



ECSTASY AND RELATED DRUGS REPORTING SYSTEM (EDRS) INTERVIEWS 2021: BACKGROUND AND METHODS

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There is the potential for revisions to this report. Please refer to the online version at [Drug Trends](#).

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Glossary of Terms

TERM	DEFINITION
Availability	Participants are asked how easy it is to obtain a certain drug
Drug dealing	Sale of drugs for cash profit, where a person purchased drugs and on-sold them for a cash profit (more than the amount to cover personal use)
Fraud	Acts involving fraud, including forging cheques, forging prescriptions, social security scams, using someone else's credit card
Incarceration	An occasion where a person has been convicted of an offence and sentenced to jail (excluding remand)
Injection	Injection (typically intravenous) of a substance
Jurisdiction	State or territory
New psychoactive substances (NPS)	Substances which are sometimes referred to as research chemicals, analogues, legal highs, herbal highs, synthetic drugs, designer drugs or bath salts, and often mimic the effects of traditional illicit drugs
Non-prescribed use	Use of a prescribed medication obtained by a prescription in someone else's name
Online purchasing	Purchasing off darknet or surface net marketplaces
Overdose (stimulant)	Experience of symptoms such as nausea, vomiting, chest pain, tremors, increased body temperature, increased heart rate, seizure, extreme paranoia, extreme anxiety, panic, extreme agitation, hallucinations, excited delirium, that are outside the person's normal drug experience, or where professional assistance would have been helpful
Overdose (depressant)	Experience of symptoms such as reduced level of consciousness, respiratory depression, turning blue and collapsing, that are outside the person's normal drug experience, or where professional assistance would have been helpful
Over-the-counter	Availability of a medicine through a pharmacy without a doctor's prescription
Penetrative sex	Penetration by penis or hand of the vagina or anus
Point	0.1 gram (although may also be used as a term referring to an amount for one injection)
Prescribed use	Use of a prescribed medication obtained by a prescription in the person's name
Property crime	Theft or destruction of someone else's property, including shoplifting, break and enter, stealing a car, receiving stolen goods
Purity	Participants are asked 'how strong would you say *drug* is at the moment?'
Session	A period of continuous use without sleeping
Shelving/shafting	Use via insertion into vagina (shelving) or the rectum (shafting)

TERM	DEFINTION
Smoking	Use of a substance via inhalation/vaping
Snorting	Use of a substance intranasally
Use	Use of a substance via any route of administration, including injecting, smoking, snorting/shelving/shafting, and/or swallowing
Violent Crime	Acts involving violence, including assault, violence in a robbery, armed robbery, sexual assault, breaking an apprehended violence order

Guide to Timeframes

Lifetime use	Use on one or more occasion in their lifetime
Recent use	Use on one or more occasion in the past six months
180 days of use	Use daily in the past six months
90 days of use	Use every second day in the preceding six months
24 days of use	Use weekly in the past six months
12 days of use	Use fortnightly (i.e., every two weeks) in the past six months
6 days of use	Use monthly in the past six months

Background

The [Ecstasy and Related Drugs Reporting System \(EDRS\)](#) is the most comprehensive and detailed study of ecstasy and related drug use, market features, and harms in Australia.

The EDRS evolved from the [Illicit Drug Reporting System \(IDRS\)](#), a monitoring system identifying trends in illicit drug markets that has been conducted in all states and territories of Australia since 2000. In June 2000, a trial was conducted in New South Wales, Queensland and South Australia to examine the feasibility of monitoring emerging trends in the ecstasy and related drugs market using the extant IDRS methodology. This component of the IDRS was known as the Party Drugs Module and the term 'party drug' included any drug that was routinely used in the context of entertainment venues such as nightclubs or dance parties, and by a population of consumers different to those surveyed by the main IDRS which focuses on injecting drug use.

In 2002, the Party Drugs Module was conducted in NSW and SA respectively. In 2003, a feasibility trial was conducted in all jurisdictions across Australia, under the title of the Party Drugs Initiative (PDI), representing the first year that data for this project had been collected nationally. The project has since been conducted annually across capital cities in Australia and was renamed the Ecstasy and Related Drugs Reporting System (EDRS) in 2006.

