

Access to naloxone in Tasmania, 2014-2022

Authors: Raimondo Bruno^{1,2}, Yalei Wilson¹, Robyn Greaves³, and Myf Briggs⁴

¹School of Psychological Sciences, University of Tasmania

²National Drug and Alcohol Research Centre, University of New South Wales Sydney

³Mental Health, Alcohol and Drug Directorate, Tasmanian Department of Health

⁴Public Health Services, Tasmanian Department of Health

Key findings

Tasmania 



Access to naloxone among people who inject drugs has dramatically increased thanks to a Tasmanian government trial of take home naloxone commencing in 2020.



Awareness of naloxone and its functions is extremely high (94% in 2021) and has been increasing among people who inject drugs in Hobart since 2014.



Between July 2020 and June 2022 there have been 75 overdoses reversed by naloxone distributed through the Tasmania take-home naloxone program reported to Needle and Syringe Program staff in Tasmania.

Introduction

Opioid overdose is a major public health issue responsible for substantial morbidity and mortality (1, 2). People who inject drugs often report experiencing non-fatal opioid overdose and a history of injecting drug use is often noted in coronial findings related to deaths induced by opioids (see 1, 2). Interventions to prevent opioid overdose are available, including opioid substitution therapy (OST) and take-home naloxone (3-5).

Naloxone is an opioid antagonist that is used as a safe and effective agent for temporarily reversing the effects of opioids, including pharmaceutical opioids (e.g., methadone, codeine, fentanyl, morphine) and illicit opioids such as heroin (6). The primary appeals of naloxone are that it is highly effective in reversing opioid overdose, and in the absence of opioids it essentially has no pharmacological effects. Adverse events following a reversal are typically predictable (acute opioid withdrawal symptoms) although some association with seizure and tachycardia has been identified (7).

Naloxone access in Tasmania

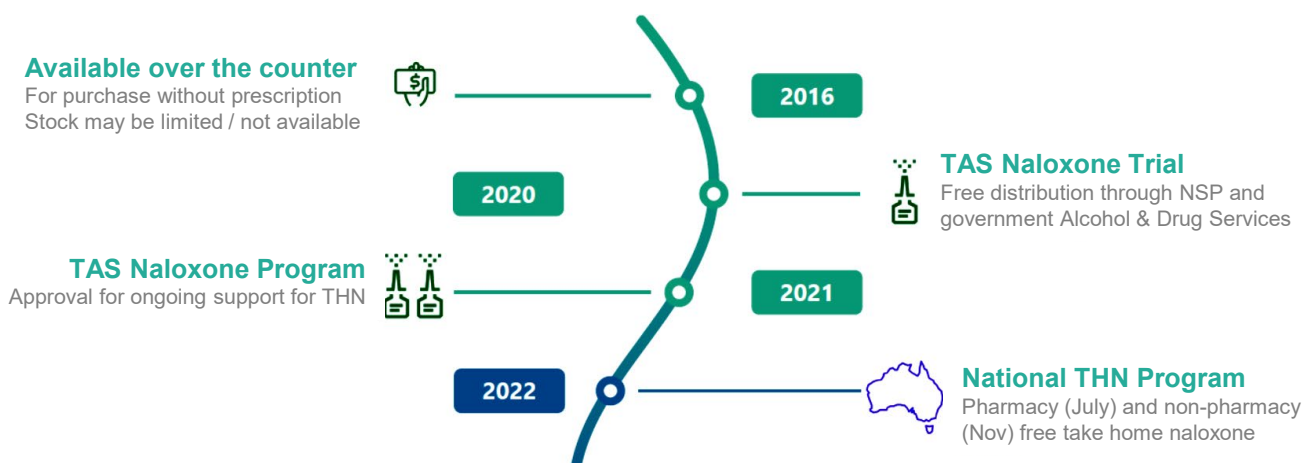
Naloxone has long been available via prescription in Australia, however it was practically inaccessible to people who inject drugs (8). Starting in 2012, a number of take-home naloxone programs commenced in Australia, providing training and prescription directly to consumers (9).

Funded by the Australian Government Department of Health under the Drug and Alcohol Program ©NDARC, UNSW SYDNEY 2022. This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. All other rights are reserved. Requests and enquiries concerning reproduction and rights should be addressed to the information manager, NDARC, UNSW Sydney, NSW 2052, Australia.

