



Use of non-prescribed pharmaceutical opioids among a sample of people who regularly inject drugs in Australia, 2000-23

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Data was collected as part of the Illicit Drugs Reporting System (IDRS). Annual interviews were conducted with people residing in Australia who injected illicit drugs monthly or more frequently and were aged 18 or older.

Key Findings

Australia IDRS



Since 2021, IDRS participants have gone from most commonly injecting **opioids** in the month prior to interview, to most commonly injecting **stimulants**.



Non-prescribed use of pharmaceutical opioids has generally **declined** over the past decade.



However, in 2023, **1 in 3** participants still reported using some form of non-prescribed pharmaceutical opioid in the past six months.



These percentages remain **highest** in the most isolated jurisdictions (TAS, NT, WA).

Introduction

It is well established that there were substantial increases in pharmaceutical opioid prescriptions across many Western countries in recent decades. Enthusiastic prescription and assertive marketing of opioids that overestimated the benefits of these medications for chronic conditions and understated their risks fuelled the development of escalating use, including non-medical use, and deaths from overdose, particularly in Northern America (1).



In Australia, rates of pharmaceutical opioid prescriptions also increased between 1990 and the mid-2010s, albeit less dramatically than the situation in North America (2). Deaths associated with opioids also increased in this period (3).

In affected countries, there were multiple policy responses to meet these challenges. In Australia, these included the introduction of tamper-resistant/abuse-deterrent formulations for opioids, prescription drug monitoring programs, take-home naloxone programs, increased workforce training on pain management, greater emphasis on multidisciplinary pain management services, and regulatory changes to availability, indications and subsidies for pharmaceutical opioids (4,5). Analyses of prescription data have demonstrated reduced rates and volumes of opioids being prescribed in Australia between 2018 and 2021 as these changes were rolled out (6,7), however trends in non-medical use have received less attention.

In this bulletin we aim to describe reports of use of non-prescribed pharmaceutical opioid products in a sample of people who regularly inject illicit drugs in Australia between 2000 and 2023.

Methods

Data were collected as part of the Illicit Drug Reporting System (IDRS). Annual interviews were conducted with people residing in a Australian capital city who injected illicit drugs on at least six days in last six months preceding the interviews. Please refer to the [IDRS Background and Methods](#) (8) and the [National 2023 IDRS report](#) (9) for further details.

The full dataset involves 21,673 interviews conducted between 2000 and 2023, with 900 interviews typically conducted per year (n≈150 interviews in Melbourne and Sydney, and n≈100 in all other capital cities). These interviews were conducted predominately via face-to-face surveys as well as telephone surveys in some instances after the onset of COVID-19.



Participants reported the drug they had injected most often in the past month, whether they had recently (i.e., in the past 6 months) used a number of different drugs, and, where relevant, whether this drug was prescribed to them. Not all of the substances reported on were systematically assessed at each time point of the study. The years that use of each substance was systematically recorded in are apparent in [Figure 5](#) and [Figure 6](#), with Physeptone assessed annually since 2000; methadone syrup since 2001, Subutex since 2002, oxycodone since 2005, morphine and Suboxone since 2006, Tapentadol since 2017, fentanyl since 2018 and 'other opioids' since 2020.

Descriptive statistics (i.e., the per cent of the sample who reported using each drug of interest) were used to analyse the data over time. We were primarily interested in non-prescribed opioid use. For 'drug injected most in the past month', participants did not report whether the drug was prescribed, so any pharmaceutical opioid use is reported for this variable only.

The main categorisations of opioids in this bulletin include:

- Any non-prescribed pharmaceutical opioid: non-prescribed methadone (syrup, Physeptone), buprenorphine (Subutex, Suboxone), morphine, oxycodone, Tapentadol, fentanyl, and other opioids; and
- Any non-prescribed opioid: heroin and/or any of the pharmaceutical opioids.

Pharmaceutical opioids were further disaggregated into those used in opioid substitution therapy (methadone, subutex, suboxone) and those typically prescribed for pain, hereafter referred to as pharmaceutical opioid analgesics (physeptone, morphine, oxycodone, Tapentadol, fentanyl).

