

# Patterns of e-cigarette use among people who regularly use ecstasy and/or illicit stimulants in Sydney, NSW, 2014-2022

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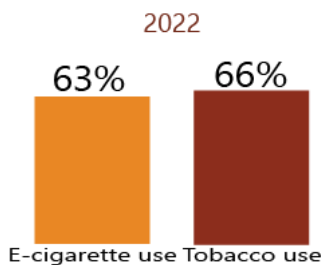
This report was prepared by the National Drug and Alcohol Research Centre, UNSW Sydney  
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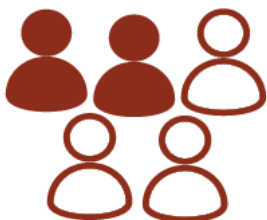
Data was collected as part of the Ecstasy and Related Drugs Reporting System (EDRS). Annual interviews were conducted with people residing in Sydney who used ecstasy and/or other illicit stimulants monthly or more frequently and were aged 18 or older.

## Key Findings

New South Wales 



The per cent reporting recent e-cigarette use has increased over time, and is now comparable with the per cent reporting recent tobacco use.



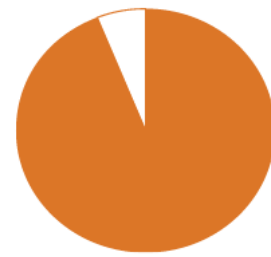
From 2019-2022, approximately two-fifths of participants who had recently used e-cigarettes reported using them for smoking cessation purposes.



Dual use of tobacco and e-cigarettes was common among the sample (43% in 2023).



Less than five participants in 2022 reported using prescribed e-cigarettes.



Most participants who had used e-cigarettes reported using e-cigarettes that contained nicotine (94% in 2022).



The prescription pathway to access e-cigarettes is currently only available to those using e-cigarettes for smoking cessation purposes. Our findings show that few participants are using this prescription pathway.

## Introduction



Electronic-cigarettes (commonly known as e-cigarettes) are battery operated products that vaporise chemical mixtures (commonly referred to as e-liquids) containing various flavours and ingredients, including nicotine and cannabis. They produce a sensory experience similar to smoking conventional tobacco cigarettes. E-cigarettes that contain nicotine can be used as a form of nicotine replacement therapy and are promoted as a less harmful alternative to tobacco smoking. However, the evidence is mixed on their efficacy as a smoking cessation strategy (1-3). Studies have found that concurrent use of e-cigarettes and conventional tobacco smoking was common among those using e-cigarettes for smoking cessation purposes (1). While concurrent use may be an interim state in the process of using e-cigarettes as a smoking cessation strategy, this interim state can last extended periods of time, exposing users to continued conventional tobacco smoking and potential e-cigarette harms (1). E-cigarettes have also been criticised for being promoted to young people and increasing the risk of conventional tobacco smoking uptake among non-smokers as a consequence of nicotine exposure (2).

In an effort to tackle concerns regarding the growing unregulated e-cigarette market in Australia and the uptake of e-cigarettes among young people, regulation was introduced in 2021 that required consumers to obtain a prescription from a doctor to legally access e-cigarettes containing nicotine. This legal pathway is intended to ensure a minimum standard of quality and safety while ensuring continued access to those who are over 18 years old and utilising these products for smoking cessation purposes (4).

The EDRS, which has been monitoring e-cigarette use since 2014, provides a novel opportunity to examine the impact of this regulation and changes to patterns of e-cigarette use and behaviour over time. Thus, this bulletin aims to examine past six-month use of any (prescribed and non-prescribed) e-cigarettes among a sample of people who regularly use ecstasy and/or other illicit stimulants in Sydney, from 2014 to 2022. This bulletin will also examine the use of e-cigarettes as a smoking cessation tool and the concurrent use of tobacco and e-cigarettes (i.e., 'dual' use).