Tasmania did not have access to any of these programs and the first practical level of access came in February 2016, where naloxone was down scheduled to allow purchase over the counter in all Australian pharmacies (as well as via prescription) (10). However, consumer access to naloxone in Tasmania remained poor due to the interrelated barriers of the costs to access the drug and pharmacies not stocking it due to poor demand (11).

Since this time there have been multiple important changes to improve practical access to the drug in Tasmania:

- In 2018 the Tasmanian Poisons Regulations 2018 came into effect and allowed for a pharmacist to supply to 'a person who may be required to administer' naloxone for the purpose of treating opioid toxicity (r58(7)), and possession (r10) and use of naloxone as part of a registered first aid service (s18A of the Poisons Act 1971).
- In 2020, the Tasmanian Poisons Regulations 2018 were amended to allow certified Needle and Syringe Program workers at permitted premises to supply naloxone to people deemed at risk of opioid-related overdose.
- In 2020, the Tasmanian Government, as part of its response to COVID-19, provided funding for a trial of free take-home naloxone (THN) through Primary Needle and Syringe Program outlets across the State as well as through government Alcohol and Drug Services. This included training for Needle and Syringe Program staff, as well as interested staff from government and non-government workers in alcohol and other drug services and correctional health services. Needle and Syringe Program staff promote naloxone to clients during regular service contacts, and complete a brief intervention along with a risk assessment when dispensing naloxone.
- In March 2021, the Minister for Mental Health and Wellbeing approved ongoing funding for the free take-home naloxone program.



The aim of this bulletin is to provide an overview of key data sources that relate to naloxone use in Tasmania.

Method

Data were drawn from the surveys of people who regularly inject drugs conducted in Hobart as part of the Illicit Drug Reporting System (IDRS) between 2014 and 2021. The IDRS is an annual cross-sectional survey of people who regularly inject drugs recruited from all capital cities of Australian states and territories. Participants were administered a one-hour face-to-face interview and reimbursed \$40 for their time, with the exception of 2020 and 2021 when interviews were also conducted via telephone or video-conference due to COVID-19. Please refer to the IDRS Background and Methods document for further details (12).

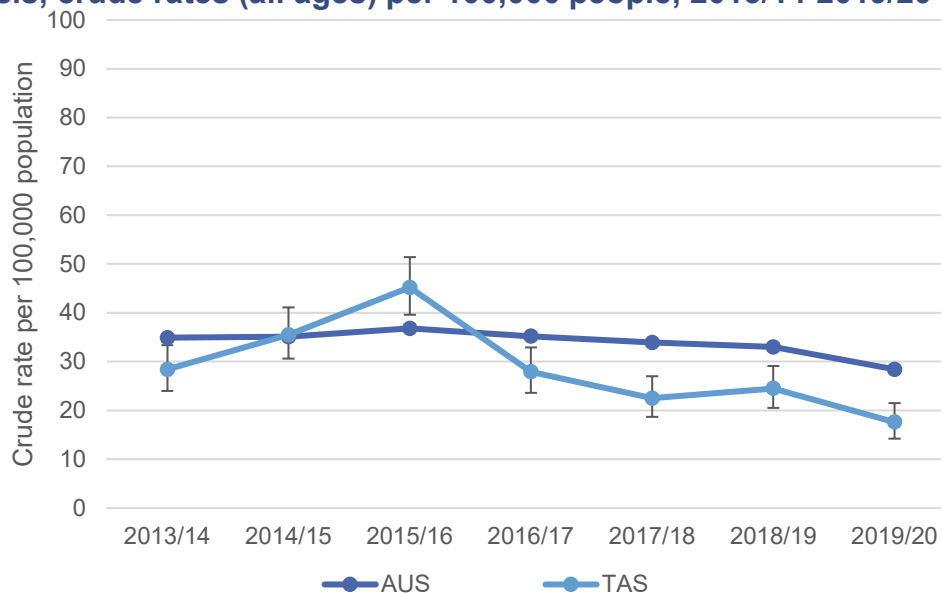
Data on naloxone dispensing from Needle and Syringe Programs as part of the Tasmanian take-home naloxone program from quarter 3 2020 and quarter 2 2022 was provided by Public Health Services, Tasmanian Department of Health. These data also include naloxone reversals reported to Needle and Syringe Program staff in Tasmania.