The trends identified in outputs have been extrapolated from interviews with people who use ecstasy and other stimulant drugs regularly, as well as other routinely collected indicator data sources. The EDRS interviews capture self-report information about drugs that are routinely used in the context of entertainment venues and other recreational locations including nightclubs, dance parties, pubs and music festivals. This includes ecstasy (MDMA, 3,4-methylenedioxymethamphetamine), methamphetamine, cocaine, LSD (*d*-lysergic acid), ketamine, MDA (3,4-methylenedioxyamphetamine), new psychoactive substances (NPS; e.g., mephedrone, synthetic cannabis) and GHB (gamma-hydroxybutyrate).

The focus is on the capital city in each state/territory because trends in illicit drug markets are more likely to emerge in large cities rather than regional centres or rural areas. The exception to this is QLD, where data is collected in Brisbane and the Gold Coast (and the Sunshine Coast in 2014-2016).

Study Aims

The aims of the EDRS interview component are to:

1. Describe the characteristics of a sample of people who regularly use ecstasy and other stimulants interviewed in each capital city of Australia;
2. Examine the patterns of ecstasy and other drug use of these samples;
3. Document the current price, perceived purity and perceived availability of ecstasy and other illicit drugs;
4. Examine participants' reports of drug-related harm, including physical, psychological, occupational, social and legal harms; and
5. Identify emerging trends in the ecstasy and other drug market that may require further investigation.

Methods

Since 2003, the sentinel population chosen has consisted of people who engage in the regular use of the drug sold as 'ecstasy'. Ecstasy is considered one of the main illicit drugs used in Australia. It is the third most widely used illicit drug, after cannabis and cocaine, with three per cent of the population aged 14 years or older reporting past year use of ecstasy in the Australian Institute of Health and Welfare's National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 2020).

National ethics approval was obtained from the UNSW Human Research Ethics Committee (HREC). In jurisdictions where the UNSW HREC application and approval was not accepted under the national mutual acceptance scheme, approval was obtained from the appropriate Ethics Committee in that jurisdiction.

In 2021, the Ecstasy and Related Drugs Reporting System (EDRS), falling within the [Drug Trends](#) program of work, was supported by funding from the Australian Government under the Drug and Alcohol Program.

Recruitment

EDRS 2003-2021

Participants are recruited through a purposive sampling strategy (Kerlinger, 1986), which includes advertisements primarily via internet websites (including drug information sites and forums as well as social media), as well as fliers and print advertisements primarily at university campuses. Interviewer contacts and 'snowball' procedures (Biernacki & Waldorf, 1981) are also utilised. 'Snowballing' is a means of sampling hidden populations which relies on peer referral, and is widely used to access illicit drug consumers both in Australian (Boys, Lenton, & Norcross, 1997; Ovendon & Loxley, 1996; Solowij, Hall, & Lee, 1992) and international (Dalgarno & Shewan, 1996; Forsyth, 1996; Peters, Davies, & Richardson, 1997; Solowij et al., 1992) studies. On completion of the interview, participants are asked if they would be willing to discuss the study with friends who might be willing and able to participate.