## Methods

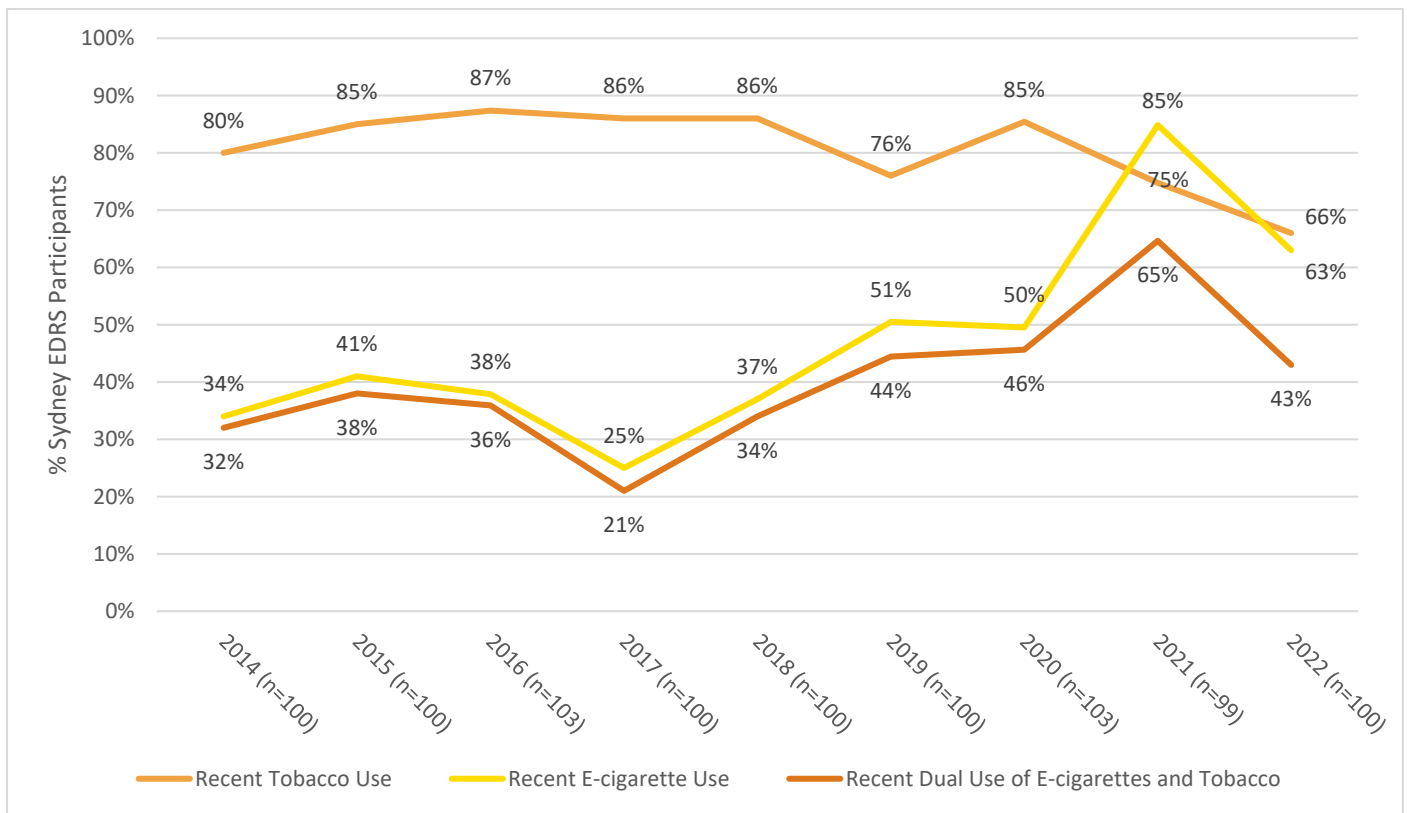


The Ecstasy and Related Drug Reporting System (EDRS) is an illicit drug monitoring system that has been conducted annually in all states and territories since 2003. The study surveys people who regularly (i.e.,  $\geq$ monthly) use ecstasy and/or other illicit stimulants. A detailed summary of our methodology, including the number of participants recruited in each year, can be found in the [EDRS Interviews 2022: Background and Method report](#). For information regarding the characteristics of the Sydney EDRS sample, please refer to the [NSW 2022 EDRS report](#).