Population-level opioid-related hospitalisations and unintentional opioid-induced deaths were derived from visualisations by the National Illicit Drug Indicators Project (see 13 and 14 for full details of methods).

Results

Adverse events related to opioids in Tasmania

Figure 1. Public hospitalisations where opioids were noted as the principal diagnosis, crude rates (all ages) per 100,000 people, 2013/14-2019/20

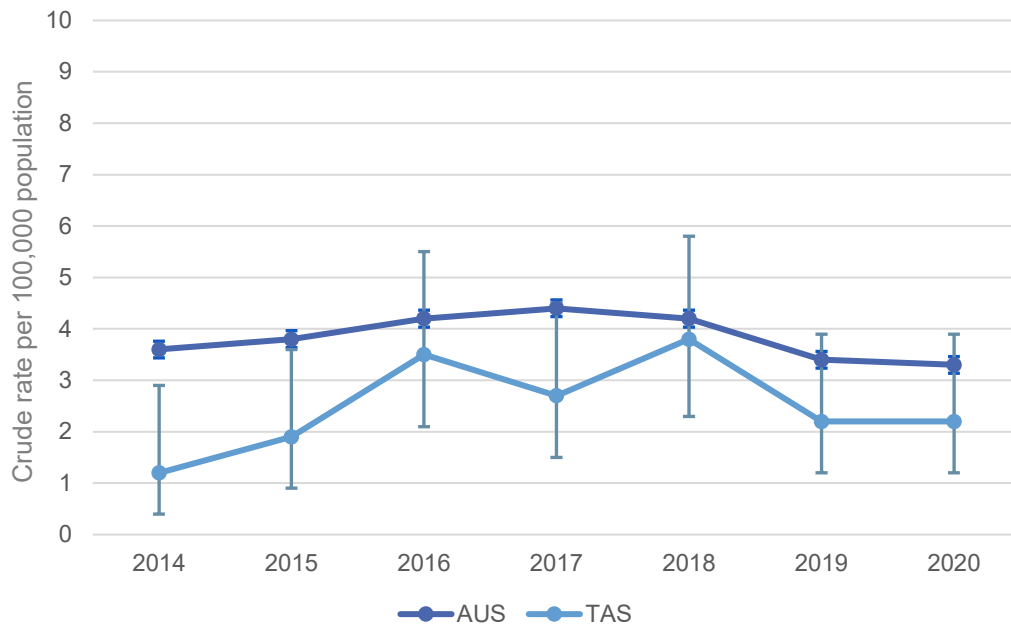


Source: Drug Trends, NDARC (13)

Note: For Tasmania, provision of data between 2008-09 and 2015-16 was limited. Estimates of drug-related hospitalisations for this period are likely to be underestimated or unavailable. Error bars represent 95%CI.

Tasmanian opioid-related hospital admissions has consistently been lower than the national rate since 2016/17 (Figure 1). Similar has been observed for unintentional opioid-induced deaths (Figure 2).

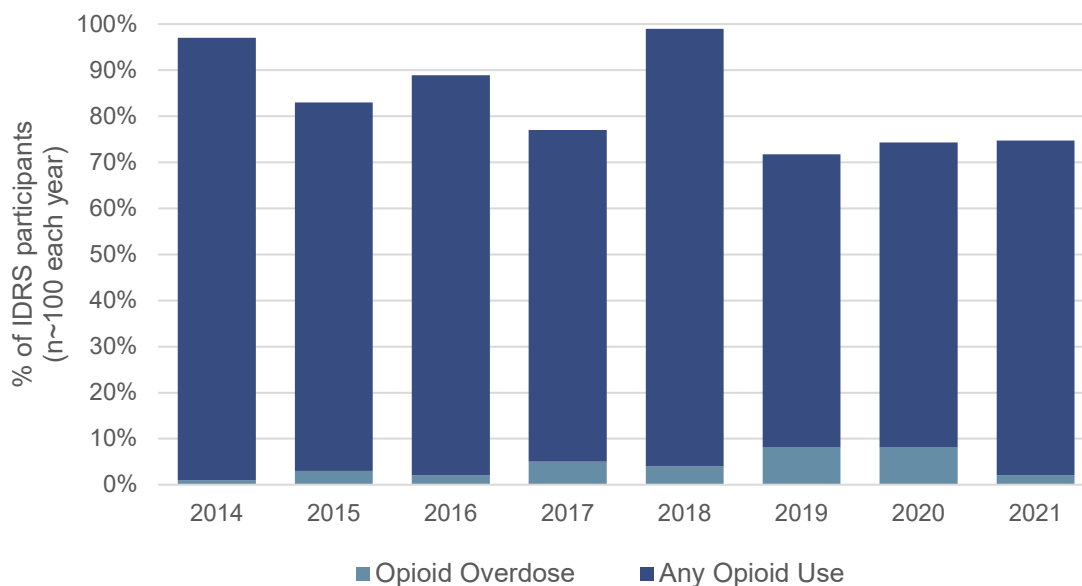
Figure 2. Unintentional opioid-induced deaths, crude rates (all ages) per 100,000 people, 2014-2020



