Naloxone awareness and uptake among a sample of people who regularly use ecstasy and/or other illicit stimulants in Australia

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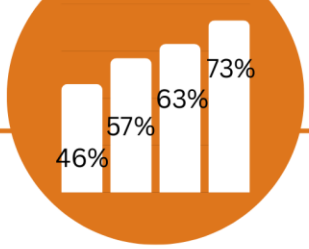
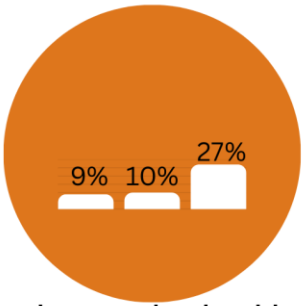
Data was collected as part of the Ecstasy and Related Drugs Reporting System (EDRS). Annual interviews were conducted with people in Australia who used ecstasy and/or other illicit stimulants monthly or more frequently and were aged 18 or older.

Key Findings



Naloxone awareness **increased** in each consecutive year, from 46% (2022) to 73% (2025).



Among those who had heard of naloxone, the percent reporting past year uptake **increased** in 2025 (27%) relative to 2024 (10%).

Factors associated with higher odds of past year naloxone uptake:

Methamphetamine use (past 6 months).

Drug alert exposure (past 12 months).

Drug checking (past 12 months).
Service + personal test kit

Introduction

Naloxone is a safe, life-saving medication that rapidly reverses opioid overdoses (including heroin, oxycodone and fentanyl), by blocking opioid receptors in the brain. Take home naloxone is available for free in all Australian states and territories to people who are at risk of, or who may witness, an opioid overdose (1).

Recent drug alerts have identified the presence of opioids, including highly potent synthetic opioids such as nitazenes, in substances sold as MDMA, ketamine, and cocaine (2). Given their high potency and the risk of overdose at very low doses (3), these adulterants substantially increase overdose risk, particularly among people who do not typically use opioids and may therefore be unfamiliar with the signs of opioid overdose or how to respond. As a result, there is growing recognition that naloxone awareness and uptake should be encouraged among a broader range of people of who drugs, not only those who intentionally use opioids. To-date, however, there has been limited research examining naloxone awareness and uptake among these broader populations. This study examines naloxone awareness and uptake among samples of people who regularly use illicit stimulants (2022-2025), as well as factors associated with past year naloxone uptake (2025).

Methods

Data were collected as part of the Ecstasy and Related Drugs Reporting System (EDRS). Interviews were conducted with people residing in all capital cities of Australia who regularly (≥6 days in the six months prior to interview) use illicit or non-prescribed stimulants and were aged 18 years or older. Please refer to the 2025 EDRS Background and Methods document for further details.

From 2022 onwards, participants were asked if they had heard of naloxone, and from 2023, participants were asked if they had ever obtained naloxone (no; yes, more than 12 months ago; yes, within the last 12 months).

Descriptive statistics were used to present data for the first aim. To examine factors associated with obtaining naloxone, bivariate logistic regression was performed with each independent variable, chosen a priori, and the outcome. Multivariable logistic regression was then conducted using variables with $p<0.05$ in the bivariate analyses, with age, gender identity and capital city included a priori.