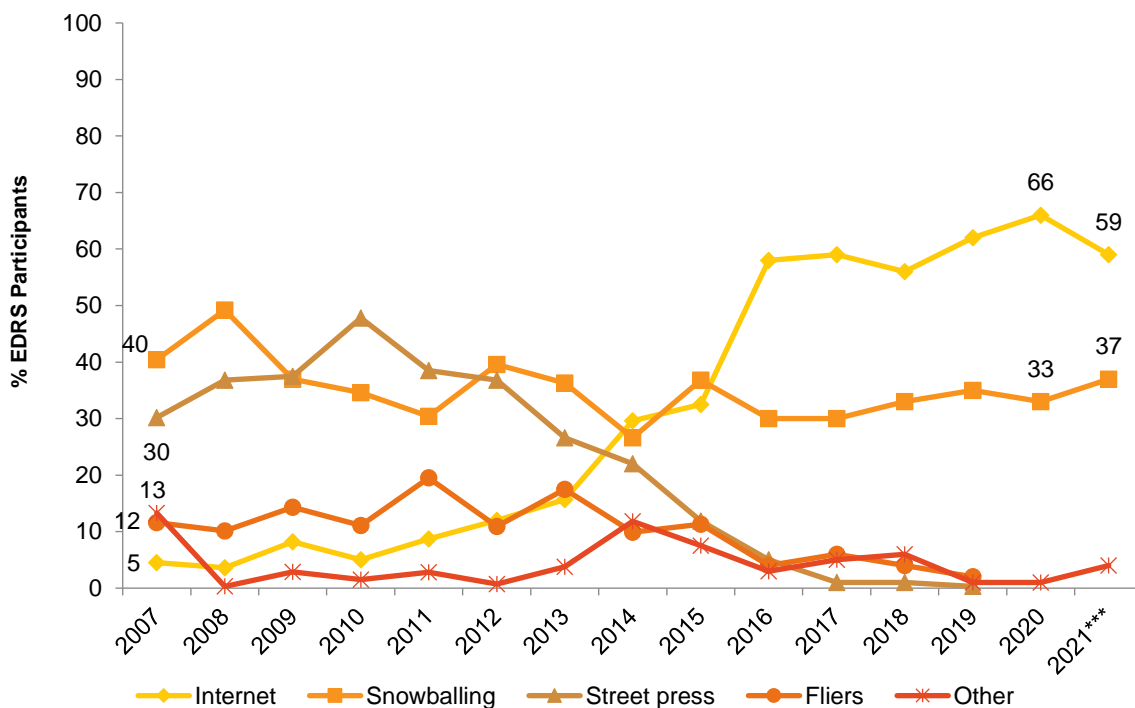
The EDRS focuses on the recruitment of participants who reside in the capital city of each jurisdiction (Brisbane/Gold Coast in QLD), because, given that the purpose of the study is to monitor emerging trends, these are likely to emerge in the main illicit drug markets rather than in regional or rural areas. In larger sites such as Sydney and Melbourne, participants can be recruited from areas where there are higher rates of illicit drug use, rather than sampling from every metropolitan region.

It is imperative that there is consistency in recruitment methods from year to year for comparison. While a significant change was observed in recruitment methods in 2021 compared to 2020 ($p=0.001$), the internet remained the medium by which most participants were recruited (59%; 66% in 2020), followed by word-of-mouth (37%; 33% in 2020) (Figure 1).

EDRS 2020-2021: COVID-19 Impacts on Recruitment

Given the emergence of COVID-19 and the resulting restrictions on travel and people's movement in Australia (which first came into effect in March 2020), paper-based advertisements were not utilised for recruitment in 2020. Restrictions had eased by April 2021 (when recruitment for 2021 commenced), and so paper-based advertisements were utilised in 2021 in various states, though the primary method of recruitment for all states remained to be online via social media platforms (primarily Facebook).

Figure 1: Recruitment method of EDRS participants over time, nationally, 2007-2021



Note. From 2020, street press and fliers were no longer part of the response options. * $p < 0.050$; ** $p < 0.010$; *** $p < 0.001$ for 2020 versus 2021.

Procedure

EDRS 2003-2019

Participants who view the advertisements and are interested in participating contact the researchers by telephone (call or text), Facebook Messenger or email and, following informed consent, are screened for eligibility.

Due to difficulty in smaller jurisdictions in recruiting people who regularly use ecstasy, the eligibility criterion was expanded from 2012 to include people who regularly use ecstasy and other stimulants. Since 2013, this criterion was adopted for all jurisdictions.

To meet entry criteria, participants have to:

- be at least 18 years of age (due to ethical constraints; note that prior to 2020, the age criterion was 17 years or older in all jurisdictions except for WA where it was 16 years of age);

- have used ecstasy or other stimulants (including: MDA, methamphetamine, cocaine, mephedrone or other stimulant NPS) at least six times during the preceding six months (equating to monthly use); and
- have been a resident of the capital city in which the interview took place for the past 12 months.