While the EDRS has been conducted annually since 2003, questions regarding e-cigarette use were introduced in 2014. In 2022, additional questions were added to the EDRS questionnaire that captured prescribed use and difficulties accessing e-cigarettes. Tobacco use has been captured since 2003, however, this bulletin will only present data from 2014 onwards.

## Results

Figure 1. Past six-month use of e-cigarettes, tobacco and dual use among the Sydney EDRS sample, 2014-22.



Note. For trends in tobacco use over the entire monitoring period (i.e., 2003-2022), see [NSW Drug Trends](#). Monitoring of e-cigarettes commenced in 2014, however on 1 October 2021, legislation came into effect requiring people to obtain a prescription to legally import nicotine vaping products. 'Any' e-cigarette use from 2022 onwards refers to prescribed and non-prescribed e-cigarette use. Data labels are suppressed where there are small numbers (i.e.,  $n \leq 5$  but not 0).

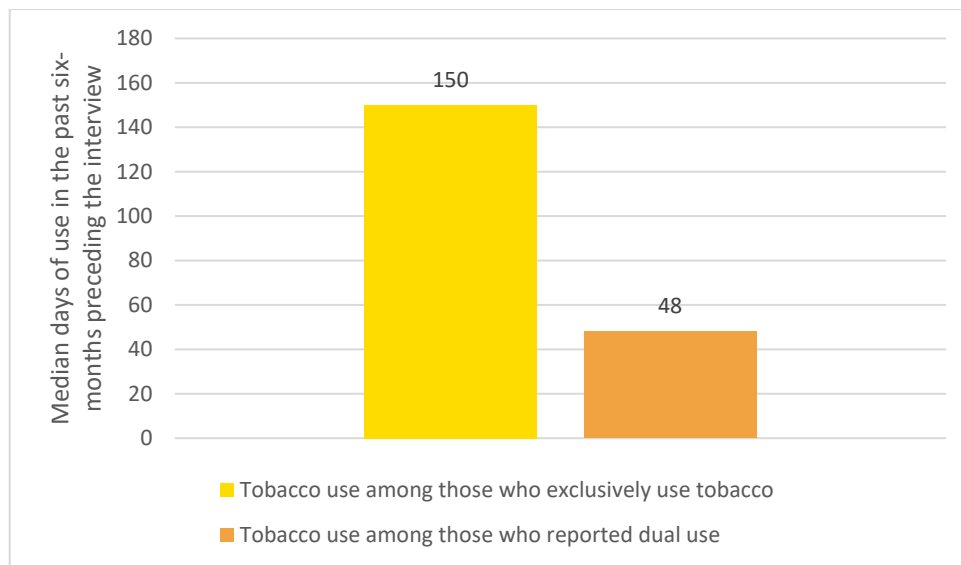
### TOBACCO, E-CIGARETTE AND DUAL USE



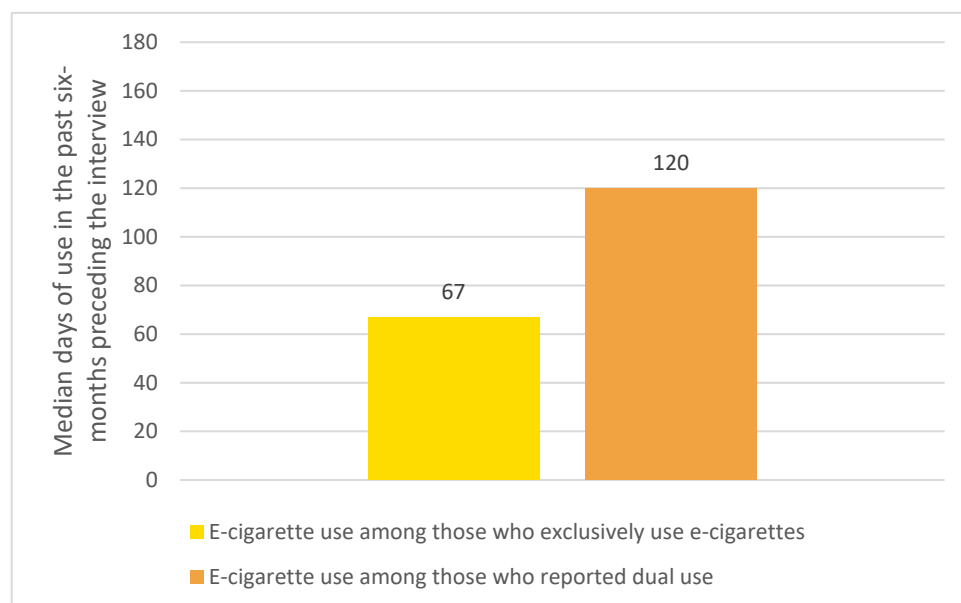
Tobacco use among the NSW EDRS sample remained high between 2014 and 2022, however has declined over the past two years (66% in 2022). In contrast, despite some fluctuation, there appears to be an overall upward trend over time in recent e-cigarette use. Specifically, after peaking in 2021, and overtaking tobacco for the first time since monitoring began, two thirds (63%) of the sample reported recent e-cigarette use in 2022, similar to the per cent reporting tobacco use (66%).

