



UNSW
NDARC
National
Drug & Alcohol
Research Centre

Trends in the use of Opioid Agonist Treatment in the Australian Capital Territory, 2013-2022





Trends in the use of Opioid Agonist Treatment in the Australian Capital Territory, 2013-2022

Chrianna Bharat, Kendal Chidwick, Natasa Gisev, Michael Farrell, & Louisa Degenhardt

Technical report number: 346

Funded by the Australian Government Department of Health and Aged Care and the ASCEND Program.

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 National Drug and Alcohol Research Centre, UNSW Sydney, NSW 2052, Australia



Suggested citation

Bharat C, Chidwick K, Gisev N, Farrell M, and Degenhardt L. NDARC Technical Report: Trends in the use of Opioid Agonist Treatment in the Australian Capital Territory, 2013-2022. Sydney: UNSW Sydney, 2023. <http://doi.org/10.26190/16m9-6z16>

Acknowledgements

We are grateful to IQVIA, and the wholesalers and pharmaceutical manufacturers who provide their sales data to IQVIA, which makes this work possible. NDARC receives core funding from the Australian Government Department of Health & Aged Care under the Drug and Alcohol Program. We would also like to acknowledge funding from the ASCEND (Advancing the health of people who use drugs: hepatitis C and drug dependence) NHMRC Program Grant (#1150078) for this report.

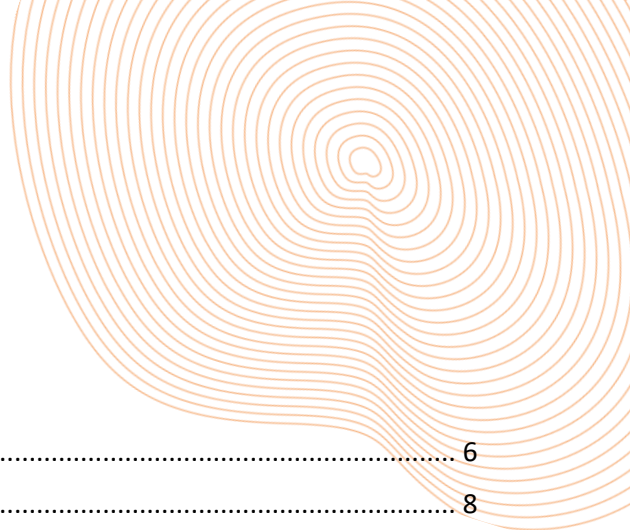


Table of Contents

1. Executive Summary	6
2. Background & Methods.....	8
2.1. Background.....	8
2.2. Aims	9
2.3. Methods	9
3. Guide to interpretation of results	13
4. Findings.....	15
4.1. OAT utilisation by state/territory	15
4.2. OAT utilisation in ACT	17
5. Discussion	26
6. Appendices	28
6.1. Mapping to postcodes	28
6.2. Appendix Tables	28
7. References	54

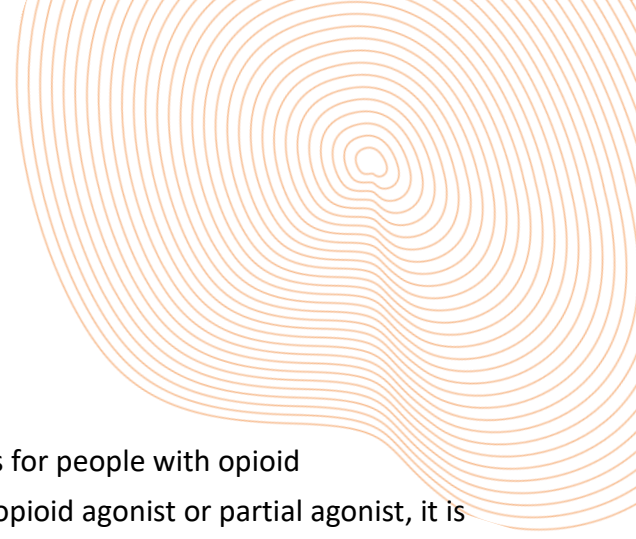


List of Tables

Table 1. Medicines available in the Australian opioid agonist treatment programme.....	10
Table 2. Average doses for OAT medicines; data pooled from Australian cohort studies.....	11

List of Figures

Figure 1. Number of OAT clients (A), and OAT clients per 10,000 population (B), per month by Australian state/territory (2013-2022).	16
Figure 2. Cumulative number of OAT clients (A) and proportion of total OAT clients (B), per month by medicine (ACT, 2013-2022).	18
Figure 3. Number of OAT clients by LAI buprenorphine (LAIB) group* (ACT, 2019-2022).....	19
Figure 4. Number of OAT clients per month by remoteness (ACT, 2013-2022).....	21
Figure 5. Number of OAT clients per month by IRSAD quintile (ACT, 2013-2022).....	22
Figure 6. Number of OAT clients per month, by setting (ACT, 2013-2022).....	24
Figure 7. Number of OAT clients per month by medicine in: community pharmacy (A), hospitals (B), and clinics and medical centres (C) (ACT, 2013-2022).....	25



1. Executive Summary

Opioid agonist treatment (OAT) is one of the main treatments for people with opioid dependence¹. Involving long-term pharmacotherapy with an opioid agonist or partial agonist, it is well established that OAT reduces non-medical use of opioids, injecting and injecting-related injuries, criminal activity, and overall mortality, particularly overdose mortality²⁻⁵. The World Health Organization lists both methadone and buprenorphine^{6,7} as essential medicines for opioid dependence⁸. In Australia, there are currently four OAT formulations subsidised through the Pharmaceutical Benefit Scheme (PBS), including methadone liquid (PBS listed in 1974), sublingual (SL) buprenorphine (2001), SL buprenorphine-naloxone (2005) and long-acting injectable (LAI) buprenorphine (2019)⁹.

LAI formulations of buprenorphine represent a relatively new addition to OAT in Australia¹⁰, having been listed on the PBS since September 2019. LAI buprenorphine is administered via weekly¹¹ or monthly^{12,13} subcutaneous injections, providing an alternate OAT option that reduces the frequency of dosing visits compared to oral and sublingual OAT alternatives. It's unclear what impact the introduction of LAI buprenorphine and policy changes in response to the COVID-19 pandemic had on patterns of OAT medicine use.

This technical report describes 10-year trends in the sales of OAT medicines in the Australian Capital Territory (ACT). Aggregate monthly sales were used to estimate the number of OAT clients per month, based on average doses.

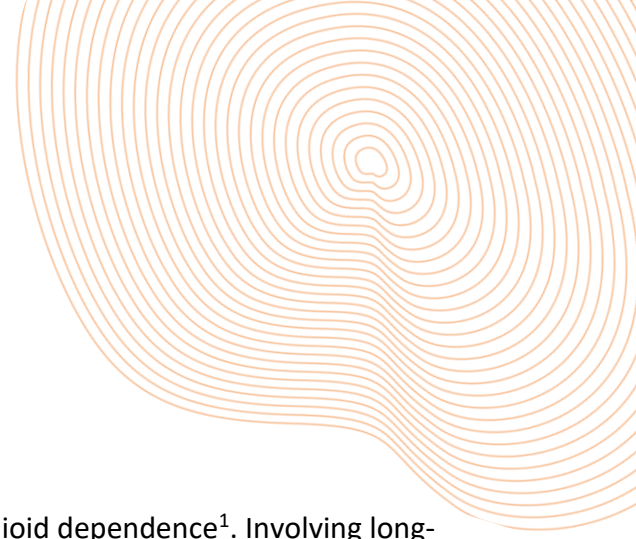
Key findings

- From 2013 to 2022, the ACT most often had the second highest per-capita utilisation of OAT of all jurisdictions, occasionally equalling or surpassing NSW in recent years, and accounted for <3% of national OAT utilisation.
- The estimated number of OAT clients in the ACT between 2013 and 2022 increased by 76%, from 693 to 1,221 clients.
- After accounting for population size, OAT utilisation in the ACT increased by 50%, from 18 OAT clients per 10,000 population in January 2013 to 27 per 10,000 in December 2022.
- Following its introduction to the market, there was a substantial uptake of LAI buprenorphine from 99 clients in September 2019 to 452 clients in December 2022.

- Consequently, the distribution of OAT medicines has shifted in the ACT:
 - In January 2013, four-fifths (80.3%) of the estimated number of OAT clients in the ACT received methadone with the remainder receiving SL buprenorphine (19.7%).
 - In December 2022, 47.4% of clients received methadone and 52.6% buprenorphine (15.6% SL buprenorphine and 37.0% LAI buprenorphine).
- Across the decade in the ACT, trends in the distribution of OAT clients by remoteness and socioeconomic status remained relatively consistent:
 - Almost all (96 to 99%) OAT in the ACT was delivered in major cities, with access in inner and outer regional areas increasing slightly.
 - Almost all (96-98%) OAT was received in the most (relatively) advantaged areas.
- Across the decade most (57% to 97%) OAT was accessed from community pharmacy.
- Between January 2013 and November 2018, the proportion of clients accessing OAT each month in hospital (inpatient and outpatient drug & alcohol services) fluctuated at around 3% to 8%, before jumping to 16% in December 2018, and continuing to rise to 27% by the end of the study (December 2022). This increase could be attributed to a sustained increase in clients receiving methadone in hospitals from December 2018, followed by an increase in clients receiving LAI buprenorphine from September 2019.
- The majority of clients in community pharmacy received methadone whereas, since late 2020, the majority of clients accessing OAT in non-community pharmacy settings each month received buprenorphine. In 2022, three-quarters (75%) of OAT clients attending hospitals (inpatient and outpatient drug and alcohol services) and 100% of OAT clients at clinics and medical centres received LAI buprenorphine.

Conclusions

There has been an increase in access to OAT in the ACT over the past decade, with just over half of clients now receiving buprenorphine and just under half, methadone. Importantly, there has been an increase in access to OAT in non-community pharmacy settings since late 2018. It is now important to determine the clinical outcomes of these changes, in terms of benefits, harms and cost effectiveness.

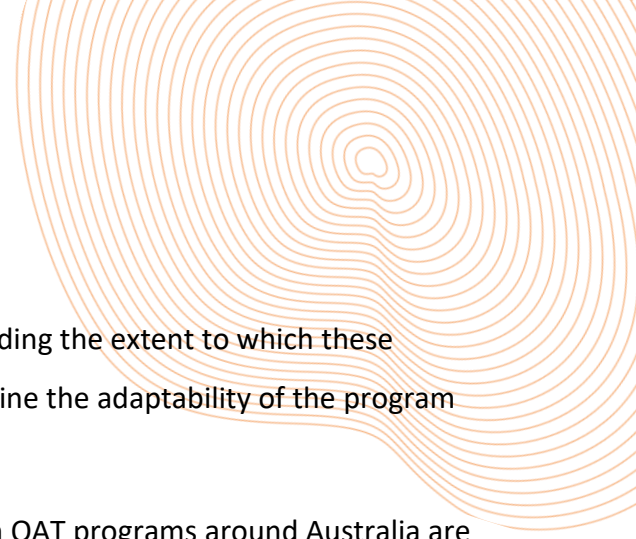


2. Background & Methods

2.1. Background

Opioid agonist treatment (OAT) is a first-line treatment for opioid dependence¹. Involving long-term pharmacotherapy with an opioid agonist or partial agonist, it is well established that OAT reduces non-medical use of opioids and related harms³. For example, there is strong evidence to show that OAT is effective at reducing injecting and injection related injuries, blood-borne viral spread, overdoses and overall mortality²⁻⁵, as well as improving physical health, social functioning and economic productivity¹. Methadone and buprenorphine are both listed by the World Health Organization as essential medicines for this indication⁸. In Australia, four formulations of OAT are approved by the Therapeutics Goods Administration (TGA) and subsidised through the Pharmaceutical Benefit Scheme (PBS) for the treatment of opioid dependence. These include methadone liquid (PBS listed in 1974), sublingual (SL) buprenorphine (2001), SL buprenorphine-naloxone (2005: tablets, 2011: films) and long acting injection (LAI) buprenorphine (September 2019)⁹.

LAI formulations of buprenorphine have recently become available for the treatment of opioid dependence¹⁰, having been listed on the PBS since September 2019. LAI buprenorphine is administered via weekly¹¹ or monthly^{12,13} subcutaneous injections, providing an alternate OAT option to daily methadone and SL buprenorphine, that reduces the frequency of dosing visits and increases flexibility^{14,15}. LAI buprenorphine may offer a number of benefits including increased quality of life, employment, and treatment satisfaction¹⁶, however, the shift to monthly dosing may result in unintended consequences as well¹⁷⁻¹⁹. In Australia, the roll-out of LAI buprenorphine was stepped up during the COVID-19 pandemic in an effort to reduce face-to-face interactions and the frequency of visits by OAT clients to health services. National interim guidance developed by professional and consumer groups also recommended increasing the number of take-away doses, greater use of telehealth appointments, and home delivery, including third party collections for clients in quarantine²⁰. These recommendations addressed logistical barriers to OAT engagement, including the travel burden associated with attending services²¹. Although their implementation



was not mandated, and varied across jurisdictions, understanding the extent to which these changes in guidance impacted access to OAT will help determine the adaptability of the program to support clients.

Each year, a summary of medicines used on snapshot day/s in OAT programs around Australia are published.²² Data on LAI buprenorphine was reported for the first time in 2020, and in the ACT, was limited to LAI buprenorphine provided in public clinics. This limits a nuanced understanding of changes to the profile of individual medicines over time and changes to overall utilisation in different settings (e.g., community vs. prison, regional v. remote). Monthly sales data provide a novel means to examine longitudinal trends of OAT in the ACT.