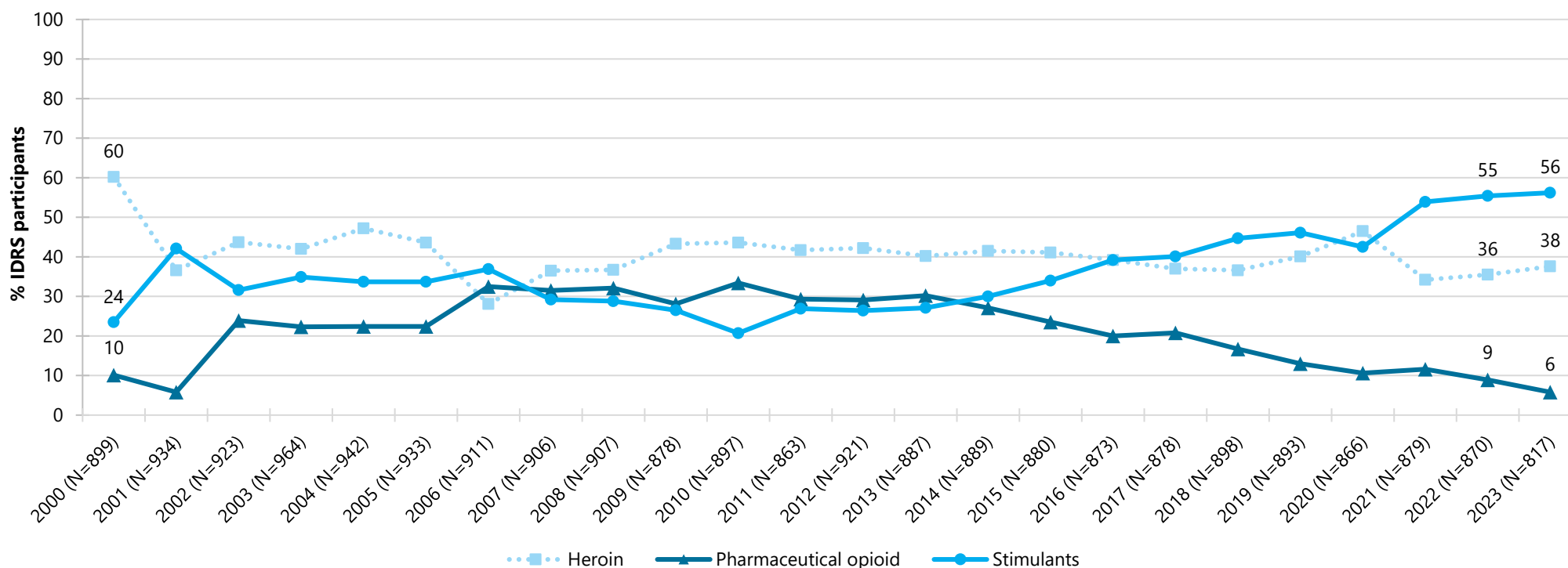
Results

Drug injected most often in past month

Between 2000 and 2020, IDRS participants most commonly nominated an opioid (i.e., heroin or pharmaceutical opioids) as the substance injected most often in the month prior to interview (Figure 1). However, from 2021 onwards, stimulants have emerged as the drug injected most often, predominantly comprising methamphetamine.

In the past decade, reports of heroin as the drug most often injected have remained largely stable (40% in 2013; 38% in 2023); in contrast, there has been a steady decline in pharmaceutical opioids as the drug most often injected (30% in 2013, 6% in 2023).