The nature and purpose of the study are explained to participants before informed consent to participate is obtained. The study involves one face-to-face interview that takes approximately 45–60 minutes to complete. All participants are assured that all information they provide will be de-identified and will remain confidential and anonymous. Interviews took place in varied locations negotiated with participants, including research institutions, coffee shops or parks, and are conducted by interviewers trained in the administration of the interview schedule, using the software package REDCap (Research Electronic Data Capture) on laptops or tablets. All respondents are reimbursed \$40 cash for time and expenses incurred.

EDRS 2020-2021: COVID-19 Impacts on Procedure

Given the emergence of COVID-19 and the resulting restrictions on travel and people's movement in Australia (which first came into effect in March 2020), face-to-face interviews were not always possible due to the risk of infection transmission for both interviewers and participants. For this reason, all methods in 2020 were similar to previous years as detailed above, with the exception of:

1. Means of data collection: Interviews were conducted via telephone or via videoconferencing across all jurisdictions in 2020. If participants opted for a telephone interview, interviewers arranged an appropriate time to contact the participant using a dedicated study mobile or landline, thus ensuring any costs of contact was incurred by the research team rather than the participant. If participants elected for a videoconference interview, the program 'Cisco Webex' was utilised, whereby participants were not required to set up an account or provide any personally identifying information. Interviews conducted via 'Cisco Webex' comprised end-to-end encryption and the capacity for the interviewer or participant to record the interview was disabled. Three-quarters (74%) of participants in 2020 completed the interview via telephone, with 26% doing so via videoconference;
2. Means of consenting participants: Participants' consent to participate was collected verbally prior to beginning the interview (historically, written consent was obtained). Verbal consent was marked in REDCap: 'I (name of interviewer) have read the above information statement to the participant and the participant has freely agreed to participate in this research study as described';
3. Means of reimbursement: Once the interview was completed via REDCap, participants were given the option of receiving \$40 reimbursement via one of three methods, comprising bank transfer, PAYID or gift voucher (formerly cash reimbursement). Personal information was stored in a secure location accessible only to those who were named on the ethics application and who were allocated to undertake participant payments. These data were destroyed seven days following reimbursement (72 hours following in the event of bank transfer);
4. Additional interview content: The interview was shortened to ease the load on participants completing the interview via electronic means, with a particular focus on the impact of COVID-19 and associated restrictions on personal circumstances, drug use and physical and mental health.

Following completion of the interview, participants were asked whether they would like to obtain specific documents relevant to the study, comprising the participant information sheet, contact details if the participant had any questions or complaints and a participant withdrawal form (prior to 2020, these forms were given to participants for their records). If the participant expressed that they would like a copy of these forms, the researcher would note down the participants' e-mail address in a separate password-protected document with a 'Yes/No' field next to the documents which would be e-mailed.

In 2021, a hybrid approach was undertaken with interviews conducted either face-to-face (whereby participants were reimbursed with cash) or via telephone (with participants reimbursed via bank transfer or other electronic means). Face-to-face interviews were the preferred methodology, however the introduction of restrictions by various jurisdictional governments throughout the recruitment period, combined with hesitancy from some participants to meet face-to-face, meant that telephone interviews were conducted when required (i.e., in accordance with government directives) or when requested by participants. Consent was collected verbally for all participants, regardless of whether interviews were conducted face-to-face or via telephone/videoconference.

Almost all jurisdictions had trouble recruiting in 2021. While it is difficult to provide a definitive reason for this, it is possible that this was reflective of a reduction in ecstasy and other illegal stimulant use due to ongoing government restrictions, including the cancellation of many music festivals and events in 2020-21. The recruitment period was therefore extended until 13 August, 2021. Further, in some jurisdictions, there was an increase in people not meeting the residency criteria (i.e., residence in the capital city in which the interview took place for at least ten out of the past twelve months), and this criterion was eased mid-way through data collection to include residency for six out of the past twelve months.