This report aims to describe sales of OAT medicines in the ACT over time and to consider factors that may have affected patterns of access.

2.2. Aims

This report aims to:

1. Examine trends in the estimated number of clients on all OAT medicines in the ACT between 2013 and 2022, and
2. Examine variation in the estimated number of OAT clients by jurisdiction, remoteness, socio-economic status and setting.

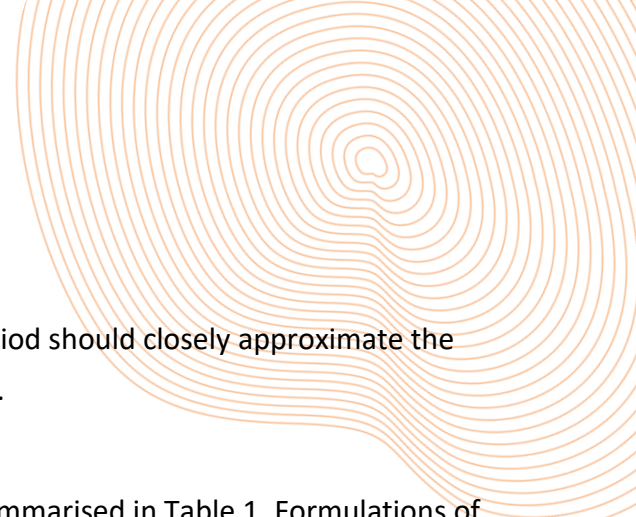
2.3. Methods

2.3.1. Study design and time period

This is a descriptive study of trends in the sales of OAT medicines (methadone, SL buprenorphine, SL buprenorphine-naloxone and LAI buprenorphine) in the ACT from January 2013 to December 2022.

2.3.2. Data source

Data was provided by IQVIA (iqvia.com) on sales of medicines by pharmaceutical wholesalers and manufacturers to community pharmacies, hospitals and other providers, including prisons. IQVIA claims around 97% coverage of the Australian community pharmacy and hospital settings.²³ Data on all formulations of OAT medicines sold in the ACT between January 2013 and December 2022 were included. Due to the legal requirements for secure storage and monitoring of OAT medicines



in pharmacies, the number of packs sold over a 12-month period should closely approximate the number of medicines used by clients in the ACT OAT Program.

2.3.3. Medicines

Available OAT medicines, by formulation and strength, are summarised in Table 1. Formulations of methadone and buprenorphine used only for opioid dependence were included. In the rare event that methadone is used for analgesia, methadone tablets (which can be crushed) are generally preferred over liquid, in both the community and hospital setting. Methadone liquid 200mL, indicated for both analgesia and opioid dependence in Australia, was included because most use was assumed to be for opioid dependence. Sales of LAI buprenorphine were disaggregated into five groups relative to strength and injection frequency - weekly low and high strengths, and monthly low, medium and high strengths (see 'LAIB Group' in Table 1). These groups were selected to provide high level trends without identifying individual brands.

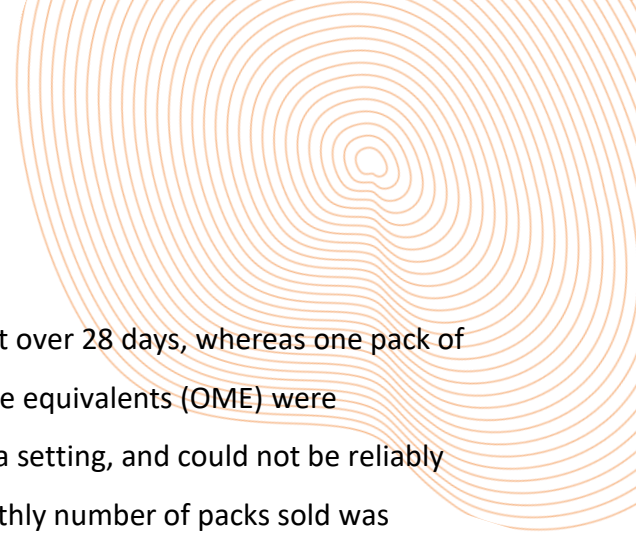
Table 1. Medicines available in the Australian opioid agonist treatment programme.

Active Ingredient	Form	Brand name	Strength (mg)	LAIB [†] Group	Entry to market [‡]
Methadone	Oral (liquid)	Biodone Forte, Methadone Syrup	5mg / mL	N/A	1974 ²⁴
Buprenorphine	Sublingual tablet	Subutex	0.4, 2, 8	N/A	2001 ²⁵
Buprenorphine / naloxone	Sublingual tablet / film	Suboxone	2/0.5, 8/2	N/A	2005: Tablets ²⁶ 2011: Films ²⁷
Buprenorphine	Long acting injection	Buvidal weekly	8, 16	Weekly LAIB - low	September 2019 ²⁴
Buprenorphine	Long acting injection	Buvidal weekly	24, 32	Weekly LAIB - high	September 2019 ²⁴
Buprenorphine	Long acting injection	Buvidal monthly	64	Monthly LAIB - low	September 2019 ²⁴
Buprenorphine	Long acting injection	Buvidal monthly	96, 128	Monthly LAIB - med	September 2019 ²⁴
Buprenorphine	Long-acting injection	Buvidal monthly	160	Monthly LAIB - high	May 2022 ²⁴
Buprenorphine	Long-acting injection	Sublocade	100	Monthly LAIB - low	May 2020 ²⁴
Buprenorphine	Long-acting injection	Sublocade	300	Monthly LAIB - high	May 2020 ²⁴

[†]LAIB: Long-acting injection buprenorphine, [‡] Entry to market based on PBS listing as part of the Australian Opioid Dependence Treatment Program

2.3.4. OAT clients per month

Describing OAT utilisation based solely on packs sold does not enable a like-for-like comparison between different medicines. In some cases, one pack may be used to treat one or multiple clients



- for example, one pack of LAI buprenorphine treats one client over 28 days, whereas one pack of methadone syrup (1L) may treat several clients. Oral morphine equivalents (OME) were considered less relevant for comparing OAT in a non-analgesia setting, and could not be reliably estimated for LAI buprenorphine. For these reasons, the monthly number of packs sold was converted into an estimate of OAT clients per month.

For SL buprenorphine and methadone formulations, OAT clients per month were estimated by summing the total milligrams (mg) contained in the packs sold that month and dividing by the average dose (mg) to treat a single person for 28 days e.g.,

$$\text{OAT clients per month} = \frac{[\text{mg per pack} \times \text{Total number of packs sold that month}]}{[\text{Average daily dose (mg) for a single person} \times 28 \text{ days}]}$$

Average doses were estimated from previous research (see Table 2). For LAI buprenorphine formulations, estimates of clients per month were based on the number of packs (injections) sold. Specifically, one pack of weekly and one pack of monthly LAI buprenorphine were assumed to treat 0.25 and 1 client, respectively, over a 28-day period, aligning with the recommended dosing schedules¹¹⁻¹³. A retrospective chart review of three Australian OAT providers verified these dose estimates aligned with real-world LAI buprenorphine dosing schedules²⁸. To account for small fluctuations in sales data, reflecting the ordering behaviour (such as stockpiling) of pharmacies rather than actual fluctuations in OAT client numbers, three-month moving averages are presented.

Table 2. Average doses for OAT medicines; data pooled from Australian cohort studies.

Measure	Methadone liquid		Sublingual Buprenorphine	
	Pooled estimate (95% CI)	Sources	Pooled estimate (95% CI)	Sources
Mean dose (mg/day)	74.06 (69.44, 78.69)	29,30	16.00 (14.39, 17.61)	30
Median dose (mg/day)	75 (47,75)	30-34	13 (13, 16)	30-35

Where applicable $I^2 = 0.0$.



2.3.5. Geographical information and setting

Monthly OAT utilisation was summarised overall and disaggregated by jurisdiction, remoteness, socioeconomic status, and setting. The Australian jurisdictions includes six states (New South Wales (NSW), Queensland (QLD), South Australia (SA), Tasmania (TAS), Victoria (VIC), Western Australia (WA)), and two territories (the ACT and the Northern Territories (NT)). Setting refers to the provider type which purchased the medicines, and includes ‘community pharmacy’, ‘hospital’ including outpatient drug and alcohol services, ‘aged and community healthcare’, ‘clinics and medical centres’, and ‘other (including prisons)’. The Australian Bureau of Statistics (ABS) mapping of Postcode 2017 was used to map sales to the Australian Statistical Geography Standard (ASGS) Remoteness Areas 2016 data³⁶ and to the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD) 2016 data³⁷ (see Appendix 6.1 Mapping to postcode). Australian remoteness categories include ‘Major Cities’, ‘Inner Regional’, ‘Outer Regional’, ‘Remote’ and ‘Very Remote’. IRSAD summarises information about the economic and social conditions of people and households within an area, with lower quintiles indicating relatively greater disadvantage and higher quintiles indicating relatively greater advantage.

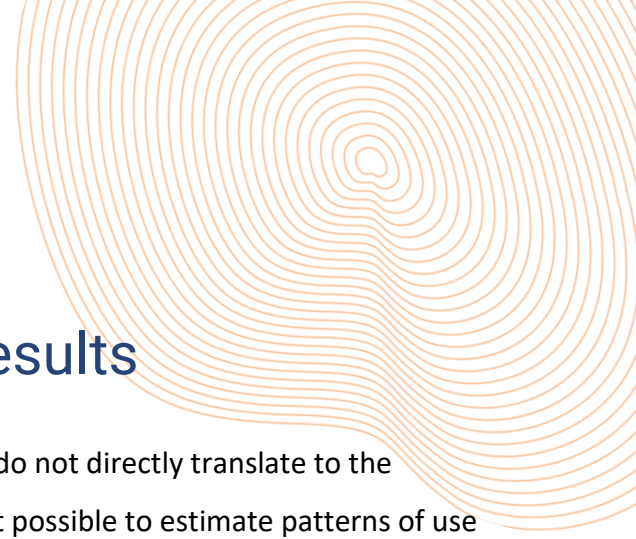
2.3.6. Statistical Analysis

Descriptive statistics and data visualisations were used to describe trends over time, and by OAT medicine, jurisdiction, remoteness, socioeconomic status and setting. The estimated number of clients receiving OAT medicines each month, overall and by individual medicines, were evaluated as a count standardised against population size and/or as a proportion (%) of the total number of OAT clients that month. Per capita estimates were based on the estimated residential population at June 30 each year, provided by the ABS³⁸, overall and by jurisdiction.

Analyses were conducted using SAS Enterprise Guide 9.4 (SAS Institute Inc., Cary, NC, USA) and Microsoft Excel for Microsoft 365 (Microsoft, Seattle, WA, USA).

Ethics approval

Ethics approval was not required as data from IQVIA were received in deidentified aggregated form.



3. Guide to interpretation of results

- It is important to acknowledge that the amounts sold do not directly translate to the amounts dispensed or used. For this reason, it was not possible to estimate patterns of use at the client level nor determine the exact number of clients engaged in OAT in each month.
- The approach used in estimating the number of clients receiving OAT per month assumes that real-world OAT doses – and the factors known to influence dose, including disorder severity - have remained stable over time and across different settings. The parameters used to derive these estimates were informed by the literature, but have not been validated against population-level data on OAT doses from Australia.
- The estimates assume clients are retained in OAT over the full 28-day interval; where this is not the case, the number of clients accessing OAT at least once a month would be higher.
- This report complements the National Opioid Pharmacotherapy Statistics Annual Data (NOPSAD), which provide a national overview of OAT pharmacotherapies used in Australia on snapshot day/s by state and territory health departments²². Where comparisons with NOPSAD show varying trends, these may be explained by differences in client ascertainment and changes in the patterns of OAT retention during the study period³⁹.
- Furthermore, IQVIA coverage is not 100% and may have improved over time, which could lead to an underestimate of OAT clients in earlier years of the study.
- Capture of OAT sales to settings other than community pharmacy and hospital (e.g., prisons) may be incomplete, leading to an underestimate of the number of clients accessing OAT in these settings.
- As the weekly low dose LAI buprenorphine formulation can be used for top-up or supplemental dosing, inclusion of these formulations may have resulted in a slight overestimate of the number of clients.

- The geographic information provided by IQVIA for non-community pharmacy/hospital settings was less granular (PHN level) so there may be some misclassification of remoteness and socioeconomic categories in these settings.
- The socioeconomic and remoteness findings reflect where OAT was received rather than where OAT clients reside, as clients may have travelled to different areas to receive OAT.