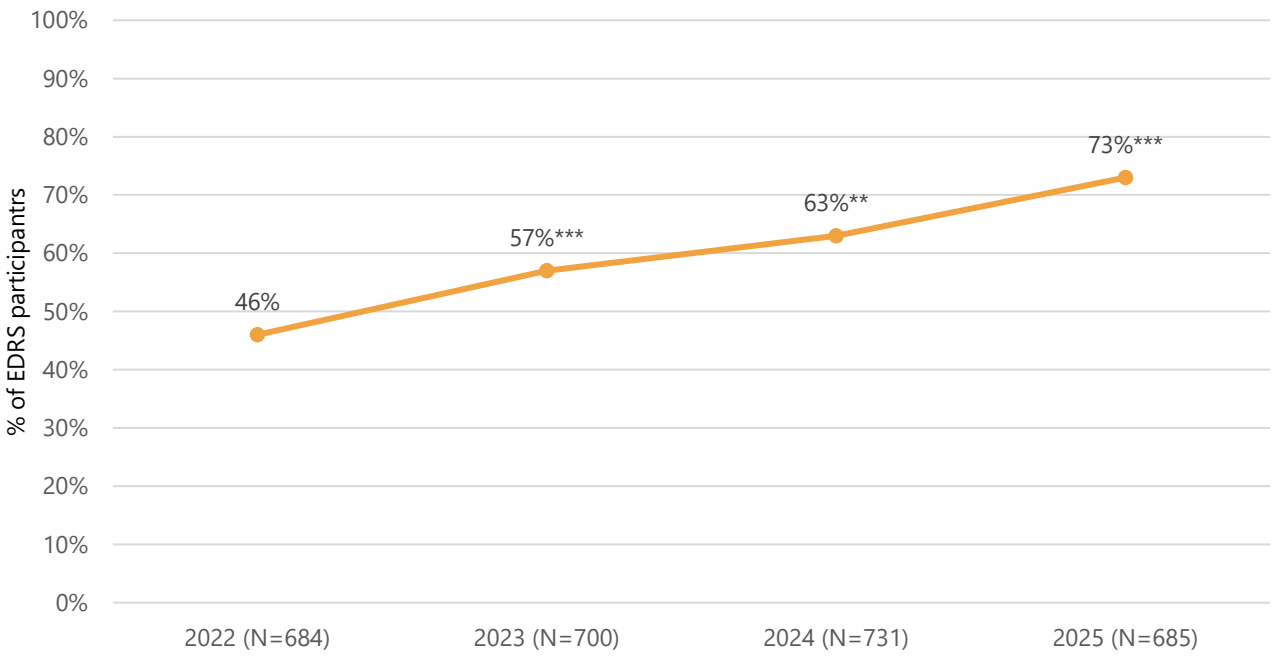
For information regarding the characteristics of the 2022-2025 EDRS samples, please refer to the National EDRS Report 2025.

Results

Naloxone awareness and uptake

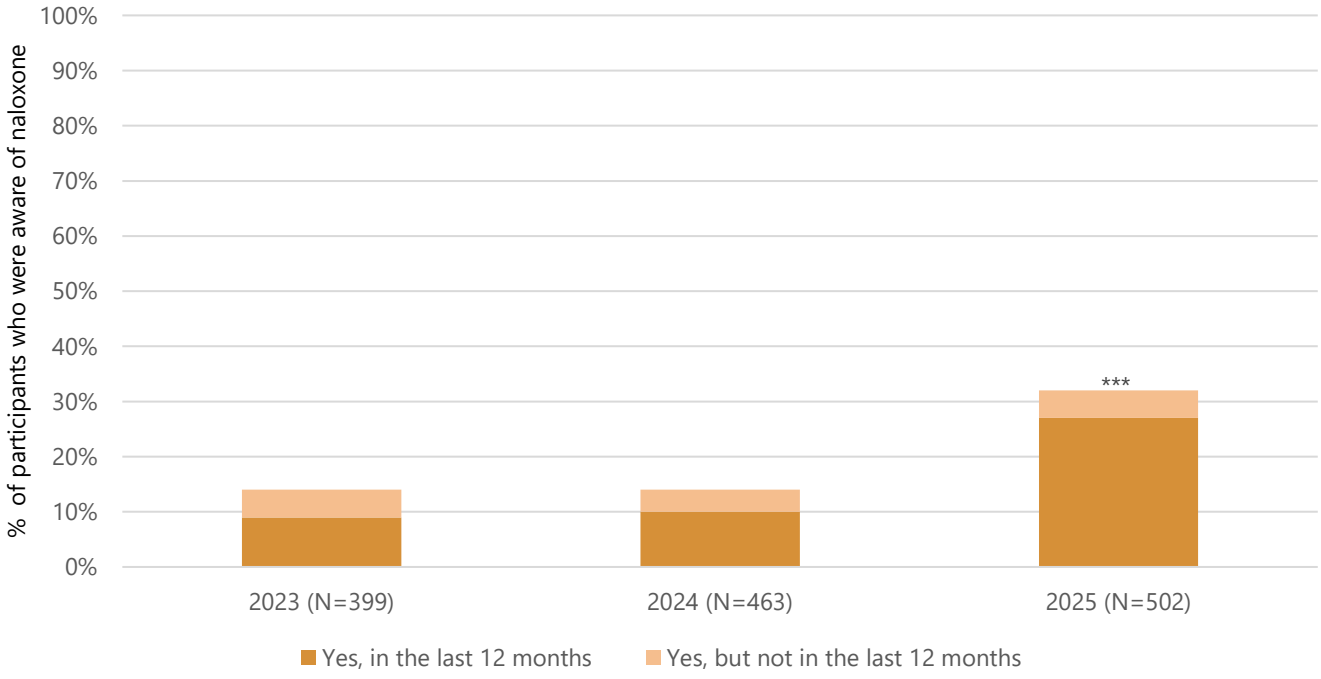
Naloxone awareness increased significantly in each consecutive year, from 46% in 2022 to almost three quarters (73%) in 2025 (Figure 1). Moreover, among those who were aware of naloxone, 27% reported obtaining naloxone in the year preceding interview in 2025, a significant increase from 10% in 2024 ($p<0.001$) (Figure 2).