The per cent of the sample reporting 'dual' use has followed a similar trend to e-cigarettes, peaking in 2021 and then declining again in 2022 (Figure 1). However, there has been an increase in participants reporting use of e-cigarettes only over time. That is, the majority of participants who reported e-cigarette use also reported recent tobacco use from 2014 to 2020 (32%-46%), however in both 2021 and 2022 approximately one-fifth (65% and 43%, respectively) of those who reported past six month e-cigarette use had not used tobacco in that period.

**Figure 2. Median days of tobacco use in the past six-months preceding the interview among those who reported exclusive tobacco use compared to those who reported dual use, NSW EDRS, 2022**

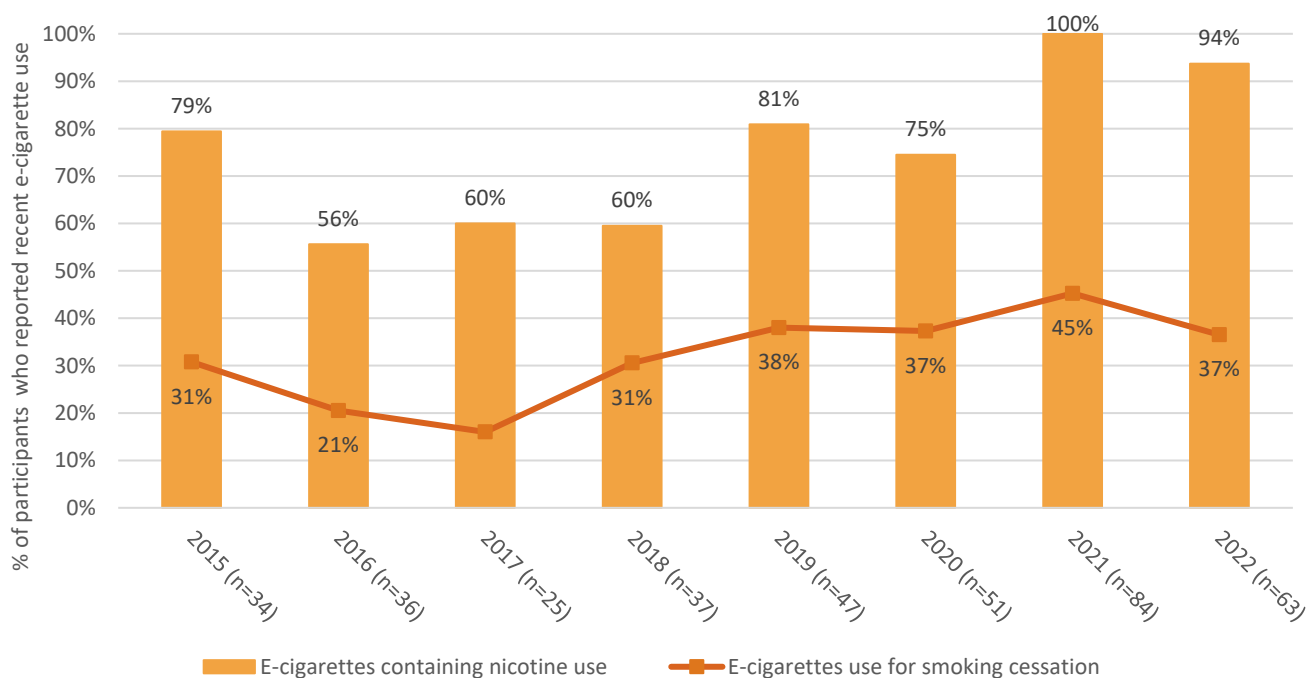


**Figure 3. Median number of e-cigarette use in the past six-months preceding the interview among those who reported exclusive e-cigarette use compared to those who reported dual use, NSW EDRS, 2022**