4. Findings

4.1. OAT utilisation by state/territory

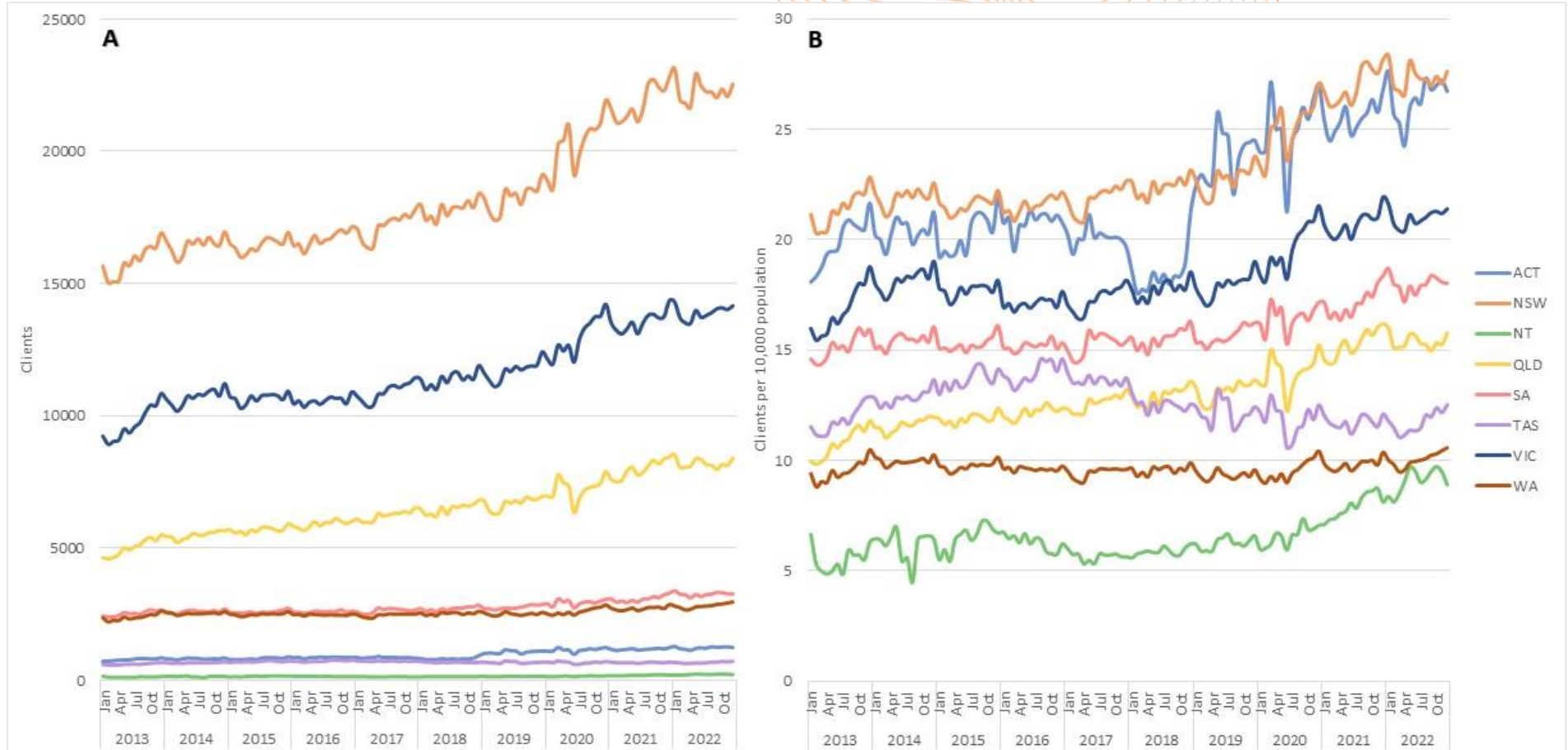
Across the decade, the ACT accounted for less than 3% of all OAT clients in Australia (Figure 1A).

The estimated number of clients receiving OAT each month in the ACT increased (+76%) from 693 clients in January 2013 to 1,221 clients in December 2022, with a marked increase in client numbers evident in late 2018/early 2019 (Figure 1A, Table A1).

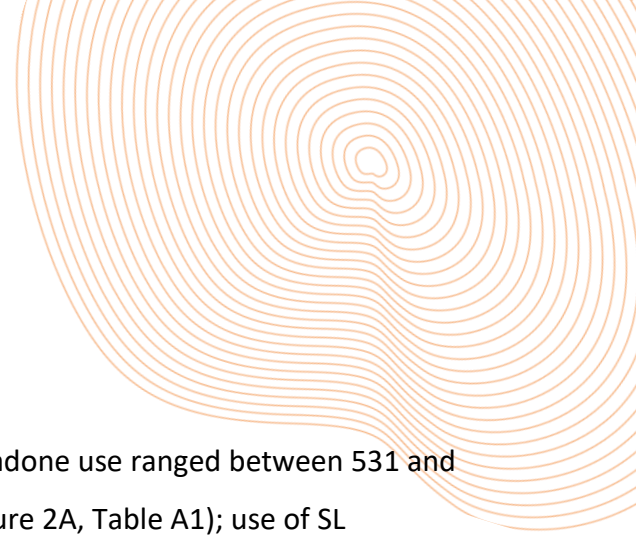
After accounting for population size, the ACT often had the second highest per-capita utilisation of OAT, occasionally equalling or surpassing NSW in recent years (Figure 1B). There was a 50% increase in per-capita rates of use in ACT, from 18 OAT clients per 10,000 population in January 2013 to 27 per 10,000 in December 2022 (Figure 1B).



Figure 1. Number of OAT clients (A), and OAT clients per 10,000 population (B), per month by Australian state/territory (2013-2022).



ACT: Australian Capital Territory, NSW: New South Wales, NT: Northern Territories, QLD: Queensland, SA: South Australia, TAS: Tasmania, VIC: Victoria, WA: Western Australia



4.2. OAT utilisation in ACT

4.2.1. All OAT medicines

Patterns of OAT in the ACT remained stable until 2019. Methadone use ranged between 531 and 855 clients per month between 2013 to September 2019 (Figure 2A, Table A1); use of SL buprenorphine ranged between 137 and 343 clients over the same timeframe (Figure 2A, Table A1). Following introduction of LAI buprenorphine to the market, there was a substantial uptake, increasing from an estimated 99 clients in September 2019 to 452 clients in December 2022.

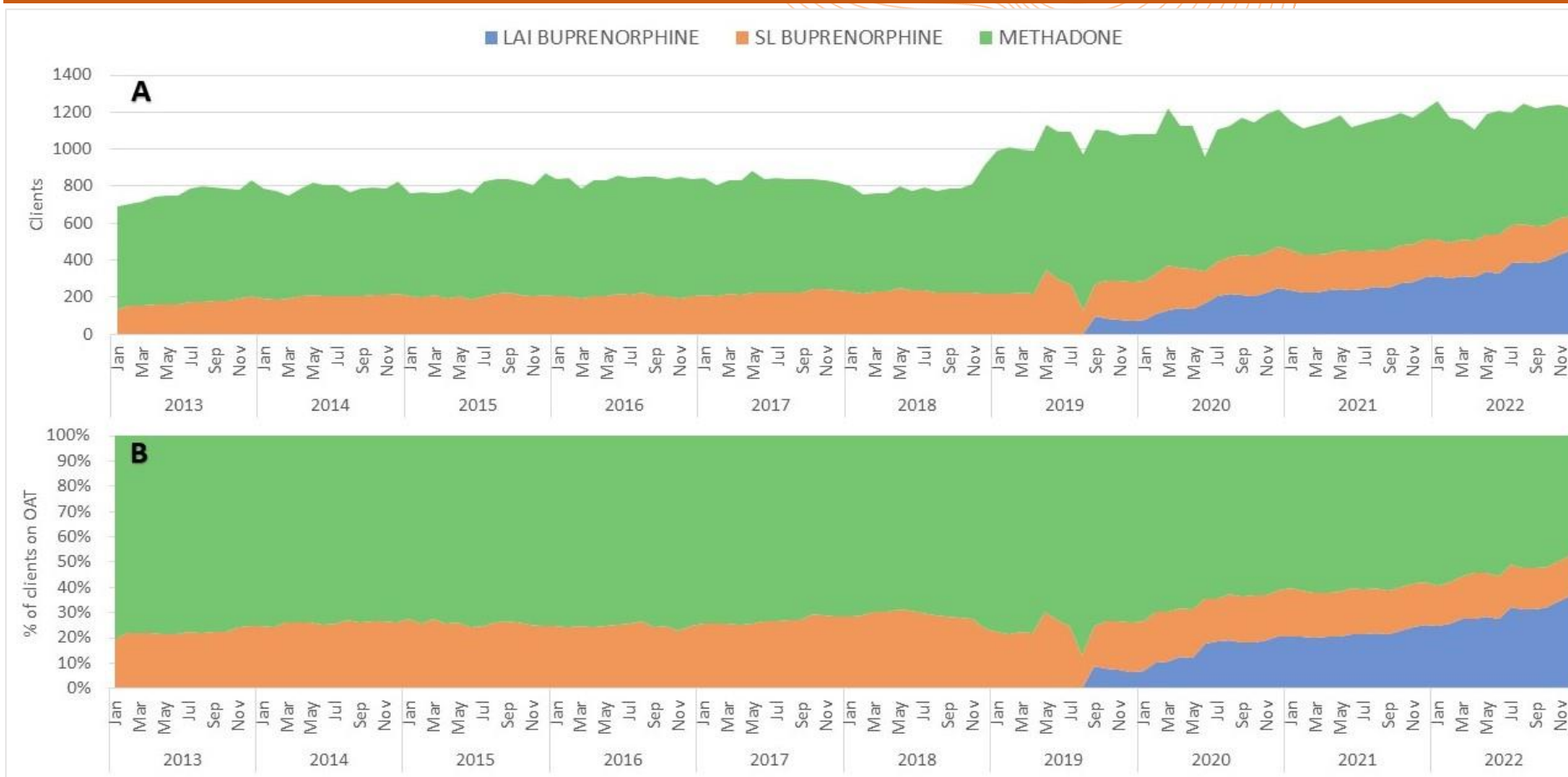
Subsequently, the distribution of medicines in the ACT OAT program evolved over time (Figure 2B). In January 2013, four-fifths (80.3%) of the estimated number of OAT clients in the ACT received methadone with the remainder receiving SL buprenorphine (19.7%). In December 2022, 47.4% of clients received methadone, 15.6% SL buprenorphine, and 37.0% LAI buprenorphine (Figure 2B, Table A1).

4.2.2. LAI buprenorphine

Since the introduction of LAI buprenorphine, most use has been for monthly rather than weekly formulations (Figure 3, Table A2). The formulations in the 'Monthly LAIB – medium' group were used most commonly, followed by the 'Monthly LAIB – low' group. From September 2019 to December 2022, use of 'Monthly LAIB – medium' formulations increased from 52 to 259 clients (+398%), and 'Monthly LAIB – low' from 26 to 122 clients (+369%) (Figure 3, Table A2).



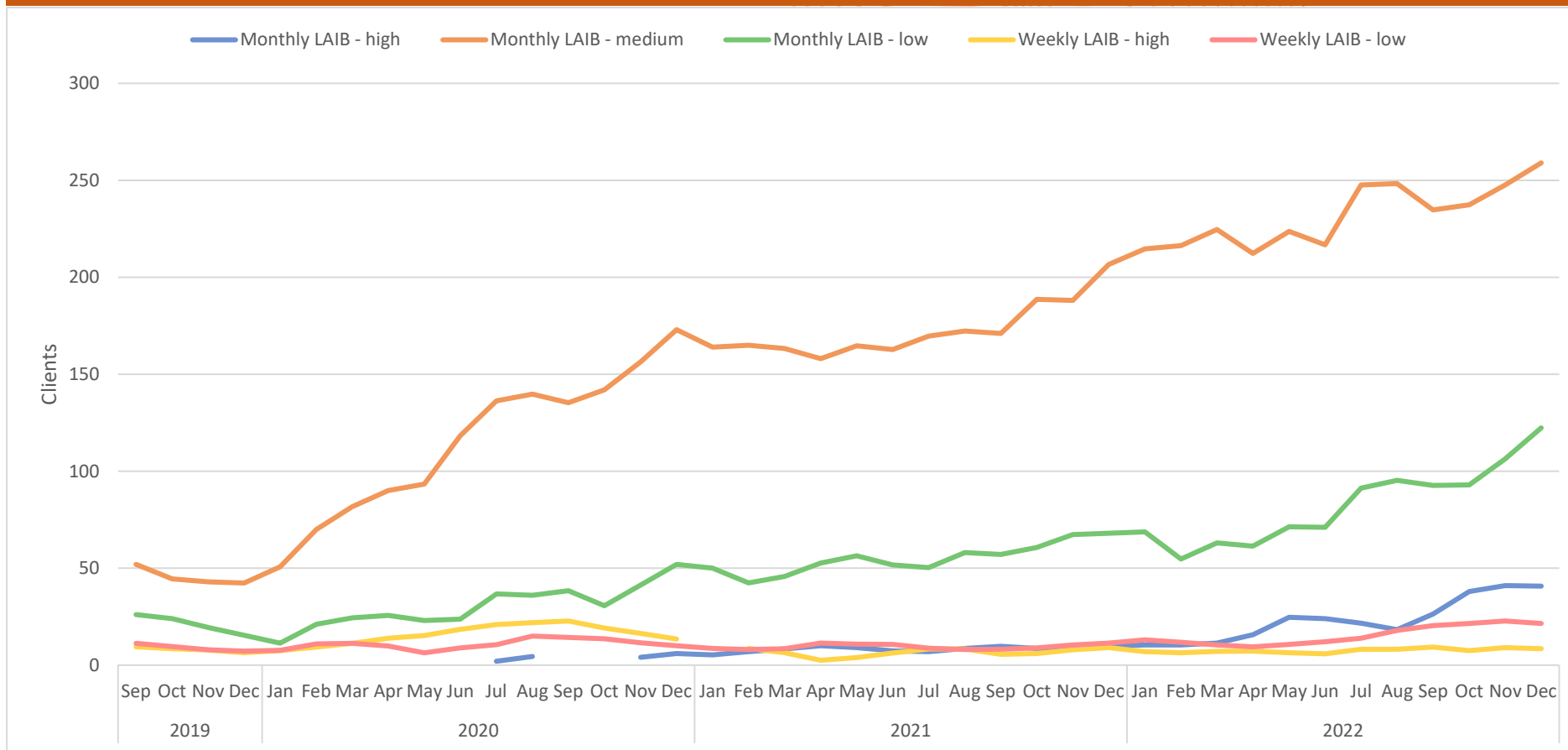
Figure 2. Cumulative number of OAT clients (A) and proportion of total OAT clients (B), per month by medicine (ACT, 2013-2022).