Source: Drug Trends, NDARC (14)

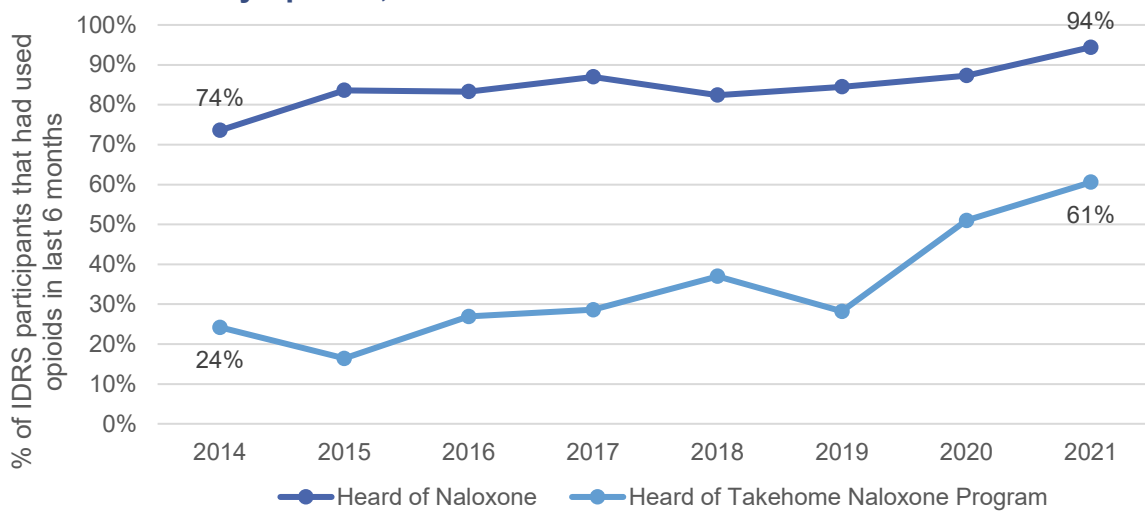
Note: These data refer to deaths where opioid toxicity was considered to be the underlying cause of death. Causes of death data undergo a revision process. Data for 2019 and 2020 are preliminary and subject to another two rounds of revision. Data for 2018 are subject to another round of revision. Data for 2017 and earlier years are final.

Figure 3. Rates of recent (past 6 month) opioid use and non-fatal opioid overdose (past 12 month) among Hobart IDRS participants, 2014-2021