Figure 1. Drug injected most often in the past month, nationally, 2000-2023



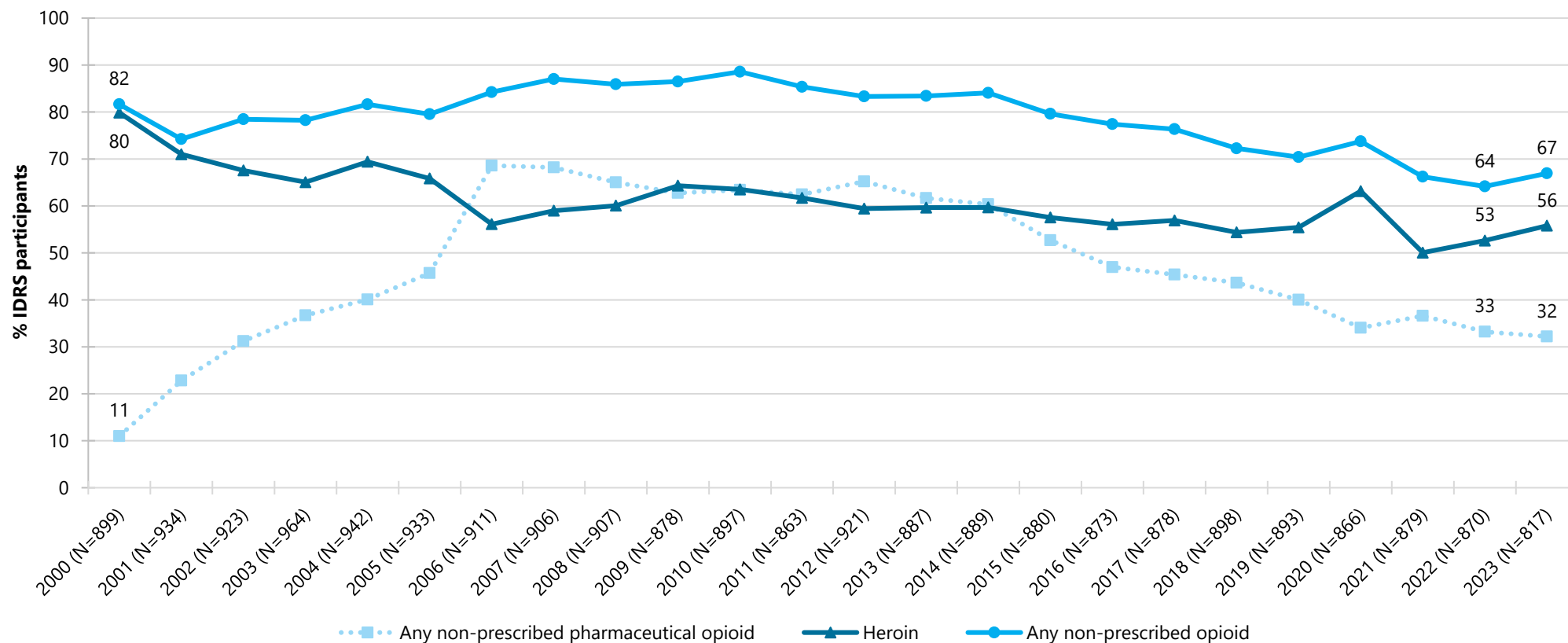
Note. In this plot 'pharmaceutical opioid' refers to a non-heroin opioid. Percents do not equal 100 as drugs that were neither opioids nor stimulants are not included here.

Results

Recent non-prescribed opioid use

As seen in [Figure 2](#), there has been a decline in recent (past 6-month) use of *any* non-prescribed opioids over the past decade. In 2023, approximately two in three (67%) participants reported any non-prescribed opioid use in 2023, compared to approximately four in five participants in the decade prior (83% in 2013). While the IDRS did not systematically record non-prescribed use of all pharmaceutical opioids in the early years, there was a clear increase in reports of use between 2000 and 2006 (11% in 2000; 69% in 2006), whereas the past decade has seen a decline (62% in 2013; 32% in 2023).

Figure 2. Past six-month use of any non-prescribed pharmaceutical opioids, nationally, 2000-2023



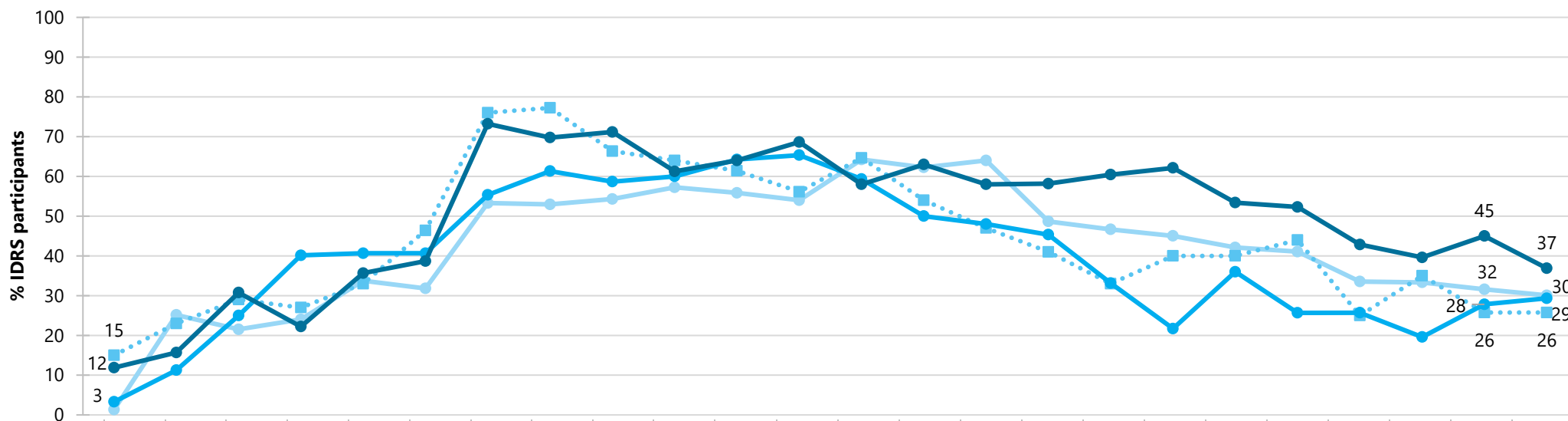
Note. 'Any non-prescribed opioid' refers to use of heroin or any non-prescribed pharmaceutical opioid.