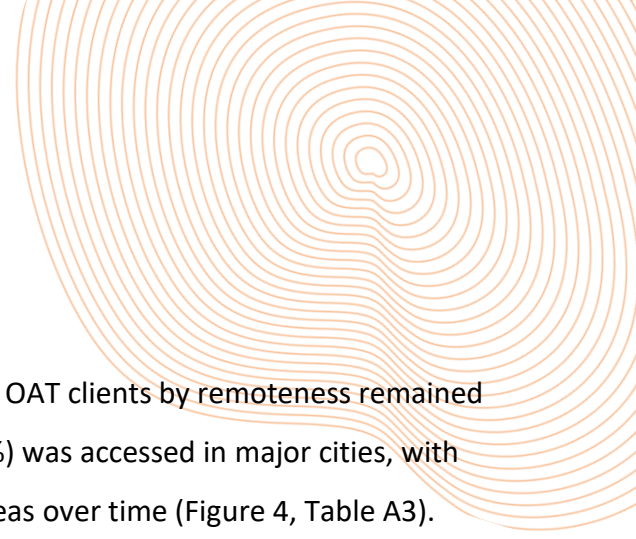
LAI: Long Acting Injection, OAT: Opioid Agonist Treatment, SL: Sublingual



Figure 3. Number of OAT clients by LAIB buprenorphine (LAIB) group* (ACT, 2019-2022).



* LAIB groups are defined in Table 1



4.2.1. Remoteness

Over the study period in the ACT, trends in the distribution of OAT clients by remoteness remained relatively consistent. Across the decade, almost all OAT (>95%) was accessed in major cities, with only slight increases in access for inner and outer regional areas over time (Figure 4, Table A3).

4.2.2. Socioeconomic status (IRSAD)

Across the decade in the ACT, trends in the distribution of OAT utilisation by socioeconomic status remained relatively consistent. Almost all (96-98%) OAT clients received OAT in the most advantaged areas (Figure 5, Table A4).



Figure 4. Number of OAT clients per month by remoteness (ACT, 2013-2022).

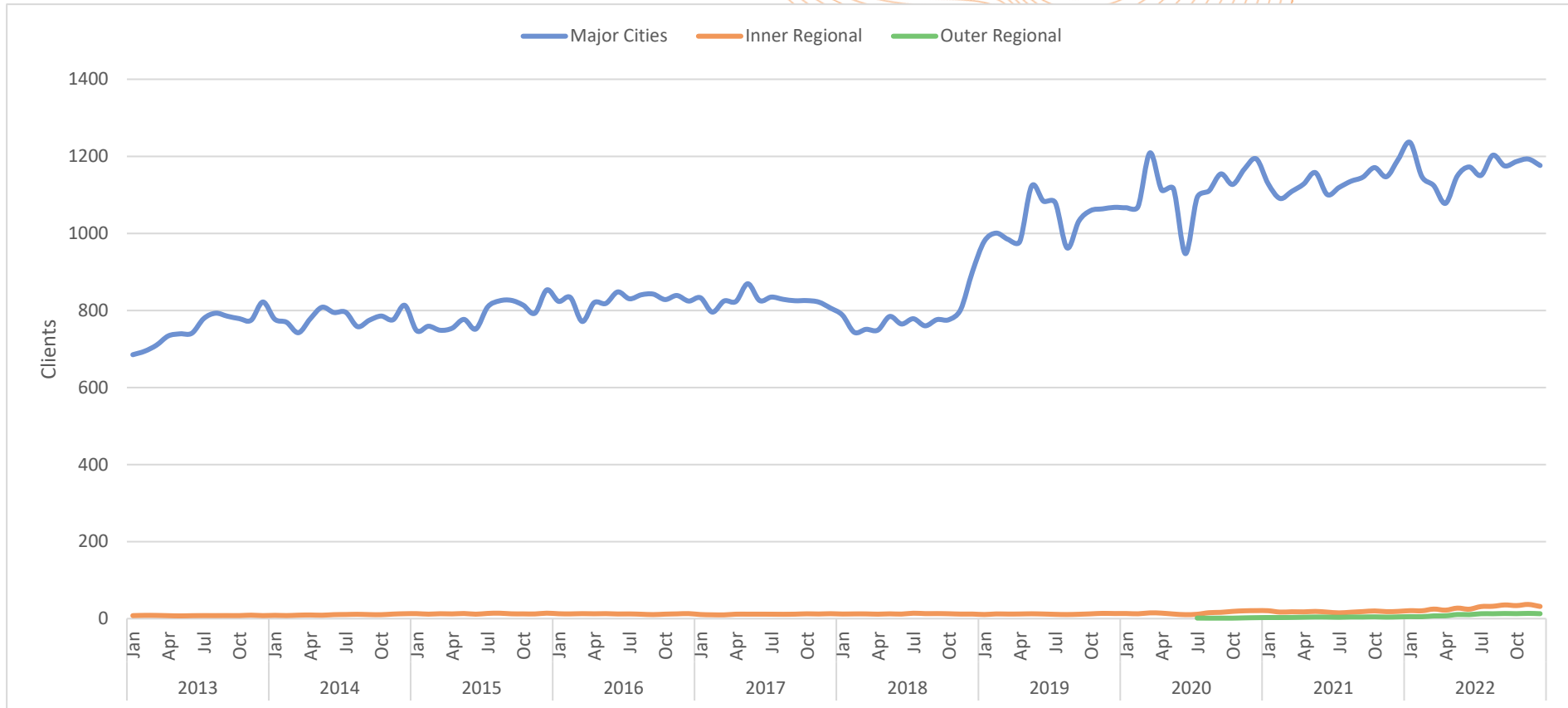
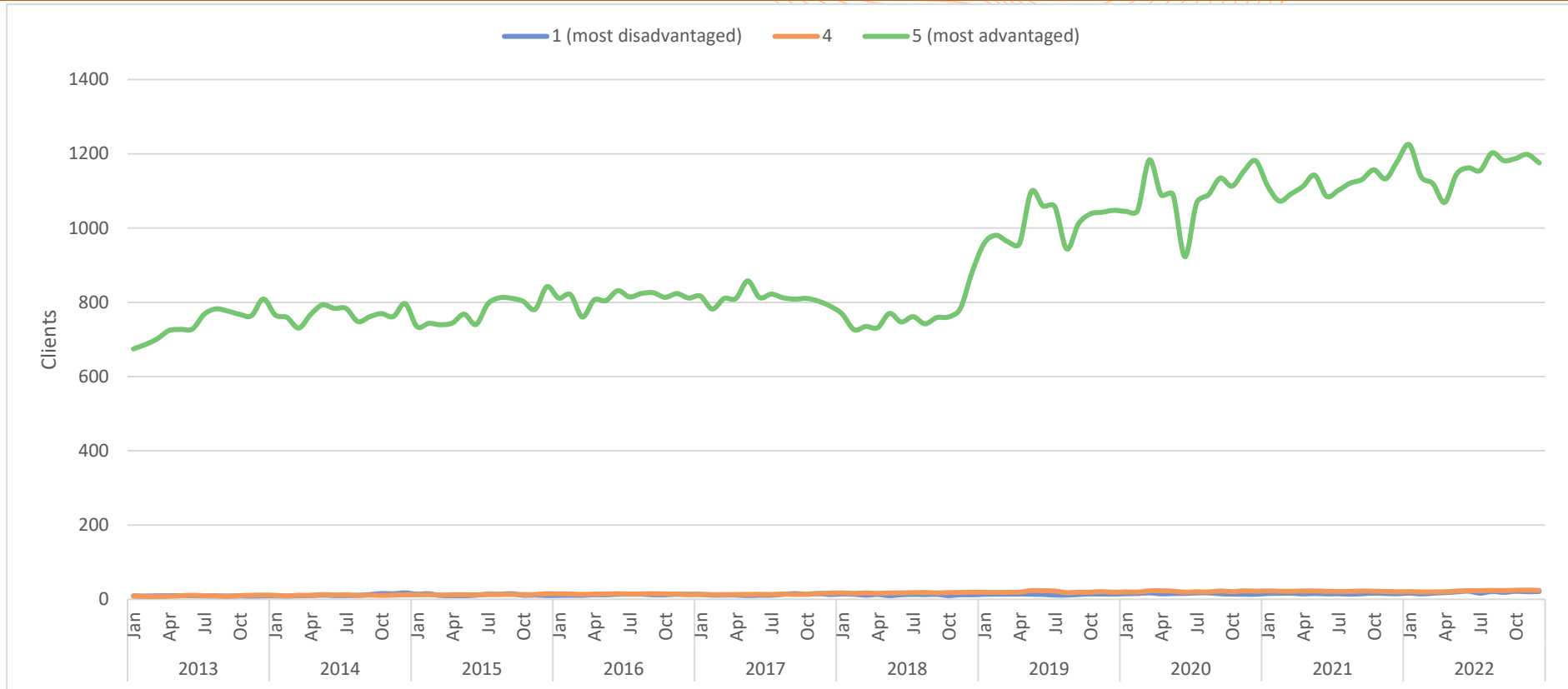
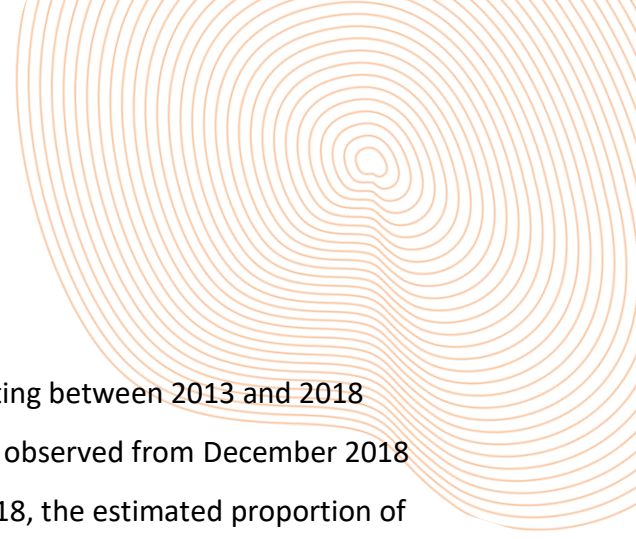




Figure 5. Number of OAT clients per month by IRSAD quintile (ACT, 2013-2022).



IRSAD: Index of Relative Socioeconomic Advantage and Disadvantage



4.2.3. Setting

In the ACT, trends in the distribution of OAT utilisation by setting between 2013 and 2018 remained relatively consistent, with some significant changes observed from December 2018 onwards (Figure 6). Between January 2013 and November 2018, the estimated proportion of clients accessing OAT each month via community pharmacies ranged between 92-97% and between 3-8% for hospital settings (including inpatient and outpatient drug & alcohol services). In December 2018 the proportion of clients estimated to be receiving OAT in hospitals jumped to 16% and continued to increase up to 27% in December 2022 (Figure 6, Table A5). This increase could be attributed to a sustained increase in clients receiving methadone in hospitals from December 2018, followed by an increase in clients receiving LAI buprenorphine in hospitals (Figure 7, Table A6).

The distribution of medicines in the ACT OAT program varied by setting (Figure 7, Table A6). The majority of clients accessing OAT in community pharmacy each month received methadone whereas, since late 2020, the majority of clients accessing OAT in non-community pharmacy settings each month received buprenorphine. In the ACT in December 2022 (Figure 7, Table A6):

- 690 clients accessed OAT from community pharmacy, of whom 508 (73.7%) received methadone and 179 (25.9%) SL buprenorphine;
- 331 clients accessed OAT from hospitals, of whom 70 (21.0%) received methadone, 11 (3.0%) SL buprenorphine and 250 (75.0%) LAI buprenorphine, and;
- All 179 clients accessing OAT from clinics & medical centres received LAI buprenorphine.



Figure 6. Number of OAT clients per month, by setting (ACT, 2013-2022).