Figure 1. Naloxone awareness among the national EDRS sample, 2022-2025



Note. Statistical significance for 2022 versus 2023; 2023 versus 2024 and 2024 versus 2025 among the national sample presented in Figure. *p<0.050; **p<0.010; ***p<0.001.

Figure 2. Naloxone uptake, among those who had heard of naloxone, 2023-2025



Note. Statistical significance for 2023 versus 2024 and 2024 versus 2025 among the national sample presented in Figure. *p<0.050; **p<0.010; ***p<0.001.

Factors associated with past year naloxone uptake

In the final model, participants who had: recently used methamphetamine (in any form); seen drug alerts in the last year; engaged in past year drug checking; and who reported high psychological distress, all had significantly higher odds of past year naloxone uptake (Table 1). Further, participants who resided Adelaide,

Perth or Brisbane/Gold Coast all had lower odds of past year naloxone uptake, compared to those residing in Sydney.

Table 1. Factors associated with past year naloxone uptake among the EDRS sample, 2025

	Past year naloxone obtainment, 2025					
	Yes (n=134)	**No (n=551)**	**OR (95% CI)**	***p* value**	**AOR (95% CI)**	***p* value**
Median age (years, IQR)	25 (20-34)	26 (20-34)	1.00 (0.98-1.02)	0.951	1.026 (1.00-1.05)	0.059
Identify as male %						
No	49	42	Ref		Ref	
Yes	52	58	0.76 (0.52-1.10)	0.146	0.78 (0.48-1.26)	0.307
Capital city of residence %						
Sydney	21	13	Ref		Ref	
Canberra	22	13	1.08 (0.58-1.20)	0.806	0.61 (0.26-1.43)	0.260
Melbourne	22	13	1.07 (0.58-1.97)	0.841	0.82 (0.40-1.69)	0.593
Hobart	12	9	0.85 (0.42-1.74)	0.658	0.62 (0.26-1.49)	0.281
Adelaide	10	16	0.39 (0.19-0.81)	**0.011**	0.39 (0.16-0.92)	**0.032**
Perth	5	17	0.20 (0.08-0.48)	**<0.001**	0.25 (0.09-0.69)	**0.007**
Darwin	3	3	0.65 (0.20-2.12)	0.477	0.61 (0.15-2.44)	0.482
Brisbane / Gold Coast	6	17	0.23 (0.10-0.53)	**<0.001**	0.19 (0.07-0.50)	**<0.001**
Sexual Orientation %						
Heterosexual	64	73	Ref		Ref	
LGBQ+	36	27	1.57 (1.05-2.35)	**0.028**	1.49 (0.89-2.48)	0.126
Housing %						
Stable	96	97	Ref		Ref	
Unstable	5	3	1.47 (0.57-3.81)	0.425	/	/
Unemployed %						
No	72	73	Ref		Ref	
Yes	28	27	1.03 (0.67-1.57)	0.894	/	/
Current student %						
No	60	67	Ref		Ref	
Yes	40	33	1.37 (0.93-2.02)	0.110	/	/
Drug use % (past 6 months)						
Non-prescribed MDMA use (any form)	95	93	1.42 (0.62-3.25)	0.405	/	/
Cocaine	81	79	1.12 (0.70-1.80)	0.633	/	/
Ketamine	69	48	2.36 (1.58-3.53)	**<0.001**	1.46 (0.87-2.44)	0.150
Methamphetamine (any form)	39	26	1.78 (1.20-2.65)	**0.004**	1.78 (1.06-3.00)	**0.030**
Any NPS use	25	12	2.51 (1.56-4.05)	**<0.001**	1.18 (0.63-2.18)	0.608
Used ecstasy or related drugs weekly or more often % (past month)						
No	49	54	Ref		Ref	
Yes	51	46	1.20 (0.82-1.75)	0.343	/	/
Saw drug alert % (past year)						
No	15	42	Ref		Ref	
Yes	85	58	4.14 (2.50-6.86)	**<0.001**	2.56 (1.39-4.72)	**0.002**
Engaged in drug checking % (past year)						
No	36	69	Ref		Ref	
Yes, personal test kit only	22	8	5.30 (3.00-9.36)	**<0.001**	4.93 (2.19-11.12)	**<0.001**