Results

Recent non-prescribed pharmaceutical opioid use, stratified by capital city

These broad national trends in recent use of *any* pharmaceutical opioids were seen in the Eastern cities (Sydney, Canberra, Melbourne, Brisbane/Gold Coast; [Figure 3](#) & [Figure 4](#)). In other jurisdictions, particularly the more isolated Tasmania and Northern Territory, use of pharmaceutical opioids was more common overall and has been slower to decline than the larger jurisdictions.

Figure 3. Past six-month non-prescribed pharmaceutical opioid use – Australian Eastern Cities (Sydney, Canberra, Melbourne, Brisbane/Gold Coast), 2000-2023

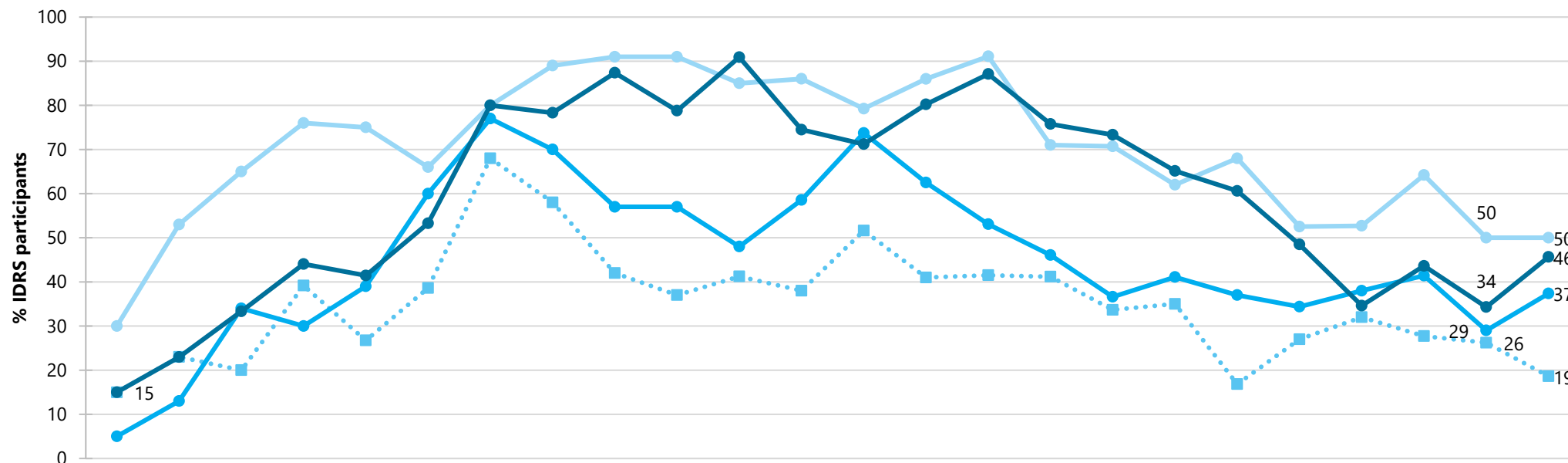


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
— Sydney	-	25	22	24	34	32	53	53	54	57	56	54	64	62	64	49	47	45	42	41	34	33	32	30
... Canberra	15	23	29	27	33	46	76	77	66	64	61	56	65	54	47	41	33	40	40	44	25	35	26	26
— Melbourne	3	11	25	40	41	41	55	61	59	60	64	65	59	50	48	45	33	22	36	26	26	20	28	29
— Brisbane/Gold Coast	12	16	31	22	36	39	73	70	71	61	64	69	58	63	58	58	60	62	53	52	43	40	45	37

Note. - Values suppressed due to small cell size (n≤5 but not 0).