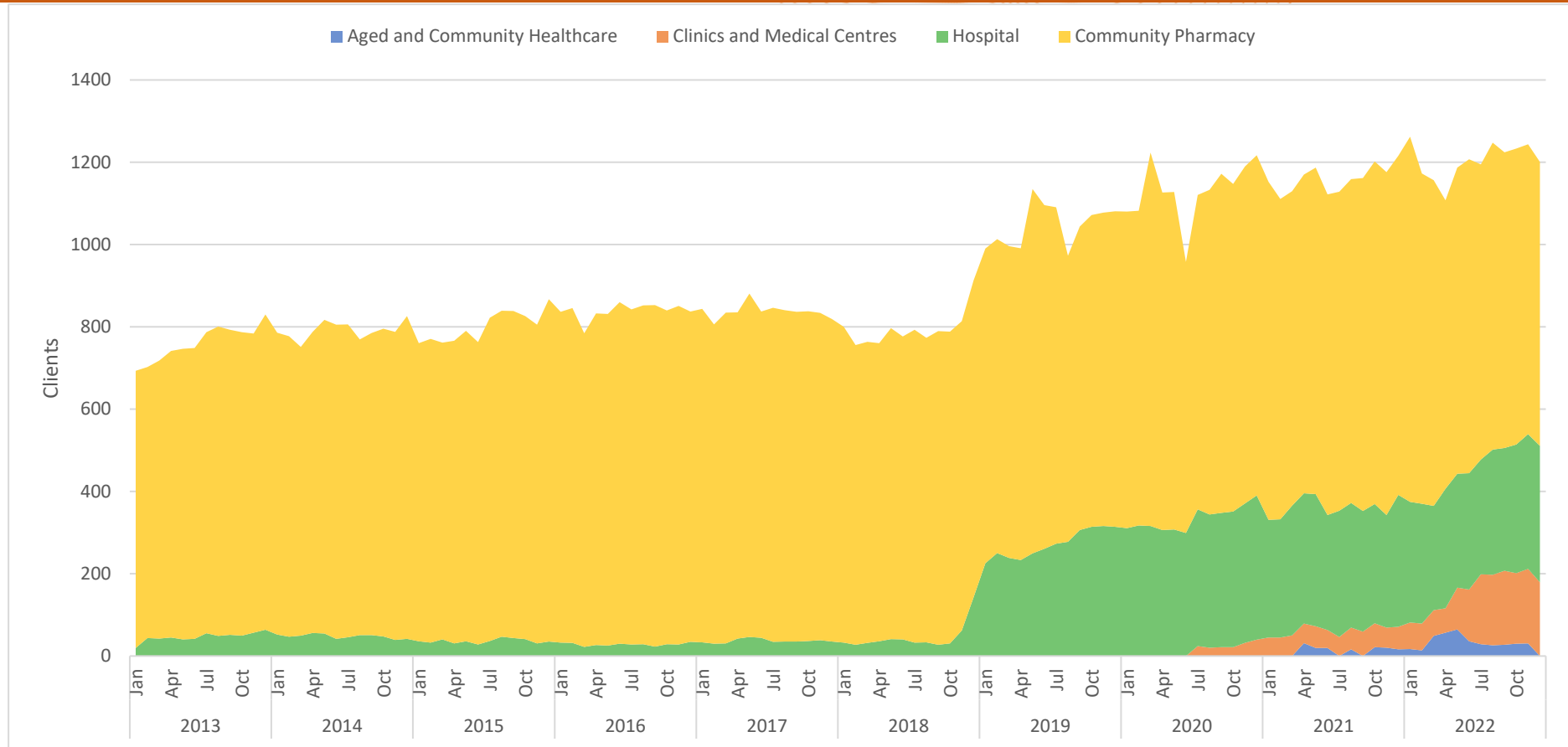
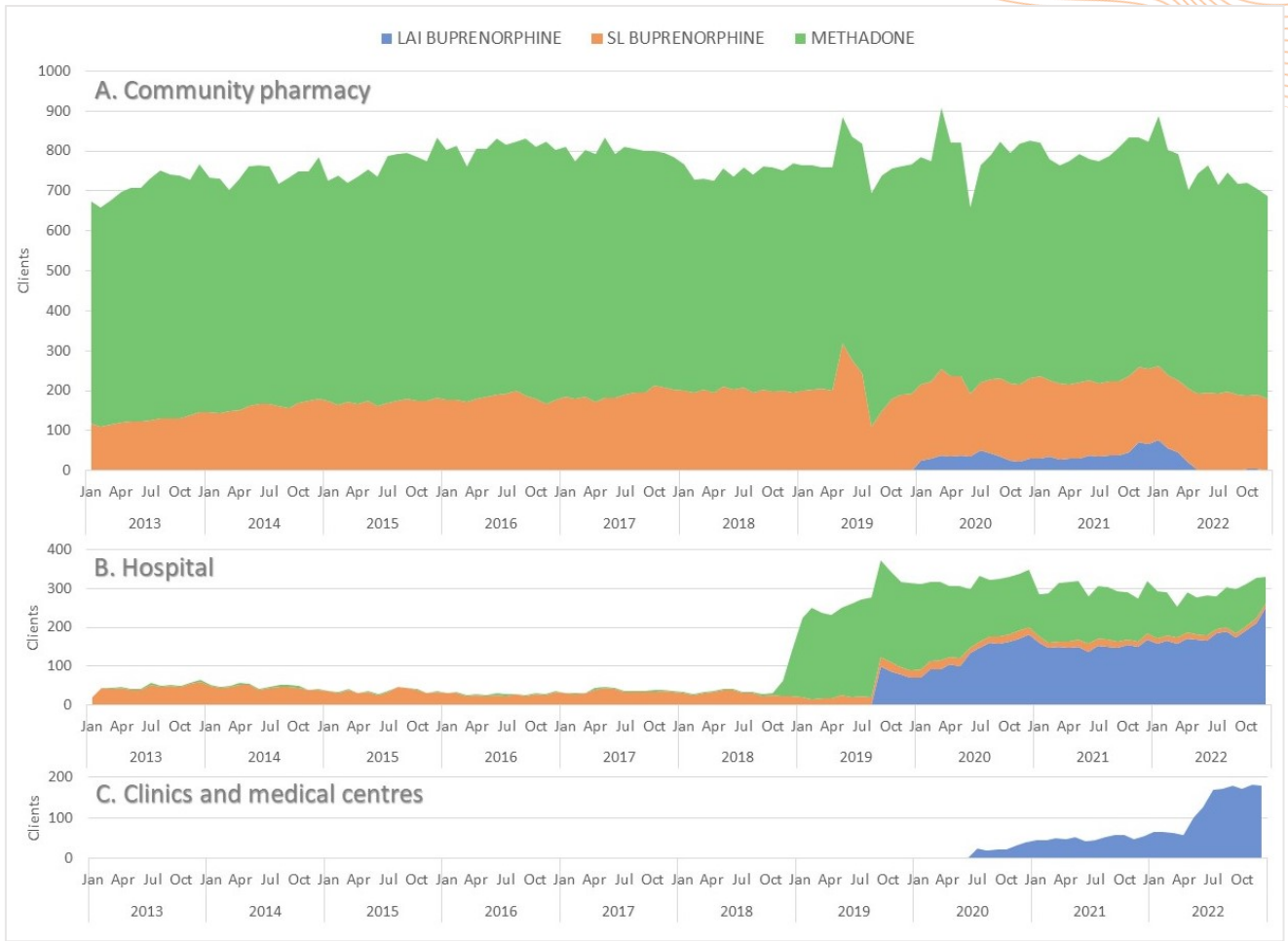
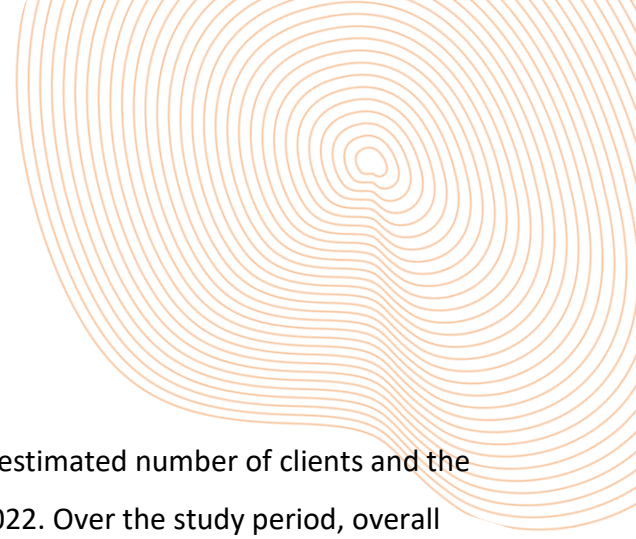




Figure 7. Number of OAT clients per month by medicine in: community pharmacy (A), hospitals (B), and clinics and medical centres (C) (ACT, 2013-2022).





5. Discussion

This report used monthly sales data to evaluate trends in the estimated number of clients and the types of OAT medicines used in the ACT between 2013 and 2022. Over the study period, overall utilisation of OAT in ACT increased steadily, with a +50% estimated increase in the per-capita number of OAT clients. The pattern of OAT medicines used in ACT changed over time; in 2013, methadone was most common while in 2022, buprenorphine surpassed methadone as the most common OAT. Considerable increases in OAT access were observed in settings other than community pharmacies, since late 2018.

Importantly this report demonstrates a substantial increase in the use of LAI buprenorphine for OAT in ACT. Between September 2019 (the month LAI buprenorphine was PBS-listed) and December 2022, the estimated number of clients accessing LAI buprenorphine increased, eventually accounting for just over a third of all ACT OAT clients. LAI buprenorphine now surpasses SL buprenorphine as the most common buprenorphine formulation for OAT in the ACT. By the end of the study period (2022), most clients in community pharmacy received methadone whereas, since late 2020, the majority of clients accessing OAT in non-community pharmacy settings each month received buprenorphine. In 2022, three-quarters (75%) of OAT clients attending hospitals and 100% at clinics and medical centres received LAI buprenorphine. This likely reflects the accelerated scale-up of LAI buprenorphine that was used as strategy during the COVID-19 pandemic to reduce exposure to infection, and help adhere with social distancing²⁰.

With this significant uptake of LAI buprenorphine there has been a shift in the distribution of OAT in the ACT, with more clients receiving buprenorphine (incl. SL and LAI buprenorphine formulations) than methadone in the most recent month of data capture. The estimated proportion of all OAT clients receiving buprenorphine increased from a fifth (19.7%) in January 2013 to over half (52.6%) of all estimated OAT clients in December 2022. Given the estimated number of clients receiving methadone over the study period remained steady, this finding aligns with previous reports that buprenorphine is increasingly the medicine most OAT clients initiate on in Australia³⁹.

The trends seen in this report differ with those produced from the NOPSAD collection. In particular, the client estimates in early years of this report are lower than those reported in NOPSAD, and the uptake of LAI buprenorphine identified in this report is higher than in NOPSAD²². At the beginning of the study period the estimated number of OAT clients in ACT in this report was 19% lower than the figure quoted by NOPSAD (June 2013: 749 clients vs 920 clients in NOPSAD) and by the end of the study period the estimates in this report were 22% higher than NOPSAD (June 2022: 1,207 clients vs 993 clients in NOPSAD). While data from this report indicate increasing per-capita OAT use in the ACT between 2013 and 2022, according to NOPSAD, rates decreased. From 2013 to 2022 data indicate per capita OAT use in ACT increased by +30% in this report (from 20 to 26 OAT clients per 10,000 population) and decreased by -8% (from 24 to 22 OAT clients per 10,000 population) according to the NOPSAD collection²². These differences may be explained by differences in the methods used for client ascertainment and changes in the patterns of OAT retention during the study period³⁹. NOPSAD collects data on clients receiving OAT on specific day/s per year, whereas the client estimates in this report are based on a conversion of packs sold into clients treated over a month, with the assumption that clients are retained in OAT over the full 28-day interval. As some attrition from OAT is expected this report may underestimate the total number of clients accessing OAT over the month, however, if OAT retention rates have improved over time³⁹ the potential for this source of underestimation would have diminished over the study time period.

In conclusion, the findings in this report suggest that in the ACT, access to OAT has increased for people with opioid dependence, especially in settings other than community pharmacy. It is now important to determine the clinical outcomes of these changes, in terms of benefits, harms and cost effectiveness.

6. Appendices

6.1. Mapping to postcodes

Data on sales to community pharmacy and hospitals were provided in 'bricks', which are geographic boundaries developed by IQVIA containing clusters of pharmacies, for medicine sales and distribution purposes across Australia. Data on sales to all other settings were provided at the Primary Health Network (PHN) level. Sales bricks and PHNs were mapped to postcodes.