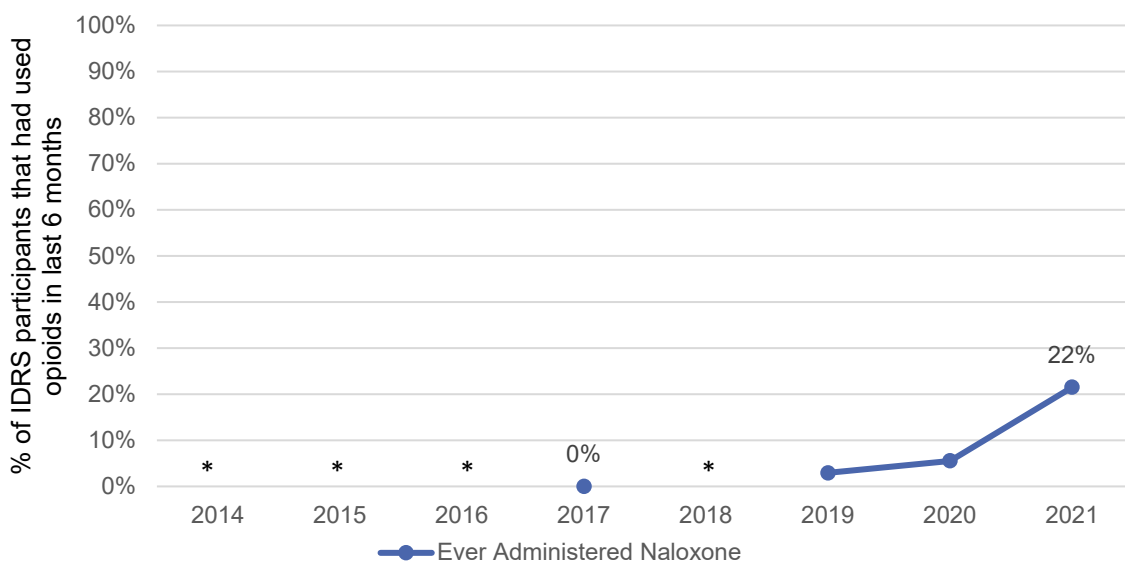
Note. Non-fatal opioid overdose was computed of the total sample (including people who did not use opioids). In the 2019 and 2020 IDRS samples, 11% of participants that had recently used an opioid reported a non-fatal opioid overdose in the previous year (Figure 3). In 2021, this rate was 3%, a return to the lower rates seen prior to 2017. This reduction fell just short of meeting statistical significance ($\chi^2_{(1)} = 3.29, p = 0.070$).

Figure 4. Knowledge of naloxone among Hobart IDRS participants that had recent use of any opioids, 2014-2021



In 2021, almost all (94%) of the Hobart IDRS participants that had recently used opioids reported being aware of naloxone and its functions (Figure 4). This has significantly increased from the proportion in 2014 (74%, $X^2_{(1)}=11.290$, $p=0.0008$), and the percentage has remained stable and high between 2020 (87%) and 2021 ($X^2_{(1)}=1.829$, $p=0.176$). Almost two-thirds (61%) of those that recently consumed opioids were aware of take-home naloxone programs, a significant increase from 2014 (24%; $X^2_{(1)}=23.437$, $p<0.0001$). While the percentage reporting awareness for take-home programs was 51% in 2020 and 61% in 2021, this change did not meet statistical significance ($X^2_{(1)}=1.252$, $p=0.263$).

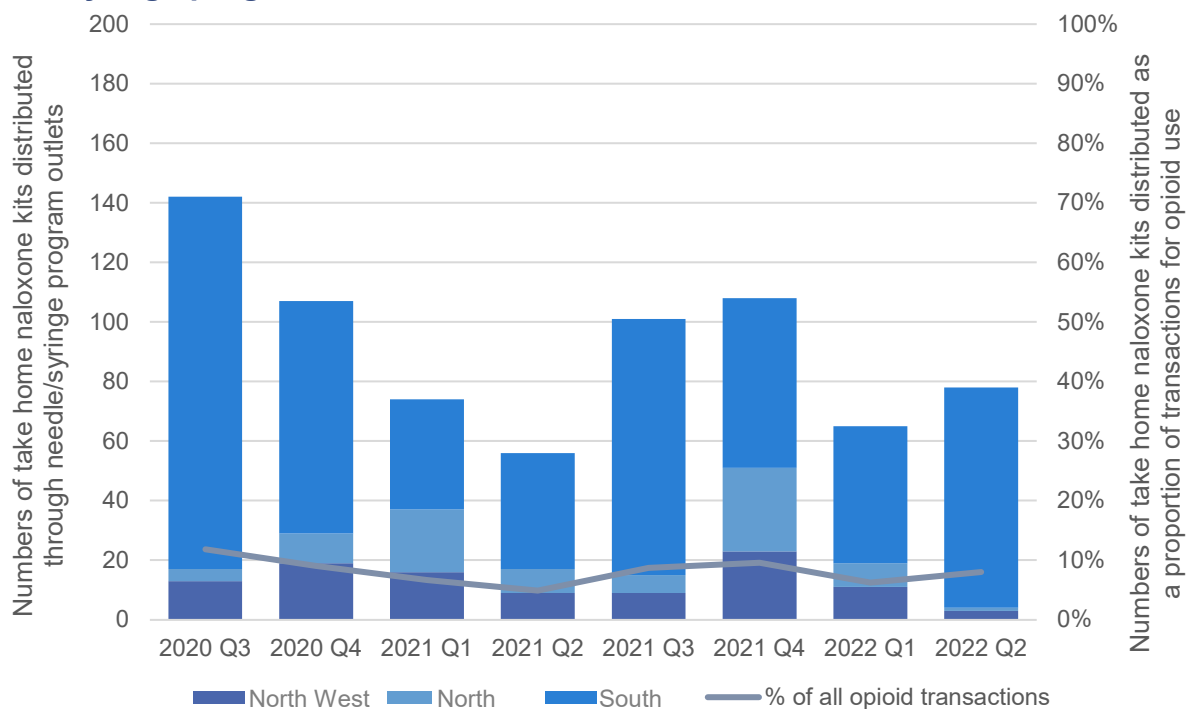
Figure 5. Lifetime administration of naloxone among Hobart IDRS participants that had recent use of any opioid, 2014-2021