Results

Figure 4. Past 6-month non-prescribed pharmaceutical opioid use – Other Australian cities (Hobart, Adelaide, Perth, Darwin), 2000-2023



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
—●— Hobart	-	53	65	76	75	66	80	89	91	91	85	86	79	86	91	71	71	62	68	53	53	64	50	50
...■... Adelaide	15	23	20	39	27	39	68	58	42	37	41	38	52	41	42	41	34	35	17	27	32	28	26	19
—●— Perth	-	13	34	30	39	60	77	70	57	57	48	59	74	63	53	46	37	41	37	34	38	41	29	37
—●— Darwin	15	23	33	44	41	53	80	78	87	79	91	74	71	80	87	76	73	65	61	48	35	44	34	46

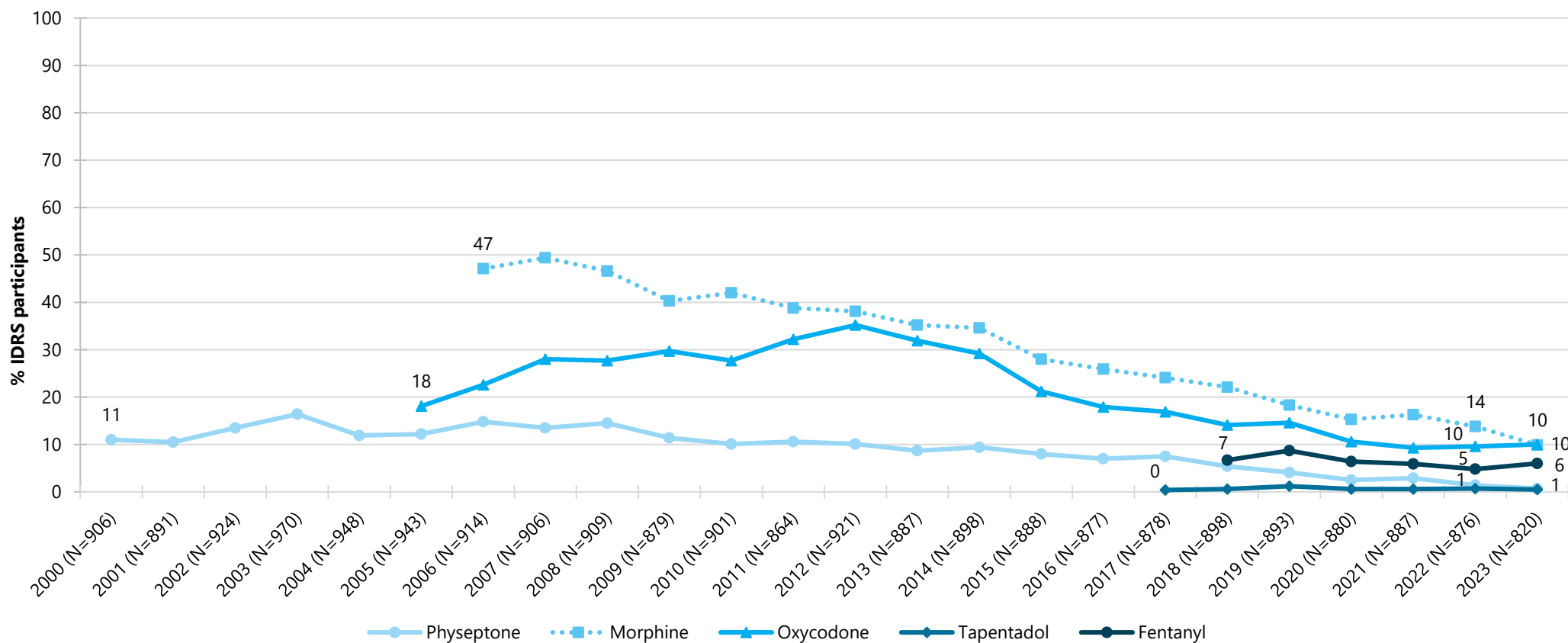
Note. - Values suppressed due to small cell size (n≤5 but not 0). In 2023, the sample sizes for Hobart (N=66) and Darwin (N=46) were smaller than previous years.