6.2. Appendix Tables

Table A1. Estimated number and proportion of OAT clients per month (ACT, 2013-2022)

Time period	LAI Buprenorphine		SL Buprenorphine		Methadone		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
2013								
January			137	20	556	80	693	100
February			154	22	548	78	703	100
March			157	22	561	78	718	100
April			164	22	578	78	742	100
May			160	21	587	79	746	100
June			161	21	588	79	749	100
July			177	22	610	78	787	100
August			175	22	626	78	801	100
September			178	23	615	77	793	100
October			177	22	610	78	787	100
November			191	24	592	76	784	100
December			204	25	626	75	830	100
2014								
January			193	25	593	75	786	100
February			187	24	590	76	777	100
March			195	26	556	74	751	100
April			204	26	583	74	788	100
May			212	26	605	74	817	100
June			204	25	601	75	805	100
July			208	26	599	74	806	100
August			207	27	562	73	769	100

Time period	LAI Buprenorphine		SL Buprenorphine		Methadone		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
September			204	26	581	74	785	100
October			213	27	583	73	796	100
November			210	27	578	73	788	100
December			218	26	608	74	826	100
2015								
January			208	27	553	73	760	100
February			196	25	575	75	771	100
March			211	28	550	72	761	100
April			196	26	571	74	766	100
May			207	26	583	74	790	100
June			187	24	577	76	763	100
July			204	25	619	75	822	100
August			218	26	621	74	839	100
September			222	26	617	74	839	100
October			215	26	612	74	826	100
November			204	25	601	75	805	100
December			214	25	654	75	867	100
2016								
January			208	25	628	75	836	100
February			207	24	639	76	846	100
March			194	25	591	75	784	100
April			204	24	629	76	833	100
May			205	25	626	75	831	100
June			215	25	645	75	860	100
July			214	25	628	75	842	100
August			227	27	626	73	852	100
September			208	24	645	76	853	100
October			207	25	633	75	840	100
November			193	23	658	77	851	100
December			208	25	630	75	837	100
2017								
January			215	25	629	75	844	100
February			208	26	597	74	806	100
March			216	26	619	74	834	100

Time period	LAI Buprenorphine		SL Buprenorphine		Methadone		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
April			210	25	625	75	835	100
May			225	26	656	74	881	100
June			223	27	615	73	837	100
July			223	26	623	74	846	100
August			227	27	613	73	840	100
September			226	27	610	73	837	100
October			246	29	593	71	838	100
November			242	29	592	71	834	100
December			235	29	584	71	819	100
2018								
January			229	29	570	71	800	100
February			218	29	537	71	756	100
March			231	30	532	70	763	100
April			230	30	531	70	761	100
May			249	31	547	69	797	100
June			239	31	537	69	777	100
July			238	30	555	70	793	100
August			223	29	550	71	773	100
September			225	28	564	72	789	100
October			222	28	567	72	789	100
November			223	27	591	73	814	100
December			218	24	695	76	913	100
2019								
January			221	22	770	78	990	100
February			216	21	797	79	1013	100
March			222	22	775	78	996	100
April			217	22	774	78	991	100
May			343	30	792	70	1135	100
June			297	27	799	73	1096	100
July			267	24	824	76	1091	100
August			129	13	844	87	973	100
September	99	9	174	17	836	80	1044*	100
October	87	8	204	19	810	76	1072*	100
November	78	7	209	19	790	73	1077	100

Time period	LAI Buprenorphine		SL Buprenorphine		Methadone		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
December	71	7	210	19	800	74	1081	100
2020								
January	77	7	212	20	791	73	1080	100
February	111	10	215	20	756	70	1082	100
March	128	10	240	20	855	70	1224	100
April	139	12	220	19	768	68	1127	100
May	138	12	217	19	773	69	1128	100
June	169	18	172	18	616	64	958	100
July	205	19	186	17	713	65	1105	100
August	216	19	203	18	708	63	1126	100
September	214	18	215	18	744	63	1172	100
October	208	18	214	19	726	63	1147	100
November	227	19	213	18	750	63	1189	100
December	252	21	219	18	746	61	1217	100
2021								
January	236	21	222	19	695	60	1152	100
February	228	20	204	18	679	61	1111	100
March	227	20	202	18	700	62	1130	100
April	235	20	200	17	715	62	1149	100
May	245	21	210	18	726	61	1181	100
June	239	21	207	18	676	60	1122	100
July	244	21	201	18	692	61	1138	100
August	255	22	202	17	699	60	1156	100
September	251	22	201	17	716	61	1168	100
October	273	23	205	17	718	60	1195	100
November	283	24	202	17	685	59	1169	100
December	305	25	205	17	706	58	1215	100
2022								
January	314	25	201	16	747	59	1262	100
February	300	26	196	17	678	58	1173	100
March	317	27	195	17	645	56	1156	100
April	306	28	202	18	600	54	1107	100
May	337	28	204	17	646	54	1187	100
June	330	27	207	17	671	56	1207	100

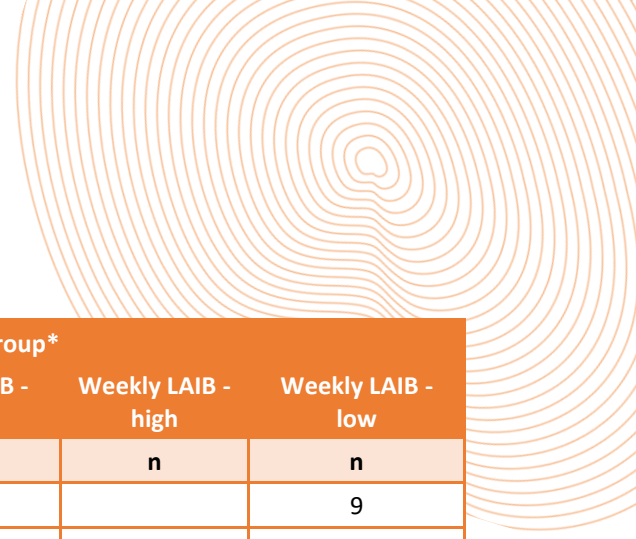
Time period	LAI Buprenorphine		SL Buprenorphine		Methadone		Total	
	n	Row %	n	Row %	n	Row %	N	Row %
July	383	32	204	17	608	51	1195	100
August	388	31	208	17	652	52	1248	100
September	383	31	201	16	640	52	1224	100
October	397	32	194	16	642	52	1233	100
November	427	34	198	16	619	50	1243	100
December	452	37	190	16	579	47	1221	100

LAI: Long acting injectable, SL: Sublingual

* Due to the calculation of 3 month moving averages the sum of the number of clients on individual OAT medicines does not tally up to the total number of clients on OAT for the first two months since launch of LAI buprenorphine (i.e., September and October 2019)

Table A2. Estimated number of LAI buprenorphine clients per month (ACT, 2019-2022)

Time period	LAI Buprenorphine group*				
	Monthly LAIB - high	Monthly LAIB - medium	Monthly LAIB - low	Weekly LAIB - high	Weekly LAIB - low
	n	n	n	n	n
2019					
September		52	26	10	11
October		45	24	9	10
November		43	19	8	8
December		42	15	6	7
2020					
January		51	11	8	8
February		70	21	9	11
March		82	24	11	11
April		90	26	14	10
May		93	23	15	6
June		118	24	19	9
July	<5	136	37	21	11
August	5	140	36	22	15
September		135	38	23	14
October		142	31	19	14
November	<5	156	41	16	12
December	6	173	52	13	10
2021					



LAI Buprenorphine group*					
Time period	Monthly LAIB - high	Monthly LAIB - medium	Monthly LAIB - low	Weekly LAIB - high	Weekly LAIB - low
	n	n	n	n	n
January	5	164	50		9
February	7	165	42	9	8
March	8	163	46	6	9
April	10	158	53	<5	11
May	9	165	56	<5	11
June	7	163	52	6	11
July	7	170	50	8	9
August	9	172	58	8	8
September	10	171	57	6	8
October	9	189	61	6	9
November	9	188	67	8	10
December	10	207	68	9	11
2022					
January	10	215	69	7	13
February	10	216	55	6	12
March	11	225	63	7	10
April	16	212	61	7	10
May	25	224	71	6	11
June	24	217	71	6	12
July	22	248	91	8	14
August	18	248	95	8	18
September	26	235	93	9	20
October	38	237	93	8	22
November	41	248	106	9	23
December	41	259	122	9	21

* LAIB groups are defined in Table 1

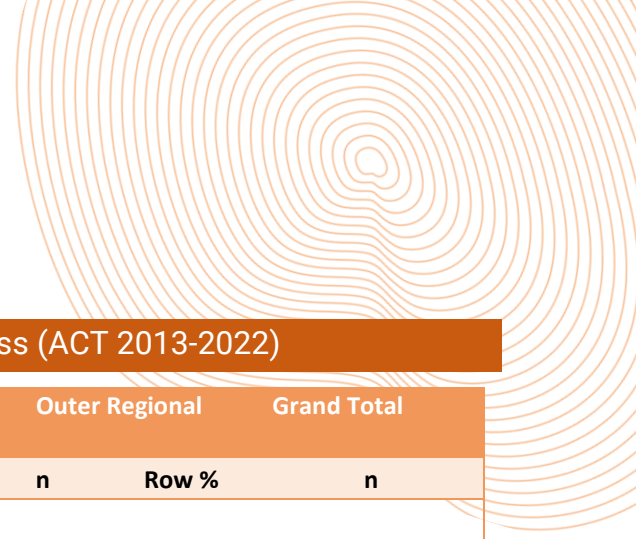
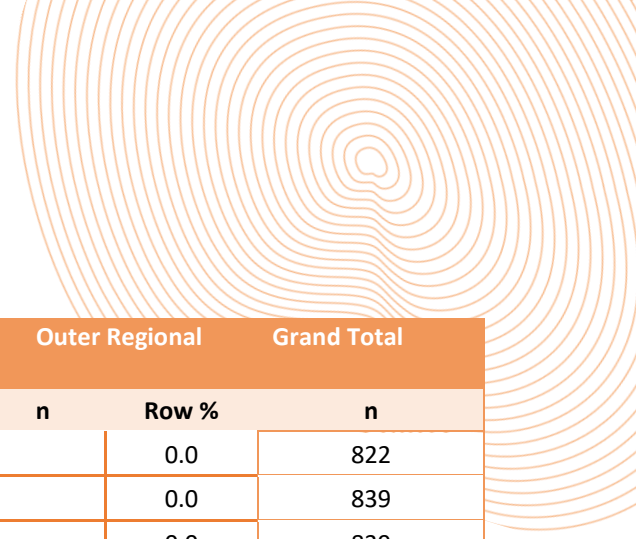


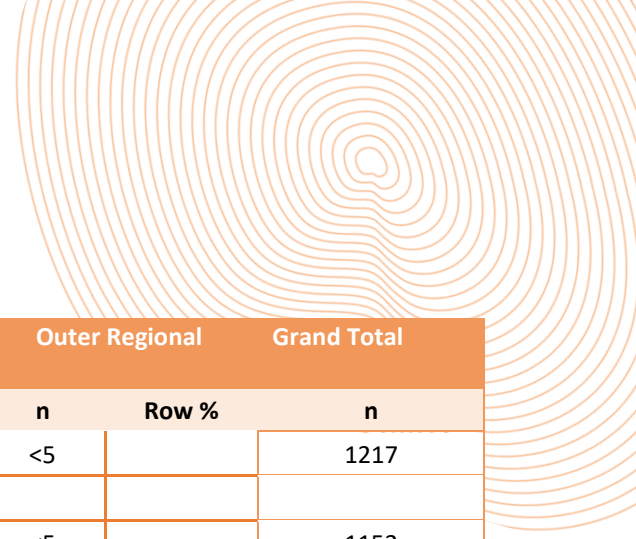
Table A3. Estimated OAT clients per month by remoteness (ACT 2013-2022)

Time period	Major Cities		Inner Regional		Outer Regional		Grand Total
	n	Row %	n	Row %	n	Row %	
2013							
January	685	98.9	8	1.1		0.0	693
February	694	98.8	9	1.2		0.0	703
March	710	98.8	8	1.2		0.0	718
April	734	99.0	8	1.0		0.0	742
May	739	99.0	7	1.0		0.0	746
June	741	99.0	8	1.0		0.0	749
July	779	99.0	8	1.0		0.0	787
August	793	99.0	8	1.0		0.0	801
September	785	99.0	8	1.0		0.0	793
October	779	99.0	8	1.0		0.0	787
November	775	98.8	9	1.2		0.0	784
December	822	99.0	8	1.0		0.0	830
2014							
January	777	98.9	9	1.1		0.0	786
February	769	99.0	8	1.0		0.0	777
March	742	98.8	9	1.2		0.0	751
April	778	98.8	10	1.2		0.0	788
May	808	98.9	9	1.1		0.0	817
June	795	98.7	10	1.3		0.0	805
July	795	98.7	11	1.3		0.0	806
August	758	98.5	11	1.5		0.0	769
September	775	98.7	11	1.3		0.0	785
October	785	98.7	10	1.3		0.0	796
November	776	98.5	12	1.5		0.0	788
December	813	98.5	13	1.5		0.0	826
2015							
January	747	98.3	13	1.7		0.0	760
February	759	98.5	12	1.5		0.0	771
March	748	98.3	13	1.7		0.0	761
April	754	98.4	12	1.6		0.0	766
May	777	98.3	13	1.7		0.0	790
June	752	98.5	12	1.5		0.0	763



Time period	Major Cities		Inner Regional		Outer Regional		Grand Total
	n	Row %	n	Row %	n	Row %	
July	809	98.3	14	1.7		0.0	822
August	825	98.3	14	1.7		0.0	839
September	826	98.5	13	1.5		0.0	839
October	814	98.5	12	1.5		0.0	826
November	793	98.5	12	1.5		0.0	805
December	853	98.4	14	1.6		0.0	867
2016							
January	824	98.5	13	1.5		0.0	836
February	834	98.5	12	1.5		0.0	846
March	771	98.3	13	1.7		0.0	784
April	820	98.5	13	1.5		0.0	833
May	818	98.4	13	1.6		0.0	831
June	848	98.6	12	1.4		0.0	860
July	830	98.5	12	1.5		0.0	842
August	841	98.6	12	1.4		0.0	852
September	842	98.8	11	1.2		0.0	853
October	828	98.6	12	1.4		0.0	840
November	839	98.5	12	1.5		0.0	851
December	824	98.4	13	1.6		0.0	837
2017							
January	833	98.7	11	1.3		0.0	844
February	796	98.8	10	1.2		0.0	806
March	824	98.8	10	1.2		0.0	834
April	823	98.6	12	1.4		0.0	835
May	869	98.7	12	1.3		0.0	881
June	826	98.6	12	1.4		0.0	837
July	835	98.6	12	1.4		0.0	846
August	829	98.6	11	1.4		0.0	840
September	825	98.6	12	1.4		0.0	837
October	825	98.5	13	1.5		0.0	838
November	822	98.5	12	1.5		0.0	834
December	806	98.4	13	1.6		0.0	819
2018							
January	788	98.5	12	1.5		0.0	800
February	743	98.4	12	1.6		0.0	756