Note: *this question not asked in 2014-16 or 2018 surveys

In the 2021 Hobart IDRS sample, one in five of the participants that had recently used opioids reported ever administering naloxone for opioid overdose reversal (Figure 5). This was a significant increase from 6% in the 2020 sample: $X^2_{(1)}=6.168$, $p=0.013$.

Figure 6. Distribution of take-home naloxone kits through Tasmanian needle and syringe program outlets, 2020-2022



Note: Kits distributed through government Alcohol and Drug treatment services are not included in these figures.

In the first 12 months of the Tasmanian take-home naloxone program, there were 379 kits distributed through Needle and Syringe Program outlets state-wide; in the second year 352 kits were distributed. Across the two years of the program, the majority (74%) of these were distributed to clients in the south of the state, which closely matches the fact that the majority of Needle and Syringe Program transactions for opioids (69%) in this period were also in the south. Over the two years of the program, a naloxone kit was distributed approximately once per every 12 opioid-related transactions. This rate has remained relatively stable over the entire two year period. Given that clients may visit the services multiple times per week, and do not require additional kits for some months if reversals are not required, this represents ongoing engagement and demand for the take-home naloxone program.



Between July 2020 and June 2022 there have been 75 overdoses reversed by naloxone distributed through the Tasmania take-home naloxone program reported to Needle and Syringe Program staff in Tasmania.

Discussion

There are many positive indications in these data demonstrating the effectiveness of the Tasmanian free take-home naloxone program. It is clear that naloxone has been used for many successful reversals in the community, indicated by both the data reported to the Needle and Syringe Program and to the independent IDRS study. There are high levels of awareness of naloxone and its function in the key target group of people who are injecting opioids, and the demand for kits has remained relatively stable over the first two years of the program.

There may be room to build on the successes of this program, given that approximately 60% of the people who were consuming opioids in the 2021 Hobart IDRS study were aware of take-home naloxone. Moreover, not all (17 of 19) secondary Needle and Syringe Program outlets are currently participating in the THN program due to staff capacity, and no community pharmacy Needle and Syringe program services are currently participating. There is also a high level of opioid use in the wider non-injecting community (15) that could be reached. Indeed, workers overseeing the Tasmanian program have noted increasing enquiries from other services about accessing free take-home naloxone.

In the 2022-23 Federal Budget a national take-home naloxone program was announced. From 1 July 2022, Section 90 and Section 94 approved pharmacies in all states and territories will be able to participate in the national take-home naloxone program, and multiple Tasmanian community pharmacies have quickly commenced participation already. From 1 November 2022, non-pharmacy sites in ACT, QLD, VIC, TAS and the NT, including alcohol and other drug treatment services, injecting centres, and homelessness / outreach services can commence transition to the program. While the range of services that engage with this national program is yet to be finalised in Tasmania, this is a positive development for further improving access to naloxone in the state.