Those who reported dual use reported using tobacco on a median of 48 days (IQR=4-180) in the past six months preceding the interview, substantially less than those who reported exclusive tobacco use (150 days (IQR=10-180)). In contrast, the median days of e-cigarette use among those who reported dual use is substantially higher than those who reported exclusive e-cigarette use (120 days (IQR=72-180) versus 67 days (IQR=5-180)).

**Figure 3. Past six-month use of e-cigarettes containing nicotine, and use as a smoking cessation tool, among those who reported recent e-cigarette use, NSW EDRS, 2015-2022.**



Note. Questions regarding the contents in the e-cigarettes and use for smoking cessation purposes were introduced in 2015. The number of participants answering the smoking cessation question (i.e., the denominator) in 2015, 2016, 2018 and 2019 was 39, 39, 36 and 50 respectively. In 2020, additional response options were added to the questionnaire to assess whether participants were using e-cigarettes for smoking cessation purposes since March 2020 (since COVID-19 restrictions) as compared to before. The per cent reporting the use of e-cigarettes for smoking cessation purposes in 2020 was computed by merging the values for 'yes, before March 2020', 'yes, after March 2020' and 'yes, both'. Data labels are suppressed where there are small numbers (i.e.,  $n \leq 5$  but not 0).



A substantial portion of the NSW EDRS sample reported using e-cigarettes containing nicotine since monitoring began, with 94% reporting e-cigarette use containing nicotine in 2022.

After some fluctuation between 2015 to 2018, the per cent reporting the use of e-cigarettes for smoking cessation purposes has remained relatively stable from 2019 onwards. In 2022, just under two-fifths (37%) of those who had recently used e-cigarettes reported using them as a smoking cessation strategy.

### Past six months use of prescribed e-cigarettes and trouble accessing e-cigarettes in 2022.

Following the introduction of the prescription pathway to legally access e-cigarettes containing nicotine, questions regarding whether participants used prescribed or non-prescribed e-cigarettes were introduced in 2022. However, five or less participants reported recent prescribed use, with the majority (61%) reporting non-prescribed use.

Similarly, five or less participants reported trouble accessing prescribed or non-prescribed e-cigarettes since monitoring began in 2022 (noting that this question was only asked of participants who reported recent e-cigarette use).

## Discussion

Recent e-cigarette use among the NSW EDRS sample has gradually increased over time, with almost two thirds of the sample reporting recent use in 2022. Although the per cent reporting use in 2022 declined from 2021, this is largely a reflection of the unprecedented spike in use in 2021, with 2022 figures remaining higher than have been reported in each year from 2014-2020. Frequency of e-cigarettes use remained stable in 2022 relative to 2021 (5), as did the proportion reporting use of e-cigarettes containing nicotine. Five or less participants reported recent use of prescribed e-cigarettes or trouble accessing e-cigarettes in 2022. Combined, these findings suggest that the changes in legislation introduced on 1 October 2021 have had little discernible impact on use of e-cigarettes among the EDRS sample, which is perhaps not surprising given that this is a group of people who are already sourcing illegal or non-prescribed substances. Alternatively, it may be too early for changes to be detected, with EDRS interviews conducted approximately six months after legislation came into effect, highlighting the importance of continued monitoring.