Results

Recent use of non-prescribed pharmaceutical opioids that are typically used for pain

While there has been a general decline overall in reports of use of non-prescribed pharmaceutical opioids, this has been most apparent in those typically used in pain management (Figure 5). This is particularly apparent with morphine and oxycodone (with one third of IDRS participants reporting recent use of each of these substances (35% and 32%, respectively) in 2013, compared to one in ten in 2023 (10%).

Figure 5. Past six-month use of non-prescribed pharmaceutical opioids that are typically used for pain, nationally, 2000-2023



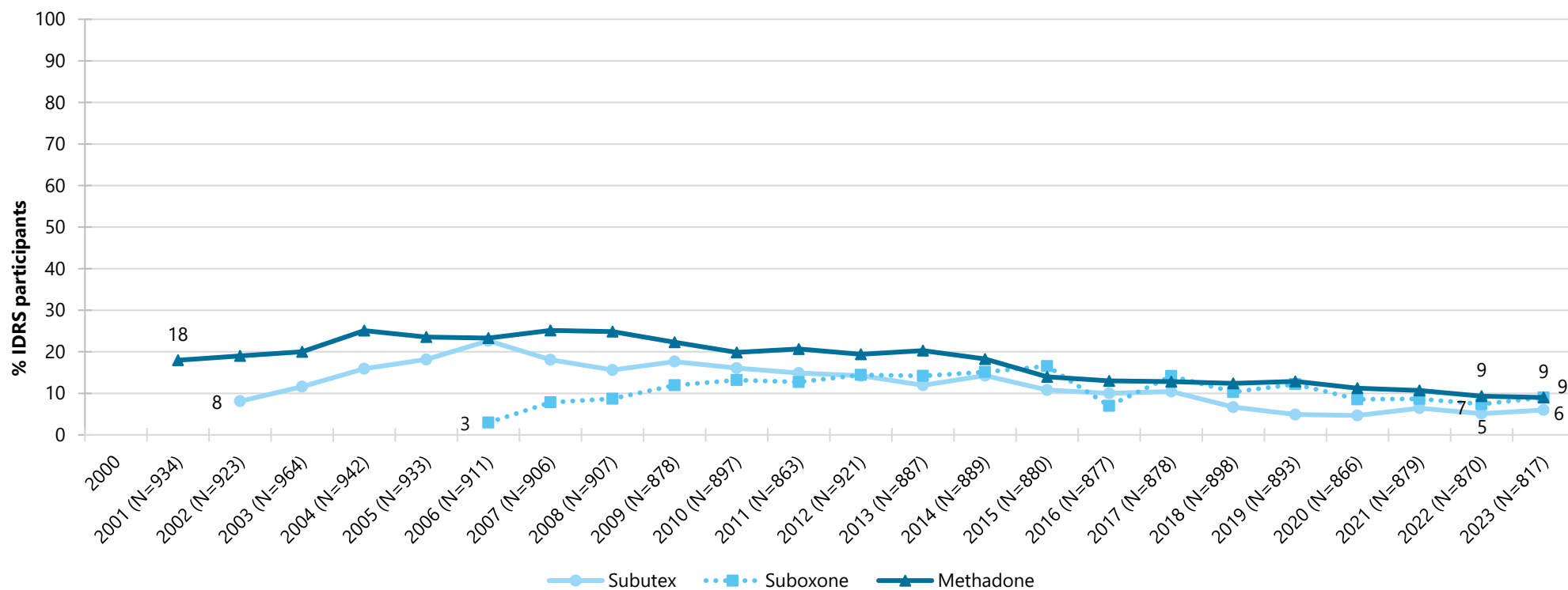
Note. In all instances, these data refer to non-prescribed use; this can include cases where use of an opioid which may have been indicated for the person (for example, if they were also receiving opioids for pain) but the substance was not directly prescribed to the participant.

Results

Recent use of non-prescribed pharmaceutical opioids that are typically used in opioid substitution therapy

Non-prescribed use of the opioids typically used in opioid substitution therapy (OST) has typically been a smaller and less frequent component of the pharmaceutical opioid use reported in the IDRS samples (9). Further, while declines in non-prescribed use of opioids used in OST have been reported (Figure 6), these have occurred at a slower rate than that seen for non-prescribed opioid analgesics (e.g., morphine).