References

1. Dietze P, Jolley D, Cvetkovski S, Cantwell K, Jacobs I, Indig D. Characteristics of non fatal opioid overdoses attended by ambulance services in Australia. *Australian and New Zealand Journal of Public Health*. 2004;28(6):569 75.
2. Roxburgh A, Hall WD, Dobbins T, Gisev N, Burns L, Pearson S, et al. Trends in heroin and pharmaceutical opioid overdose deaths in Australia. *Drug and Alcohol Dependence*. 2017;179:291 8.
3. Darke S, Hall W. Heroin overdose: research and evidence based intervention. *Journal of Urban Health*. 2003;80(2):189 200.
4. Strang J, Bird SM, Dietze P, Gerra G, McLellan AT. Take home emergency naloxone to prevent deaths from heroin overdose. *British Medical Journal*. 2014;349:6580.
5. Lenton SR, Dietze PM, Jauncey M. Australia reschedules naloxone for opioid overdose. *The Medical Journal of Australia*. 2016;204(4):146 7.
6. Li W, Gunja N. Illicit drug overdose: prevalence and acute management. *Australian Family Physician* 2013;42(6):481 5.
7. Wermeling, P. Review of naloxone safety for opioid overdose: practical considerations for new technology and expanded public access. *Therapeutic Advances in Drug Safety*. 2015; 20 31.

References cont.

8. Penington Institute. Saving Lives: Australian naloxone access model, September, Melbourne: Penington Institute. 2018.
9. Dwyer R, Olsen A, Fowle C, Gough C, van Beek I, Jauncey M, Lintzeris N, Oh G, Dicka J, Fry CL, Hayllar J, Lenton S. An overview of take-home naloxone programs in Australia. *Drug and Alcohol Review*. 2018;37:440-449.
10. Pharmaceutical Society of Australia. Regulatory Issues: Naloxone Schedule 3. 2016. At: https://www.guild.org.au/__data/assets/pdf_file/0022/5584/key_points_re_s3naloxone_new.pdf
11. Sharman C. Bruno R. Trends in naloxone use Among a sample of people who inject drugs in Tasmania. *Drug Trends Bulletin Series*. 2019. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.
12. Sutherland, R., Karlsson, A., Price, O., Chandrasena, U., Uporova, J., Gibbs, D., Swanton, R., Bruno, R., Dietze, P., Lenton, S., Salom, C., Daly, C., Thomas, N., Juckel, J., Agramunt, S., Wilson, Y., Woods, E., Moon, C., Degenhardt, L., Farrell, M. & Peacock, A. (2021). Illicit Drug Reporting System (IDRS) Interviews 2021: Background and Methods. Sydney, National Drug and Alcohol Research Centre, UNSW Sydney.
13. Chrzanowska A. Man N. Sutherland, R., Degenhardt, L., Peacock, A. Trends in drug-related hospitalisation in Australia, 1999-2020. 2021. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney. https://drugtrends.shinyapps.io/hospital_separations/
14. Chrzanowska, A., Man, N., Sutherland, R., Degenhardt, L. Peacock, A. Trends in overdose and other drug-induced deaths in Australia, 1997-2020. 2022. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney. https://drugtrends.shinyapps.io/deaths_2020/
15. Australian Criminal Intelligence Commission. Report 16 of the National Wastewater Drug Monitoring Program. 2022. <https://www.acic.gov.au/publications/national-wastewater-drug-monitoring-program-reports/report-16-national-wastewater-drug-monitoring-program>

Participating Researchers and Research Centres

- Dr Rachel Sutherland, Antonia Karlsson, Julia Uporova, Daisy Gibbs, Rosie Swanton, Olivia Price, Udesha Chandrasena, Professor Louisa Degenhardt, Professor Michael Farrell and Associate Professor Amy Peacock, National Drug and Alcohol Research Centre, University of New South Wales, New South Wales;
- Cristal Hall, Sarah Eddy, Dr Campbell Aitken and Professor Paul Dietze, Burnet Institute, Victoria;
- Yalei Wilson and Associate Professor Raimondo Bruno, School of Psychology, University of Tasmania, Tasmania;
- Dr Seraina Agramunt and Professor Simon Lenton, National Drug Research Institute, Curtin University, Western Australia;
- Catherine Daly, Dr Jennifer Juckel, Dr Natalie Thomas and Associate Professor Caroline Salom, Institute for Social Science Research, The University of Queensland, Queensland; and
- Mr Chris Moon, Northern Territory Department of Health, Northern Territory.

Other Acknowledgements

- The participants who were interviewed for the IDRS in the present and in previous years.
- The agencies that assisted with recruitment and interviewing.
- The IDRS is funded by the Australian Government under the Drug and Alcohol Program.

Suggested Citation

Bruno, R., Wilson, Y., Greaves, R., & Briggs, M. (2022). Access to naloxone in Tasmania, 2014-2022. Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.