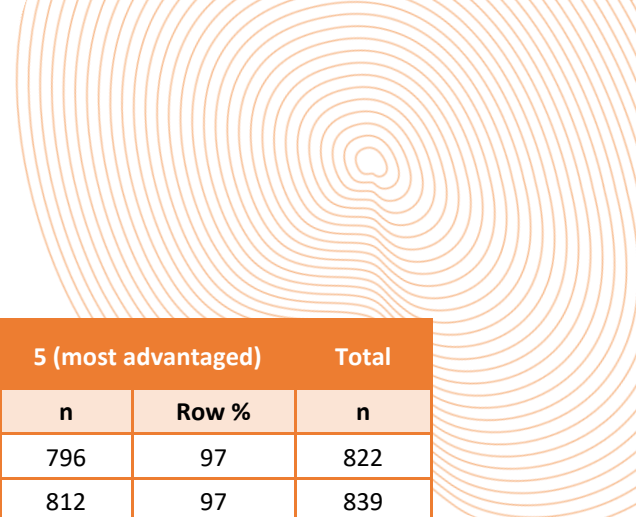
Time period	Major Cities		Inner Regional		Outer Regional		Grand Total
	n	Row %	n	Row %	n	Row %	
March	751	98.4	12	1.6		0.0	763
April	749	98.5	12	1.5		0.0	761
May	784	98.4	13	1.6		0.0	797
June	765	98.5	12	1.5		0.0	777
July	778	98.2	14	1.8		0.0	793
August	760	98.3	13	1.7		0.0	773
September	776	98.3	13	1.7		0.0	789
October	776	98.4	13	1.6		0.0	789
November	802	98.5	12	1.5		0.0	814
December	901	98.7	12	1.3		0.0	913
2019							
January	979	98.9	11	1.1		0.0	990
February	1001	98.8	12	1.2		0.0	1013
March	985	98.8	12	1.2		0.0	996
April	979	98.8	12	1.2		0.0	991
May	1123	98.9	13	1.1		0.0	1135
June	1084	98.9	12	1.1		0.0	1096
July	1080	99.0	11	1.0		0.0	1091
August	962	98.9	11	1.1		0.0	973
September	1032	93.0	11	1.0		0.0	1109
October	1059	96.2	12	1.1		0.0	1100
November	1064	98.7	14	1.3		0.0	1077
December	1067	98.8	13	1.2		0.0	1081
2020							
January	1066	98.8	13	1.2		0.0	1080
February	1069	98.8	13	1.2		0.0	1082
March	1209	98.8	15	1.2		0.0	1224
April	1112	98.7	14	1.3		0.0	1127
May	1116	98.9	12	1.1		0.0	1128
June	947	98.9	10	1.1		0.0	958
July	1093	98.9	11	1.0	<5		1105
August	1110	98.5	15	1.4	<5		1126
September	1154	98.5	16	1.4	<5		1172
October	1127	98.2	19	1.6	<5		1147
November	1167	98.1	20	1.7	<5		1189



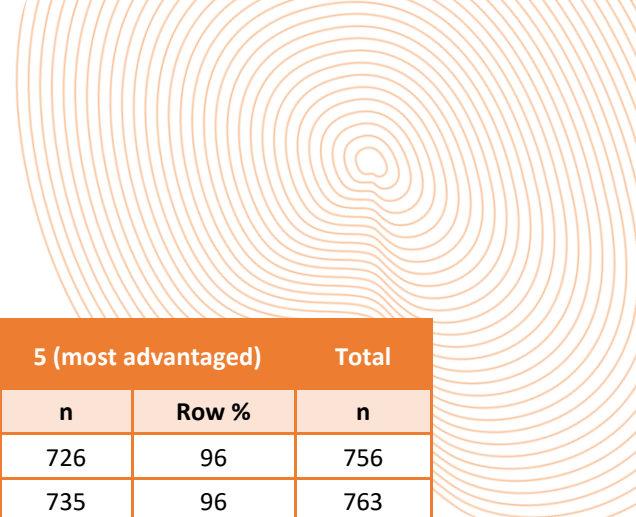
Time period	Major Cities		Inner Regional		Outer Regional		Grand Total
	n	Row %	n	Row %	n	Row %	n
December	1193	98.1	21	1.7	<5		1217
2021							
January	1129	98.0	21	1.8	<5		1152
February	1091	98.2	17	1.5	<5		1111
March	1109	98.1	18	1.6	<5		1130
April	1128	98.1	18	1.5	<5		1149
May	1158	98.0	19	1.6	<5		1181
June	1101	98.1	17	1.5	<5		1122
July	1119	98.4	15	1.3	<5		1138
August	1135	98.2	17	1.4	<5		1156
September	1146	98.1	18	1.6	<5		1168
October	1171	97.9	20	1.7	5	0.4	1195
November	1147	98.1	18	1.6	<5		1169
December	1192	98.1	19	1.6	5	0.4	1215
2022							
January	1236	97.9	21	1.6	5	0.4	1262
February	1147	97.8	20	1.7	5	0.4	1173
March	1124	97.2	25	2.1	7	0.6	1156
April	1078	97.3	22	2.0	7	0.7	1107
May	1149	96.8	27	2.3	11	0.9	1187
June	1172	97.1	25	2.0	10	0.9	1207
July	1150	96.3	31	2.6	13	1.1	1195
August	1203	96.4	32	2.6	13	1.0	1248
September	1175	96.0	36	2.9	13	1.1	1224
October	1186	96.2	34	2.7	13	1.1	1233
November	1193	95.9	37	3.0	14	1.1	1243
December	1176	96.4	32	2.6	13	1.1	1221

Table A4. Estimated OAT clients per month by IRSAD quintile (ACT, 2013-2022)

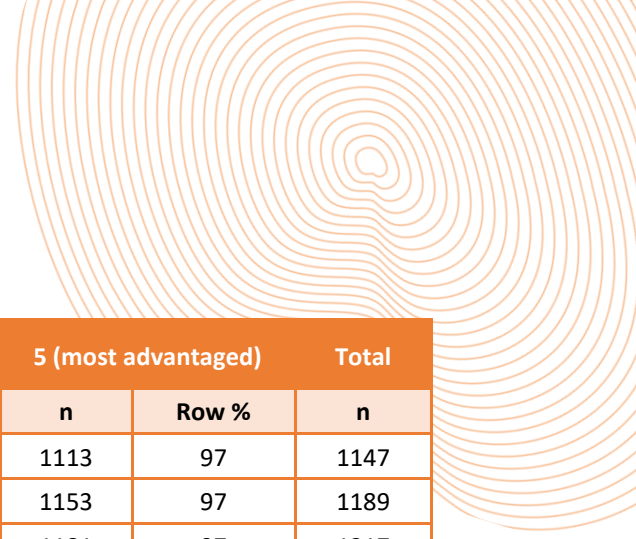
Time period	1 (most disadvantaged)		4		5 (most advantaged)		Total n
	n	Row %	n	Row %	n	Row %	
2013							
January	9	1	10	1	674	97	693
February	9	1	8	1	686	98	703
March	9	1	8	1	701	98	718
April	10	1	8	1	724	98	742
May	10	1	9	1	727	97	746
June	10	1	11	1	728	97	749
July	9	1	10	1	768	98	787
August	9	1	9	1	782	98	801
September	9	1	8	1	776	98	793
October	9	1	10	1	767	98	787
November	9	1	11	1	764	98	784
December	9	1	11	1	809	98	830
2014							
January	9	1	11	1	766	97	786
February	9	1	9	1	759	98	777
March	10	1	11	1	731	97	751
April	10	1	11	1	767	97	788
May	11	1	13	2	793	97	817
June	10	1	12	1	784	97	805
July	10	1	12	2	784	97	806
August	11	1	10	1	748	97	769
September	13	2	11	1	761	97	785
October	16	2	10	1	770	97	796
November	15	2	11	1	762	97	788
December	17	2	12	1	796	96	826
2015							
January	14	2	12	2	735	97	760
February	15	2	13	2	743	96	771
March	10	1	11	1	740	97	761
April	10	1	12	2	744	97	766
May	10	1	12	2	768	97	790
June	11	1	12	2	740	97	763



Time period	1 (most disadvantaged)		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n
July	14	2	13	2	796	97	822
August	14	2	13	2	812	97	839
September	15	2	13	2	811	97	839
October	11	1	13	2	802	97	826
November	11	1	13	2	781	97	805
December	10	1	15	2	842	97	867
2016							
January	11	1	15	2	811	97	836
February	11	1	14	2	821	97	846
March	11	1	13	2	760	97	784
April	12	1	14	2	806	97	833
May	12	1	14	2	805	97	831
June	14	2	15	2	831	97	860
July	14	2	14	2	814	97	842
August	14	2	15	2	824	97	852
September	12	1	15	2	826	97	853
October	12	1	15	2	813	97	840
November	14	2	14	2	824	97	851
December	13	2	13	1	811	97	837
2017							
January	13	2	13	2	817	97	844
February	11	1	13	2	782	97	806
March	11	1	13	2	810	97	834
April	12	1	13	2	810	97	835
May	10	1	13	1	858	97	881
June	11	1	14	2	813	97	837
July	11	1	13	2	822	97	846
August	14	2	14	2	812	97	840
September	15	2	13	2	808	97	837
October	14	2	14	2	810	97	838
November	15	2	15	2	803	96	834
December	13	2	17	2	789	96	819
2018							
January	14	2	17	2	768	96	800



Time period	1 (most disadvantaged)		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n
February	14	2	16	2	726	96	756
March	11	1	17	2	735	96	763
April	13	2	16	2	732	96	761
May	10	1	17	2	770	97	797
June	12	2	17	2	747	96	777
July	13	2	18	2	761	96	793
August	13	2	18	2	742	96	773
September	13	2	17	2	759	96	789
October	10	1	18	2	760	96	789
November	12	2	18	2	783	96	814
December	12	1	19	2	882	97	913
2019							
January	13	1	19	2	958	97	990
February	14	1	18	2	981	97	1013
March	14	1	19	2	964	97	996
April	14	1	19	2	957	97	991
May	14	1	24	2	1098	97	1135
June	13	1	23	2	1059	97	1096
July	11	1	22	2	1057	97	1091
August	11	1	18	2	944	97	973
September	13	1	19	2	1011	97	1044
October	15	1	19	2	1038	97	1072
November	14	1	21	2	1043	97	1077
December	14	1	19	2	1048	97	1081
2020							
January	15	1	20	2	1045	97	1080
February	16	1	19	2	1047	97	1082
March	17	1	23	2	1184	97	1224
April	15	1	23	2	1089	97	1127
May	16	1	22	2	1090	97	1128
June	16	2	19	2	923	96	958
July	17	2	20	2	1067	97	1105
August	17	2	20	2	1089	97	1126
September	15	1	22	2	1135	97	1172



Time period	1 (most disadvantaged)		4		5 (most advantaged)		Total
	n	Row %	n	Row %	n	Row %	n
October	14	1	20	2	1113	97	1147
November	14	1	23	2	1153	97	1189
December	14	1	22	2	1181	97	1217
2021							
January	16	1	23	2	1114	97	1152
February	16	1	22	2	1073	97	1111
March	17	1	21	2	1092	97	1130
April	15	1	22	2	1112	97	1149
May	16	1	23	2	1142	97	1181
June	15	1	22	2	1085	97	1122
July	15	1	21	2	1102	97	1138
August	14	1	21	2	1121	97	1156
September	15	1	22	2	1131	97	1168
October	17	1	22	2	1157	97	1195
November	16	1	21	2	1132	97	1169
December	15	1	20	2	1180	97	1215
2022							
January	17	1	21	2	1225	97	1262
February	15	1	20	2	1138	97	1173
March	16	1	20	2	1120	97	1156
April	18	2	20	2	1069	97	1107
May	20	2	22	2	1145	96	1187
June	22	2	23	2	1162	96	1207
July	17	1	23	2	1155	97	1195
August	21	2	24	2	1202	96	1248
September	19	2	24	2	1182	97	1224
October	22	2	24	2	1187	96	1233
November	20	2	25	2	1198	96	1243
December	21	2	24	2	1175	96	1221

IRSAD: Index of Relative Socioeconomic Advantage and Disadvantage

*Australia Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016. ABS: Canberra; 2018.