Measures

EDRS 2003-2021

Participants are administered a structured interview schedule based on a national study of people who use ecstasy conducted by NDARC in 1997 (Topp et al., 1998; Topp, Hando, Dillon, Roche, & Solowij, 2000), which incorporated items from a number of previous NDARC studies of people who use ecstasy (Solowij et al., 1992) and powder amphetamine/methamphetamine (Darke, Cohen, Ross, Hando, & Hall, 1994; Hando & Hall, 1993; Hando, Topp, & Hall, 1997). The interview focuses primarily on the preceding six months, and assesses various domains, including:

- demographic characteristics;
- patterns of drug use, including frequency and quantity of use and routes of administration;
- drug market characteristics (i.e., price, perceived purity and perceived availability of substances);
- risk behaviours (such as injecting practices);
- help-seeking behaviour;
- mental and physical health, personal health and wellbeing;
- self-reported criminal activity; and
- general trends in drug markets, such as new drug types and new drug consumers.

It is important to note that in 2020, all measures were similar to previous years as detailed above, though questions specific to COVID-19 and impacts of restrictions were included to capture changes in drug purchasing, use and harm reduction behaviours.

Data Cleaning and Analysis

Participant responses were checked to ensure eligibility criteria were met; that responses were consistent across the interview; that valid responses were given to items where there were minimum and maximum possible values (e.g., frequency of use in last 6 months does not exceed 180 days); and that responses falling under 'other' were not more accurately captured under existing response options.

Data were cleaned using the IBM SPSS Statistical Package for Windows, Version 26.0 (IBM, 2019) and Stata 16 (StataCorp, 2019) and analysed using R version 4.0.2 (The R Foundation for Statistical Computing). Percentages were calculated for categorical data (valid percent where data were missing); mean and standard deviation for continuous data; and median and interquartile range for skewed or count data. Between-group comparisons of categorical variables (e.g., percentage endorsing past six-month use of cocaine in the 2020 and 2021 samples) were analysed using the Chi-squared test, or Fisher's exact test when any cell size was less than 5. In previous years, categorical variables with more than two response options (e.g., perceived purity and availability) were analysed as separate binary variables (e.g., 'high' versus not high; 'medium' versus not medium; 'low' versus not low). Due to concerns about Type 1 error, these variables were analysed as single variables in 2021 – where a significant overall difference was identified, changes in response options were described descriptively. The Mann-Whitney U test was run to identify differences between the most recent and preceding year for count data. Because the Mann-Whitney U test compares the *sample distributions* of two independent samples that are not normally distributed, significant differences may be detected even when median days or median price are the same across years. No corrections for multiple comparisons and risk of Type 1 error were made and thus comparisons should be treated with caution. Values where cell sizes were ≤ 5 are suppressed with corresponding notation (zero values are reported). All figures were generated in Microsoft Word, with the exception of Figure 4, which was created using the 'ggplot2' package for R, and Figure 39, which was created using the 'UpSetR' package for R.

Participation in annual EDRS interviews in previous years by current participants remains infrequently reported (10% of 2021 participants reported completing the EDRS interview in 2020; for comparison, 8% of 2020 participants reported previous completion of the EDRS interview in 2019; $p=0.188$). Participants can consent to the provision of a unique identifier but not all do so, meaning complete identification of repeat participation via this method is not possible, and thus analyses are typically conducted with the total sample. Responses from the repeat participants will likely be correlated over time. Analyses have shown that, when analysing the national sample, the impacts of excluding from the analysis subjects who self-report previous participation are minimal (Slade, 2011). Point-prevalence and effect estimation without correction for the lack of independence in observations is unlikely to seriously affect population inference (Agius et al., 2018).

Sample Size

The intended sample size for each Australian capital city is a minimum of 100 participants per year, typically collected between April-July each year (the exception being 2021, as noted above). Figure 2 and Table 1 overview national and jurisdictional sample sizes over the course of monitoring.

Interviews for EDRS 2021 were undertaken from 21 April to 13 August 2021. Figure 3 provides an indication as to recruitment progress against COVID-19 cases and restrictions in Australia. Various differences were observed in the 2021 EDRS sample compared to previous years. Most notably, significant changes were observed in terms of median age, gender, sexual

identity, employment status, accommodation and the percentage of participants who had completed post-school qualification(s) (Table 2).

