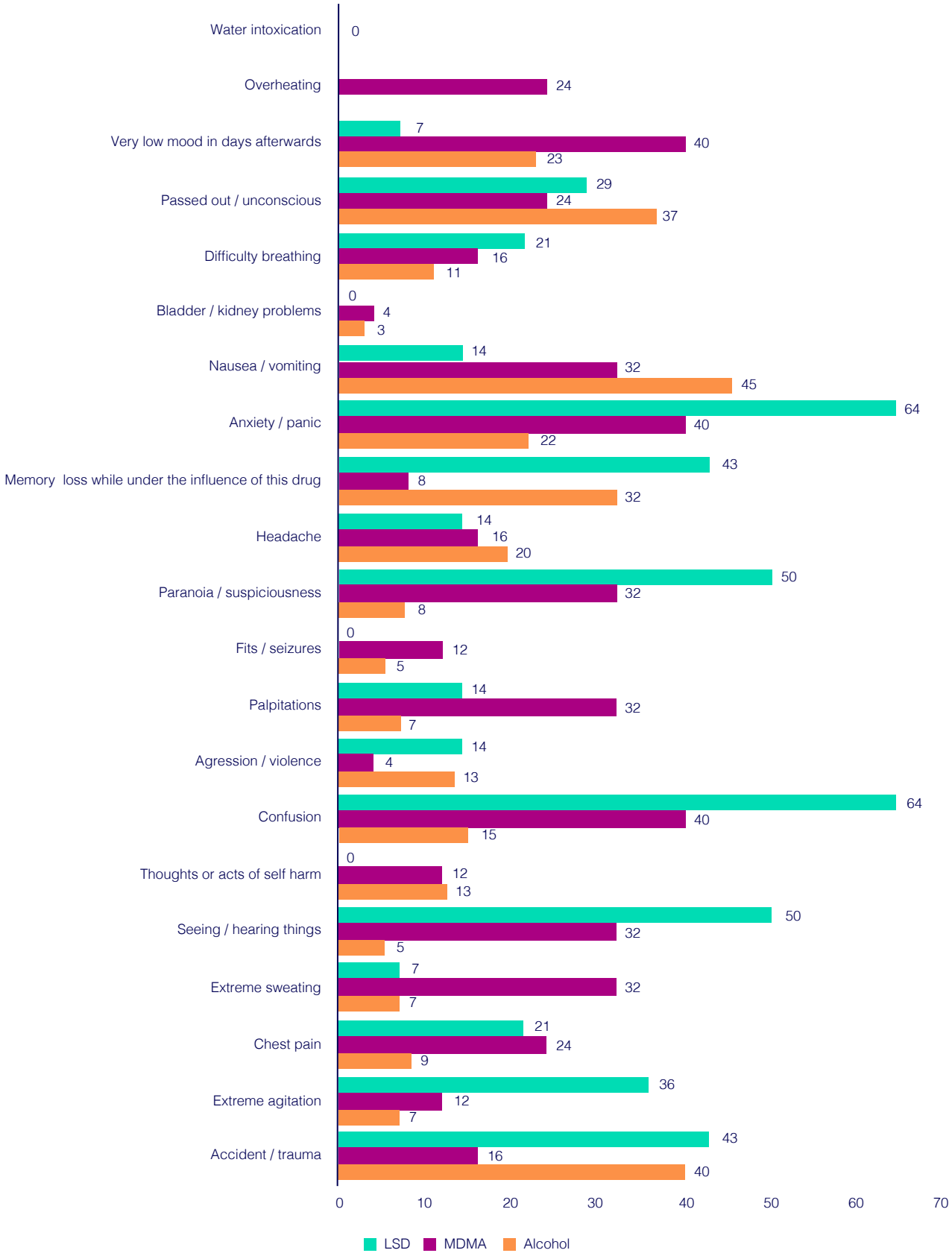

Figure 8: Symptom profile for EMT events following LSD, MDMA and Alcohol (%)

DISCUSSION

While most participants used alcohol and other drugs without incurring serious risks of harm, a significant minority (6% of our festivalgoer sample) reported seeking emergency help. According to our data, young women are particularly vulnerable to experiencing acute harms from consumption of alcohol and other drugs. This vulnerability may reflect lower body mass, differing dosing patterns or physiological and hormonal variations in susceptibility to drug related harm.

While no pattern of consumption can be regarded as completely safe, some consistent patterns of use appear associated with increased risk. Individual consumption practices could be amenable to moderation or adjustment through appropriate engagement and education. For MDMA, reducing the amount used per session and the frequency of use combined with reducing alcohol consumption (especially prior to taking their first dose) could form the basis of effective harm-reduction messaging.

Alcohol remains the biggest contributor to drug related harms with excessive consumption being a key target for intervention in this group. The median number of standard drinks consumed when medical help was sought was 15. This amount is over 3 times the limit recommended by the NHMRC in the national guidelines to reduce "the risk of alcohol-related injury arising from that occasion" (National Health and Medical Research Council, 2009). It is timely therefore that a new free, digital alcohol resource offering brief advice and intervention, **the Drinks Meter app**, developed by GDS and funded by NSW Health, has just been released. Festival promoters could be requested to promote this app as part of wider harm reduction strategies. The Drinks Meter adjusts risk based on the concurrent use of stimulant drugs and personalises its response to individuals with different risk profiles.