While the use of e-cigarettes containing nicotine was common, our analysis found that less than half of those who reported e-cigarette use reported using it for smoking cessation purposes in all years since reporting began in 2015. This suggests that the majority of our participants who are using these products do so for reasons that are not related to smoking cessation, such as enjoyment, affordability, and to circumvent smoke-free policies (1). Given that the prescription pathway only provides access to those seeking e-cigarettes for smoking cessation purposes (7), this suggests that, for most EDRS participants, the prescription pathway will be a barrier to accessing the benefits of the regulated e-cigarette market, such as increased quality and safety of the products. To ensure all people who use e-cigarettes are able to access the benefits of regulation, there may be benefit in considering broadening the requirements for attaining a prescription for e-cigarettes containing nicotine.

Dual use was common among the Sydney EDRS sample. People who had used both e-cigarettes and tobacco reported substantially lower median days of tobacco use compared to exclusive tobacco smokers (48 days versus 150 days) and higher median days of e-cigarette use compared to exclusive e-cigarette users (120 days versus 67 days). This pattern of use aligns with Borland et al's (6) non-daily concurrent use classification which is characterised by the non-daily use of e-cigarettes and tobacco, with these individuals 'torn between two behaviours which they value, presumably in different ways' (6). The federal government recently announced that they plan to further reform tobacco and nicotine-based product regulation (8), indicating that both tobacco and e-cigarettes remain a policy priority. Continued monitoring of both tobacco and e-cigarette patterns of use, including dual use, will therefore be vital in informing future regulations that appropriately balance the experiences of people who use e-cigarettes with harm mitigation measures.

## References

1. Coleman SR, Piper ME, Byron MJ, Bold KW. Dual Use of Combustible Cigarettes and E-cigarettes: a Narrative Review of Current Evidence. *Current Addiction Reports*. 2022 Dec;9(4):353-62. Available from: <https://doi.org/10.1007/s40429-022-00448-1>
2. Baenziger O. N, Ford L, Yazidjoglou A, Joshy G, & Banks E. E-cigarette use and combustible tobacco cigarette smoking uptake among non-smokers, including relapse in former smokers: umbrella review, systematic review and meta-analysis. *BMJ Open*. 2021 March;11(3):e045603. Available from: <https://doi.org/10.1136/bmjopen-2020-045603>
3. Jackson SE, Shahab L, West R, Brown J. Associations between dual use of e-cigarettes and smoking cessation: a prospective study of smokers in England. *Addictive behaviors*. 2020 Apr 1;103:106230. Available from: <https://doi.org/10.1016/j.addbeh.2019.106230>
4. Therapeutic Goods Association (TGA). TGA confirms nicotine e-cigarette access is by prescription only [internet]. Canberra (AU): TGA; 2020 [Published 21 December 2020; cited 2023 Mar 27]. Available from <https://www.tga.gov.au/news/media-releases/tga-confirms-nicotine-e-cigarette-access-prescription-only-21-December-2021>
5. Jones F, Peacock A, Sutherland R. New South Wales Drug Trends 2022: Key Findings from the Ecstasy and Related Drugs Reporting System (EDRS) Interviews. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney. 2022. DOI: 10.26190/mskn-2692
6. Borland R, Murray K, Gravely S, Fong GT, Thompson ME, McNeill A, O'Connor RJ, Goniewicz ML, Yong HH, Levy DT, Heckman BW. A new classification system for describing concurrent use of nicotine vaping products alongside cigarettes (so-called 'dual use'): findings from the ITC-4 Country Smoking and Vaping wave 1 Survey. *Addiction*. 2019 Oct;114:24-34. Available from <https://doi.org/10.1111/add.14570>
7. Zwar N, Richmond R, Borland R, Peters M, Litt J, Bell J, Caldwell B, Ferretter I. Supporting smoking cessation: a guide for health professionals [internet]. Melbourne: The royal Australian college of general practitioners; 2011 [Updated 29 Sept 2021; cited 2023 Mar 27]. Available from <https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/supporting-smoking-cessation>
8. The Hon Mark Bulter MP. Ten years of world-leading reforms and reigniting the fight against tobacco addiction [internet]. Canberra (AU): Federal Government; 2022 [Published 30 November 2022; cited 2023 Mar 27]. Available from <https://www.health.gov.au/ministers/the-hon-mark-butler-mp/media/ten-years-of-world-leading-reforms-and-reigniting-the-fight-against-tobacco-addiction?language=en>

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