In 2021, analyses were also undertaken to determine if there were significant differences between those who completed the interview via telephone and those who completed it face-to-face. Most notably, those who completed the interview face-to-face were more likely to be current students (50%) than those who completed the survey via telephone (39%; $p=0.001$). Despite these changes, there were no significant differences in substance use (e.g., drug used most often in the past month, drug of choice, past six-month use) between the two groups.

Figure 2: Recruitment of EDRS participants over time, nationally, 2003-2021

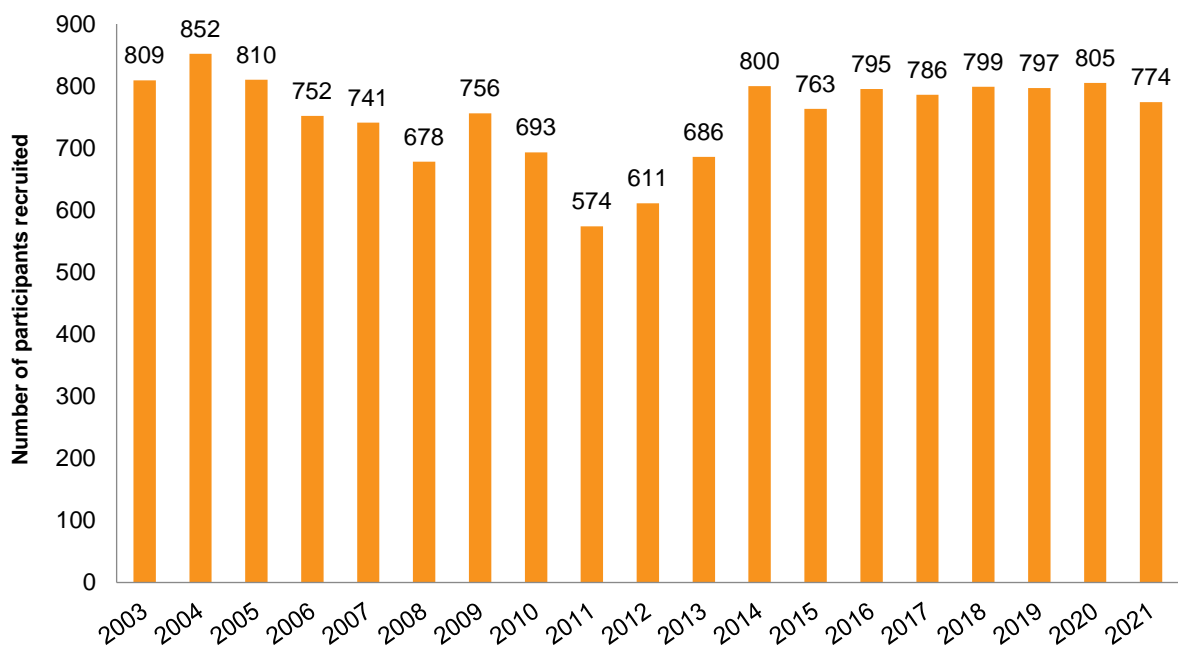
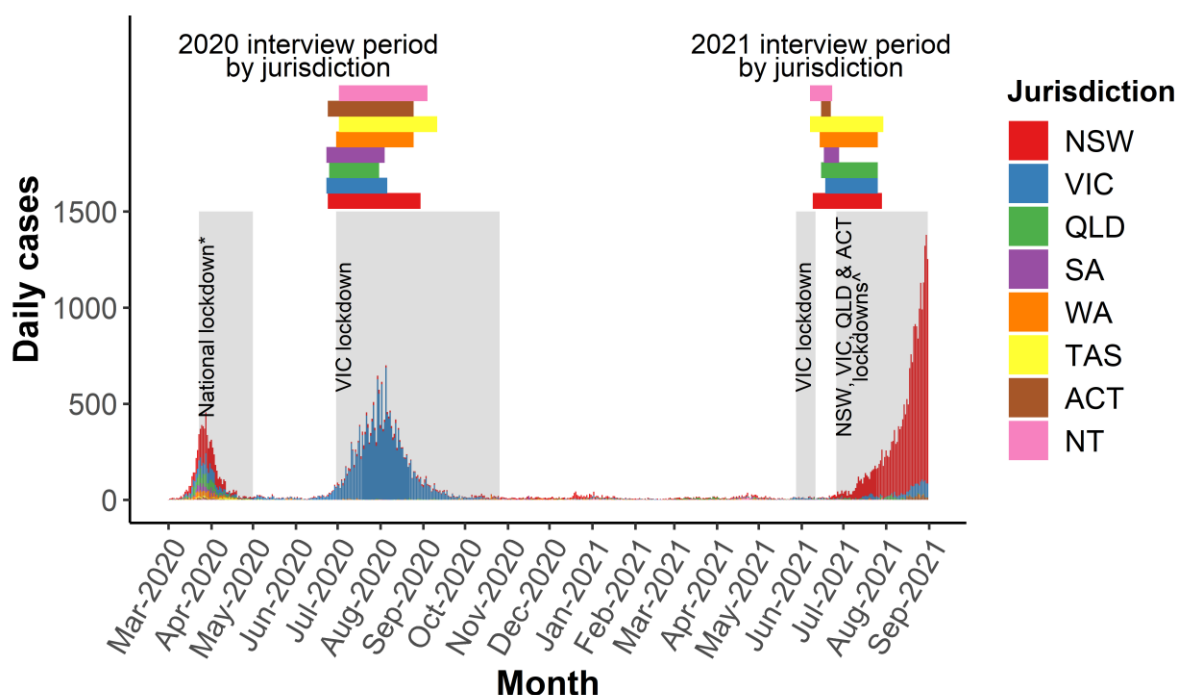