Yes, drug checking at a service only	29	21	2.71 (1.68-4.34)	**<0.001**	2.53 (1.44-4.47)	**0.001**
Yes, both	13	3	7.78 (3.71-16.24)	**<0.001**	8.14 (3.27-20.27)	**<0.001**
Psychological distress % (K10 score; past month)						
K10<22	40	54	Ref		Ref	
K10 ≥22	60	46	1.74 (1.19-2.56)	**0.005**	1.94 (1.19-3.14)	**0.007**
Self-reported general health %						
Poor/Fair	23	24	Ref		Ref	
Good/Very good/Excellent	77	76	1.07 (0.69-1.67)	0.766	/	/
Overdose % (past year)						
Stimulant overdose	20	18	1.11 (0.69-1.79)	0.672	/	/
'Other' overdose	17	10	1.79 (1.06-3.03)	**0.030**	1.37 (0.70-2.69)	0.363

Note. LGBQ+: lesbian, gay, bisexual, queer or other non-heterosexual identity. Unstable housing includes people without accommodation (rough sleeping or squatting), people living in temporary or crisis accommodation (shelter/refuge/treatment residence) and people living in inadequate or insecure accommodation (boarding house/hostel, couch surfing (home of friends or family). Current student: studying for a trade/technical or university/college qualification at the time of interview. The K10 is a 10-item questionnaire measuring psychological distress over the past four weeks, with total scores ranging from 10 to 50. Each item is rated from 1 ("none of the time") to 5 ("all of the time"). Higher scores indicate greater distress, typically categorized as low (10-15), moderate (16-21), high (22-29), or very high (30-50). Overdose of 'Other drugs' is characterised as an event where medical or professional assistance may have been helpful, and outside of a participant's 'normal' drug experience (and includes all drugs that are not stimulants or alcohol). OR: odds ratio; AOR; adjusted odds ratio; Bolded findings indicate significance. /Not included in the multivariable model.

Discussion

The significant increases in both naloxone awareness and uptake among these samples of people who regularly use illicit stimulants in Australia represent a significant harm reduction achievement. This progress is particularly salient in the context of an evolving global drug market and the increasing presence of high-potency synthetic opioids, which heighten potential overdose risk for individuals who may be unknowingly exposed through adulterated products. Nonetheless, a persistent gap between awareness and uptake indicates the need for continued and targeted efforts to strengthen access to naloxone.

Past-year exposure to drug alerts and engagement with drug checking were both significantly associated with past-year naloxone uptake. Although the cross-sectional nature of these data precludes causal inference, these associations are unsurprising given that opioid-related drug alerts routinely include messaging encouraging people to carry naloxone (2), and most drug checking services operating in Australia distribute naloxone while also delivering harm reduction education. It is therefore likely that these services play a direct role in facilitating increased naloxone awareness and uptake, underscoring their importance in promoting harm reduction behaviours. At the same time, it is plausible that individuals who engage with drug alerts and drug checking are already more proactive in adopting multiple harm reduction strategies and may have been aware of or obtained naloxone prior to these interactions.

Taken together, these findings underscore the value of embedding naloxone education and distribution within established harm reduction infrastructure, while also considering strategies to extend reach beyond these settings.

References

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