Figure 6. Past six-month use of non-prescribed pharmaceutical opioids that are typically used in opioid substitution therapy, nationally, 2000-2023



Note. In all instances, these data refer to non-prescribed use; this can include cases where use of an opioid which may have been indicated for the person (for example, if they were also currently part of an opioid substitution treatment) but the substance was not directly prescribed to the participant.

Discussion

Since 2021, IDRS participants have gone from most commonly injecting opioids in the month prior to interview, to most commonly injecting stimulants. Opioid use remains, however, a central part of the substance use pattern of these cohorts. While non-prescribed use of pharmaceutical opioids has generally declined over the past decade, it is important to note that one in three IDRS participants in 2023 still reported using something from this group in the past six-months. These percentages remain highest in the most isolated jurisdictions (Tasmania, Northern Territory, Western Australia). As such it is important that harm reduction approaches for these types of substances (particularly filtering education and equipment [10], as well as naloxone) continue to form central parts of discussion with people who inject opioids.

References

1. Vadivelu N, Kai AM, Kodumudi V, Sramcik J, Kaye AD. The opioid crisis: a comprehensive overview. *Current pain and headache reports*. 2018 Mar;22:1-6. <https://doi.org/10.1007/s11916-018-0670-z>
2. Karanges EA, Blanch B, Buckley NA, and Pearson SA. Twenty-five years of prescription opioid use in Australia: a whole-of-population analysis using pharmaceutical claims. *British journal of clinical pharmacology*. 2016 Jul;82(1):255-67. <https://doi.org/10.1111/bcp.12937>
3. Roxburgh A, Hall WD, Dobbins T, Gisev N, Burns L, Pearson S, Degenhardt L. Trends in heroin and pharmaceutical opioid overdose deaths in Australia. *Drug and alcohol dependence*. 2017 Oct 1;179:291-8. <https://doi.org/10.1016/j.drugalcdep.2017.07.018>
4. Campbell G, Larance B, Gisev N, Pearson S, Lintzeris N, Degenhardt L. Regulatory and other responses to the pharmaceutical opioid problem. *The Medical Journal of Australia*. 2019 Jan;210(1):6. <https://doi.org/10.5694/mja2.12047>
5. NPS MedicineWise. Opioids: New and amended PBS listing [Internet]. Sydney, Australia: Australian Commission on Safety and Quality in Health Care, 2020 Jun 20 [updated 2020 Jul 1; cited 2024 Jul 21]. Available from: <https://www.nps.org.au/radar/articles/opioids-new-and-amended-pbs-listings>
6. Koch FC, Olivier J, Brett J, Buckley NA, Gisev N, Pearson S, Daniels B. The impact of tightened prescribing restrictions for PBS-subsidised opioid medicines and the introduction of half-pack sizes, Australia, 2020–21: an interrupted time series analysis. *Medical Journal of Australia*. 2024 Apr 1;220(6):315-22. <https://doi.org/10.5694/mja2.52257>
7. Australian Commission on Safety and Quality in Health Care. Opioid medicines dispensing: All ages 2016-17 to 2020-21 [Internet]. Sydney, Australia: Australian Commission on Safety and Quality in Health Care [cited 2024 Jul 21]. Available from: <https://www.safetyandquality.gov.au/our-work/healthcare-variation/opioid-medicines-dispensing-all-ages-2016-17-2020-21>
8. Sutherland R, Uporova J, King C, Chandrasena U, Karlsson A, Jones F, Gibbs D, Price O, Dietze P, Lenton S, Salom C, Bruno R, Wilson J, Agramunt S, Daly C, Thomas N, Radke S, Stafford L, Degenhardt L, Farrell M, & Peacock A. *Illicit Drug Reporting System (IDRS) Interviews 2023: Background and Methods*. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2023.
9. Sutherland R, Uporova J, King C, Chandrasena U, Karlsson A, Jones F, Gibbs D, Price O, Dietze P, Lenton S, Salom C, Bruno R, Wilson J, Agramunt S, Daly C, Thomas N, Radke S, Stafford L, Degenhardt L, Farrell M, & Peacock A. *Australian Drug Trends 2023: Key Findings from the National Illicit Drug Reporting System (IDRS) Interviews*. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2023. DOI: <https://doi.org/10.26190/1tj1-8454>

10. McLean S, Patel R, Bruno R. Injection of pharmaceuticals designed for oral use: Harms experienced and effective harm reduction through filtration. Non-medical and illicit use of psychoactive drugs. 2017:77-98. https://doi.org/10.1007/7854_2016_470

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