Table 1: Recruitment of EDRS participants over time, by jurisdiction, 2003-2021

N	NSW	ACT	VIC	TAS	SA	WA	NT	QLD
2003	102	66	100	100	101	100	104	136
2004	104	116	100	100	100	100	71	161
2005	101	126	100	100	100	100	82	101
2006	100	100	100	100	101	100	51	100
2007	100	74	100	100	100	100	66	101
2008	100	83	100	100	74	58	55	108
2009	100	101	100	100	100	100	67	88
2010	100	73	100	100	92	100	27	101
2011	100	80	101	75	76	28	11	103
2012	100	51	100	100	92	90	12	62
2013	100	77	100	75	100	100	45	88
2014	100	100	100	100	100	100	100	100
2015	100	99	100	78	100	100	101	85
2016	103	100	100	100	100	100	100	92
2017	100	100	100	100	100	100	86	100
2018	100	100	100	100	100	100	99	100
2019	100	100	99	98	100	100	100	100
2020	103	101	100	100	101	100	100	100
2021	99	100	100	102	100	100	100	73

Figure 3: Timeline of COVID-19 in Australia and EDRS data collection period, 2020-2021



Note. Data on COVID-19 cases in Australia obtained from <https://www.covid19data.com.au/>.

Table 2: Demographic characteristics of the sample, nationally, 2003-2021

	2003 N=809	2004 N=852	2005 N=810	2006 N=752	2007 N=741	2008 N=678	2009 N=756	2010 N=693	2011 N=574	2012 N=611	2013 N=686	2014 N=800	2015 N=763	2016 N=795	2017 N=786	2018 N=799	2019 N=797	2020 N=805	2021 N=774
Mean age in years (range)	25 (15-59)	24 (16-60)	24 (16-61)	25 (16-61)	25 (16-54)	25 (17-59)	24 (16-54)	24 (16-59)	24 (16-57)	25 (17-57)	23 (16-53)	23 (16-64)	23 (16-55)	23 (17-54)	21 (16-50)	23 (16-52)	24 (16-52)	22 (19-27)	26*** (18-66)
% Male	60	62	59	63	58	57	64	58	69	65	67	66	62	61	64	59	60	61	63** ^
% Aboriginal and/or Torres Strait Islanders	7	4	3	2	2	2	2	2	1	2	2	2	2	4	3	6	5	4	6
% Sexual identity~																			***
Heterosexual	82	83	84	84	81	81	86	86	88	87	88	89	87	88	84	84	81	83	73
Gay male	5	4	6	7	8	9	6	5	4	4	4	3	3	2	2	2	5	3	4
Lesbian	2	3	1	2	2	3	2	3	2	2	2	2	2	1	-	1			
Bisexual	10	9	8	7	8	6	6	6	5	6	7	6	7	8	12	10	12	10	14
Other	-	-	-	-	-	1	-	-	-	2	-	1	1	1	1	2	3	5	2
Mean years school education (range)	12 (6-15)	12 (6-13)	12 (6-13)	12 (7-13)	12 (6-13)	12 (8-12)	11 (7-12)	12 (7-12)	12 (7-12)	12 (6-12)	12 (7-12)	12 (0-12)	12 (3-12)	12 (0-12)	12 (7-12)	12 (8-12)	12 (8-12)	12 (7-12)	12 (6-12)
% Completed trade/technical qualification	23	25	30	26	27	24	24	25	22	27	23	27	27	26	24	26	33	29	28
% Completed university/college	23	25	20	19	28	30	19	23	24	23	21	20	20	18	13	16	26	25	35***
% Accommodation																			***
Own home (incl. renting)	66	66	68	68	70	73	63	63	65	62	55	55	54	54	49	47	52	55	6
Parents'/family home	26	30	27	27	24	25	34	34	29	35	41	41	42	41	47	48	40	40	26
Boarding house/hostel	3	2	2	2	3	1	2	2	3	1	1	3	5	2	1	1	5	2	4
Shelter/refuge	-	-	0	-	-	0	-	0	-	-	-	0	-	0	-	-	-	2	4
No fixed address ^	2	-	0	1	1	-	-	-	-	-	2	1	-	1	-	1	1	1	2
Other	3	1	2	2	2	1	-	-	2	-	1	-	1	3	2	1	3	0	1