This research suggests that modifying individual behaviour remains a promising site for reducing drug-related harm. Peer-run harm-reduction services located on-site (e.g. DanceWize) are particularly well placed to offer a trusted environment for brief intervention. Peer education services have been demonstrated to be credible and accessible to young people at risk of drug-related harm in the nightlife and festival settings (Bleeker & Silins, 2008). It should be noted, though, that people's capacity to modify their behaviour depends to an extent on whether they have accurate knowledge about the drugs they are taking. Taking a 'test dose' to determine the strength of a drug batch may still result in problems if the batch is a completely different drug with a significantly higher than expected potency. Choosing to use one drug type rather than mixing two drug types together may be thwarted if the drug batch used actually contains multiple drug types. It is in these situations that a drug checking service can provide highly relevant information to clients who submit drug samples for testing and talk through their drug use with qualified counsellors (Barratt, Kowalski, Maier, & Ritter, 2018; Measham, 2019; Smit-Rigter & van der Gouwe, 2019). Both peer education services and drug checking services (or a combination of both) also provide valuable opportunities for referrals to other services and treatment.

Attention to the broader risk environment, particularly policing and criminal statute of the laws surrounding drug taking at Australian festivals, is also warranted, as well as the differential likelihoods of criminal justice responses to use and possession across states/territories (Hughes, Seear, Ritter, & Mazerolle, 2019b). These issues are examined and discussed in the accompanying bulletin (Hughes et al., 2019a).

LIMITATIONS

There are some important limitations that need to be considered when interpreting these findings. The first is that while each respondent in this sample reports attending at least one festival in the last 12 months, we do not know whether the EMT incidents they reported occurred at a festival. We also do not know whether the EMT event occurred in Australia – an Australian respondent may have been profiling an event that occurred when they were in another country. It is also the

case that if the EMT incident was very severe, resulting in permanent disability or in death, the person would be unable to complete a self-report survey about the incident. So, this sampling strategy will inevitably not capture the most severe incidents of EMT following drug use. The phrase 'emergency medical treatment' was also not further defined in the survey, which means we do not know what kind of EMT people were reporting, apart from attendance at hospital which was asked about specifically. Furthermore, our study is reliant upon self-report of symptoms and details which may be difficult for the respondent to recall, due to intoxication, incapacitation or due to the length of time since the incident, which could be up to 12 months. These limitations would make our findings conservative in their estimates.

Another issue to be noted is that when asked to report on seeking EMT following the use of different drugs, respondents may be referring to the same incident multiple times, especially if during that event, they took a wide range of drug types. We are unable to determine whether respondents were referring to the same or different EMT incidents, but we have described the levels of polydrug use reported.

Self-report of drug use can also only refer to the drugs people believe they consumed. Adulterated drugs cannot be fully accounted for unless forensic testing of bodily fluids or drug samples is conducted. While we included questions about suspected adulteration in the MDMA and LSD cases, these data cannot fully account for adulteration as a factor in these EMT events.

The sample itself, while large, will be biased towards people who access Time Out and Vice Australia and who follow clubbing and music festival promoter email lists and engage at a higher rate with social media platforms, as these were the methods of recruitment. We don't believe that digital access is problematic for sampling this population given the very high, almost saturation, of digital media use among Australian young adult populations (98% of 15-34 year olds, Australian Bureau of Statistics, 2018).

CONCLUSIONS

Profiling Australian festivalgoers requiring emergency medical attendance identified behavioural risk factors that tailored interventions could target, such as polydrug use, taking large doses, and not knowing the content/purity of drug(s) consumed. Having said that, people's capacity to modify their behaviour depends to an extent on whether they have accurate knowledge about the drugs they are taking. Expanded access to peer-run harm-reduction services like DanceWize may help better educate festivalgoers who take illegal drugs. These services would ideally be informed by, or work alongside, on-site forensic analysis of drugs (drug checking). Brief interventions that engage festivalgoers to re-consider their drinking practices are also warranted, given that in this dataset, the most prevalent substance resulting in the need for emergency services was alcohol. Attention to the broader risk environment, particularly policing and criminal statute of the laws surrounding drug taking at Australian festivals, is also warranted.

In addition, it is worth noting that the Australian music festival scene is not the only scene where people use alcohol and other drugs. Many people take alcohol and other drugs within the night-time economy or while staying at home. While the focus of the NSW Coronial inquiry is necessarily limited to the music festival setting, many of the same recommendations apply equally to the wider community who may not participate in the festival scene, and who may also benefit from access to tailored harm-reduction services, including drug checking services in urban centres (Smit-Rigter & van der Gouwe, 2019).

We hope this information will assist in informing debate about the prevention of acute drug-related harms at festivals and other settings and in developing better policy responses. Risk from taking any substance cannot be reduced to zero. In a society where drug-taking still occurs regardless of what policy or policing measures are in place, we suggest aspiring to zero harm for those who use drugs as opposed to zero tolerance to using drugs (Winstock & Barratt, 2016).

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