% Unemployed/on a pension	25	16	14	16	16	11	18	14	22	16	16	15	12	11	13	20	27	35	22*** ^
% Prison history	8	7	5	7	6	4	6	4	/	5	3	4	3	4	2	4	5	2	4
% Currently in drug treatment	6	3	3	4	4	3	3	4	5	5	3	2	2	2	3	4	6	3	3

Note: ^significant difference in overall gender identity (not specifically 'male') and employment status (not specifically 'unemployed') identified between 2020 and 2021. Refer to national report for more details. ~ From 2019 onwards, 'gay male' and 'lesbian' combined to form 'homosexual'. / not asked. ^ In 2020-21, no fixed address included 'couch surfing' and 'rough sleeping' or 'squatting'. – Per cent suppressed due to small cell size (n≤5 but not 0). *p<0.050; **p<0.010; ***p<0.001 for 2020 versus 2021.

Limitations

There are various limitations to these data; key caveats are noted here.

As people who regularly use drugs are deliberately recruited for their ability to report on drug markets, findings from the EDRS interviews cannot provide information on general population levels of use, or use patterns and harms associated with more occasional drug use. For this same reason, findings from the EDRS interviews cannot be used to identify changes in the size of drug markets. The EDRS interviews cannot provide information about trends in places outside of the capital cities (Brisbane/Gold Coast in QLD) from which people who regularly use ecstasy and other stimulants are recruited.

It also should be noted that participants are asked to report according to what they believed the substance was when they obtained it, and thus will not capture unwitting consumption of a different substance(s). Other possible limitations of retrospective self-report may apply (e.g., recall bias), although evidence suggests sufficient reliability and validity of self-report to provide descriptions of drug use and drug-related problems (Darke, 1998).

Differences in the methodology, and the events of 2020-2021, must be taken into consideration when comparing 2020-2021 data to previous years, and treated with caution.

Additional Outputs

There are a range of outputs from the EDRS triangulating key findings from the annual interview and other data sources, including [national reports](#), [jurisdictional reports](#), [bulletins](#), and other resources available via the [Drug Trends webpage](#). This includes results from the [Illicit Drug Reporting System \(IDRS\)](#), which focuses more so on the use of illicit drugs via injecting.

Please contact the research team at drugtrends@unsw.edu.au with any queries; to request additional analyses using these data; or to discuss the possibility of including items in future interviews.

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