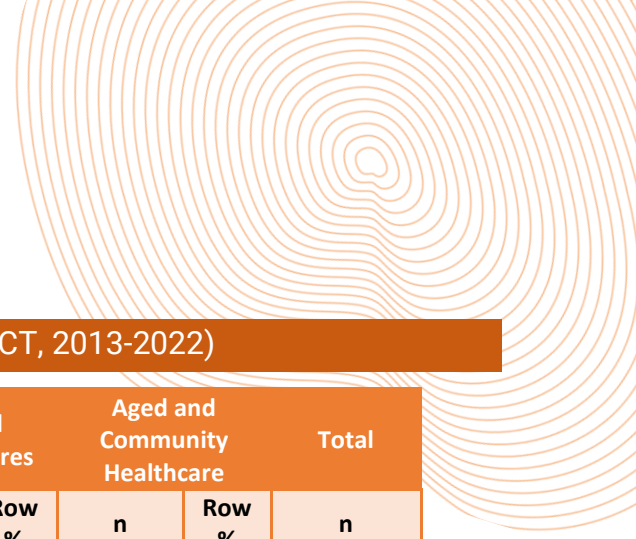


Table A5. Estimated OAT clients per month by setting (ACT, 2013-2022)

Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Aged and Community Healthcare		Total
	n	Row %	n	Row %	n	Row %	n	Row %	
2013									
January	673	97	20	3					693
February	659	94	44	6					703
March	676	94	43	6					718
April	697	94	45	6					742
May	706	95	40	5					746
June	707	94	42	6					749
July	731	93	55	7					787
August	752	94	49	6					801
September	741	93	52	7					793
October	737	94	50	6					787
November	727	93	56	7					784
December	766	92	64	8					830
2014									
January	734	93	52	7					786
February	731	94	47	6					777
March	702	93	50	7					751
April	732	93	56	7					788
May	762	93	55	7					817
June	763	95	42	5					805
July	760	94	46	6					806
August	718	93	51	7					769
September	734	94	51	6					785
October	748	94	48	6					796
November	749	95	39	5					788
December	784	95	41	5					826
2015									
January	725	95	36	5					760
February	738	96	33	4					771
March	721	95	40	5					761
April	735	96	31	4					766
May	754	95	36	5					790

Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Aged and Community Healthcare		Total
	n	Row %	n	Row %	n	Row %	n	Row %	
June	735	96	28	4					763
July	786	96	36	4					822
August	792	94	47	6					839
September	795	95	44	5					839
October	785	95	41	5					826
November	774	96	31	4					805
December	832	96	35	4					867
2016									
January	804	96	33	4					836
February	814	96	32	4					846
March	762	97	23	3					784
April	806	97	27	3					833
May	806	97	25	3					831
June	830	96	30	4					860
July	814	97	28	3					842
August	823	97	29	3					852
September	830	97	23	3					853
October	811	97	29	3					840
November	823	97	28	3					851
December	803	96	35	4					837
2017									
January	811	96	33	4					844
February	775	96	30	4					806
March	803	96	31	4					834
April	793	95	42	5					835
May	834	95	46	5					881
June	793	95	44	5					837
July	811	96	35	4					846
August	805	96	35	4					840
September	801	96	35	4					837
October	801	96	37	4					838
November	796	95	38	5					834
December	783	96	35	4					819

Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Aged and Community Healthcare		Total n
	n	Row %	n	Row %	n	Row %	n	Row %	
2018									
January	768	96	32	4					800
February	728	96	27	4					756
March	731	96	32	4					763
April	725	95	36	5					761
May	755	95	41	5					797
June	736	95	40	5					777
July	760	96	33	4					793
August	740	96	33	4					773
September	762	97	27	3					789
October	758	96	30	4					789
November	752	92	62	8					814
December	770	84	143	16					913
2019									
January	765	77	225	23					990
February	763	75	250	25					1013
March	758	76	238	24					996
April	758	76	233	24					991
May	885	78	250	22					1135
June	835	76	260	24					1096
July	818	75	273	25					1091
August	695	71	278	29					973
September	737	71	306	29					1044
October	758	71	314	29					1072
November	761	71	316	29					1077
December	767	71	314	29					1081
2020									
January	769	71	311	29					1080
February	765	71	317	29					1082
March	908	74	316	26					1224
April	820	73	306	27					1127
May	820	73	308	27					1128
June	658	69	299	31					958

Time period	Community Pharmacy		Hospital		Clinics and Medical Centres		Aged and Community Healthcare		Total
	n	Row %	n	Row %	n	Row %	n	Row %	
July	765	69	332	30	24	2			1105
August	789	70	323	29	21	2			1126
September	824	70	326	28	22	2			1172
October	796	69	330	29	21	2			1147
November	819	69	339	28	32	3			1189
December	827	68	350	29	40	3			1217
2021									
January	821	71	286	25	45	4			1152
February	778	70	287	26	45	4			1111
March	765	68	315	28	50	4			1130
April	775	67	316	28	48	4	31	3	1149
May	794	67	321	27	53	4	20	2	1181
June	779	69	280	25	44	4	20	2	1122
July	775	68	307	27	46	4		0	1138
August	787	68	303	26	53	5	16	1	1156
September	809	69	293	25	59	5		0	1168
October	833	70	290	24	58	5	21	2	1195
November	834	71	274	23	49	4	20	2	1169
December	824	68	321	26	55	5	16	1	1215
2022									
January	887	70	293	23	65	5	17	1	1262
February	803	68	291	25	65	6	14	1	1173
March	791	68	253	22	63	5	49	4	1156
April	701	63	291	26	59	5	57	5	1107
May	744	63	277	23	102	9	65	5	1187
June	763	63	283	23	126	10	36	3	1207
July	717	60	279	23	170	14	29	2	1195
August	746	60	304	24	172	14	26	2	1248
September	719	59	298	24	180	15	28	2	1224
October	719	58	313	25	171	14	30	2	1233
November	704	57	327	26	181	15	31	2	1243
December	690	57	331	27	179	15			1221



Table A6. Estimated OAT clients per month by setting and medicine (ACT, 2013-2022)

Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
2013									
January		117	556		20				
February		111	548		43	<5			
March		116	560		41	<5			
April		121	575		42	<5			
May		123	584		37	<5			
June		123	584		38	<5			
July		125	607		52	<5			
August		130	622		45	<5			
September		129	612		49	<5			
October		131	607		46	<5			
November		138	589		53	<5			
December		145	621		59	5			
2014									
January		145	589		48	<5			
February		144	586		43	<5			
March		147	554		47	<5			



Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
April		152	580		53	<5			
May		161	601		51	<5			
June		167	596		37	<5			
July		165	595		42	<5			
August		161	557		46	5			
September		157	577		47	<5			
October		169	579		44	<5			
November		173	575		37	<5			
December		178	606		39	<5			
2015									
January		173	551		34	<5			
February		165	573		31	<5			
March		172	549		39	<5			
April		166	569		29	<5			
May		174	580		33	<5			
June		162	574		25	<5			
July		170	616		34	<5			
August		173	619		45	<5			



Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
September		179	616		43	<5			
October		175	610		39	<5			
November		174	600		30	<5			
December		181	651		32	<5			
2016									
January		177	626		31				
February		177	637		30	<5			
March		173	589		21	<5			
April		179	627		25	<5			
May		184	622		21	<5			
June		190	640		25	5			
July		191	623		23	5			
August		200	623		27				
September		186	643		22	<5			
October		180	631		27	<5			
November		167	656		26	<5			
December		176	627		32	<5			
2017									



Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
January		184	627		31				
February		180	595		28	<5			
March		185	618		30				
April		171	622		39	<5			
May		181	653		44	<5			
June		182	611		41	<5			
July		191	621		32	<5			
August		195	610		32	<5			
September		194	607		32	<5			
October		212	589		33	<5			
November		207	588		35	<5			
December		203	581		32	<5			
2018									
January		201	567		29	<5			
February		194	534		25	<5			
March		202	529		29	<5			
April		196	529		34	<5			
May		211	545		39	<5			



Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
June		202	535		38	<5			
July		208	552		29	<5			
August		194	546		29	<5			
September		202	560		23	5			
October		197	561		25	6			
November		200	552		23	39			
December		196	574		22	121			
2019									
January		200	564		20	205			
February		201	561		15	235			
March		205	553		17	221			
April		201	557		16	217			
May		320	566		24	226			
June		277	558		20	241			
July		245	573		22	250			
August		109	587		20	258			
September		148	589	99	26	248			
October		179	578	87	24	232			



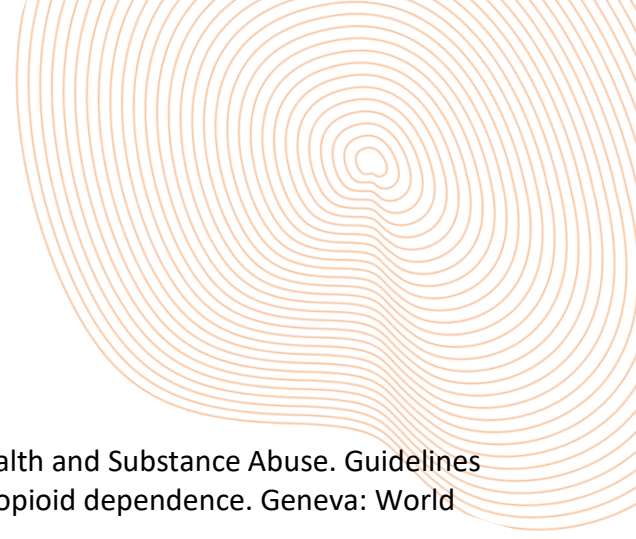
Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
November		189	572	78	20	218			
December		191	575	71	18	225			
2020									
January	25	191	570	69	22	221			
February	31	193	551	91	22	205			
March	37	217	653	91	23	202			
April	36	200	585	104	20	183			
May	38	198	584	100	19	188			
June	36	158	465	134	14	151			
July	49	171	544	148	15	169	24		
August	42	185	562	160	18	146	21		
September	35	196	594	158	19	150	22		
October	24	193	579	162	21	147	21		
November	22	193	604	172	20	147	32		
December	31	199	597	182	20	149	40		
2021									
January	31	206	584	161	15	110	45		
February	34	191	554	148	13	126	45		



Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
March	28	190	547	149	13	153	50		
April	30	184	560	146	16	154	48		
May	30	191	573	149	19	153	53		
June	39	187	553	136	20	123	44		
July	36	182	557	152	19	136	46		
August	38	185	563	151	17	136	53		
September	39	186	584	146	16	132	59		
October	45	192	596	155	13	122	58		
November	72	188	573	149	13	112	49		
December	65	189	570	169	16	136	55		
2022									
January	75	186	626	157	15	121	65		
February	56	182	565	165	14	112	65		
March	46	181	564	159	14	80	63		
April	20	186	495	170	16	104	59		
May	<5	189	552	168	15	94	102		
June	<5	194	568	167	13	103	126		
July		192	524	183	12	84	170		



Time period	Community Pharmacy			Hospital			Clinics and Medical Centres		
	LAI	SL	Methadone	LAI	SL	Methadone	LAI	SL	Methadone
	buprenorphine	buprenorphine		buprenorphine	buprenorphine		buprenorphine	buprenorphine	
	n	n	n	n	n	n	n	n	n
August	<5	196	548	189	12	103	172		
September		191	527	175	10	113	180		
October	<5	182	534	193	11	109	171		
November	<5	187	515	212	11	104	181		
December		179	508	250	11	70	179		



7. References

1. World Health Organization, Department of Mental Health and Substance Abuse. Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence. Geneva: World Health Organization; 2009.
2. Colledge-Frisby S, Jones N, Larney S, et al. The impact of opioid agonist treatment on hospitalisations for injecting-related diseases among an opioid dependent population: A retrospective data linkage study. *Drug and Alcohol Dependence* 2022; **236**: 109494.
3. Degenhardt L, Grebely J, Stone J, et al. Global patterns of opioid use and dependence: harms to populations, interventions, and future action. *Lancet* 2019; **394**(10208): 1560-79.
4. Gisev N, Bharat C, Larney S, et al. The effect of entry and retention in opioid agonist treatment on contact with the criminal justice system among opioid-dependent people: a retrospective cohort study. *Lancet Public Health* 2019; **4**(7): e334-e42.
5. Santo T, Jr., Clark B, Hickman M, et al. Association of Opioid Agonist Treatment With All-Cause Mortality and Specific Causes of Death Among People With Opioid Dependence: A Systematic Review and Meta-analysis. *JAMA Psychiatry* 2021; **78**(9): 979-93.
6. World Health Organization. WHO, UNODC, UNAIDS technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users–2012 revision. 2012.
7. Colledge-Frisby S, Ottaviano S, Webb P, et al. Global coverage of interventions to prevent and manage drug-related harms among people who inject drugs: a systematic review. *Lancet Global Health* 2023; **11**(5): e673-e83.
8. World Health Organization. WHO Model List of Essential Medicines. World Health Organization; 2017.
9. Australian Government Department of Health and Aged Care. The Pharmaceutical Benefits Scheme (PBS). 2023. <https://www.pbs.gov.au/pbs/home> (accessed 21 June 2023).
10. Lintzeris N, Dunlop A, Masters D. Clinical Guidelines for Use of Depot Buprenorphine (Buvidal and Sublocade) in the Treatment of Opioid Dependence: NSW Ministry of Health; 2019.
11. Australian Product Information: Buvidal® weekly (buprenorphine) solution for injection. Therapeutic Goods Administration, 2018.
12. Australian Product Information: Buvidal® monthly (buprenorphine) solution for injection. Therapeutic Goods Administration, 2018.
13. Australian Product Information: Sublocade (Buprenorphine). Therapeutic Goods Administration, 2019.
14. Frost M, Bailey GL, Lintzeris N, et al. Long-term safety of a weekly and monthly subcutaneous buprenorphine depot (CAM2038) in the treatment of adult out-patients with opioid use disorder. *Addiction* 2019; **114**(8): 1416-26.
15. Haight BR, Learned SM, Laffont CM, et al. Efficacy and safety of a monthly buprenorphine depot injection for opioid use disorder: a multicentre, randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet* 2019; **393**(10173): 778-90.

16. Farrell M, Shahbazi J, Byrne M, et al. Outcomes of a single-arm implementation trial of extended-release subcutaneous buprenorphine depot injections in people with opioid dependence. *International Journal of Drug Policy* 2022; **100**: 103492.
17. Barnett A, Savic M, Lintzeris N, et al. Tracing the affordances of long-acting injectable depot buprenorphine: A qualitative study of patients' experiences in Australia. *Drug and Alcohol Dependence* 2021; **227**: 108959.
18. Clay S, Treloar C, Degenhardt L, et al. 'I just thought that was the best thing for me to do at this point': Exploring patient experiences with depot buprenorphine and their motivations to discontinue. *International Journal of Drug Policy* 2023; **115**: 104002.
19. Lancaster K, Gendera S, Treloar C, et al. The Social, Material, and Temporal Effects of Monthly Extended-Release Buprenorphine Depot Treatment for Opioid Dependence: An Australian Qualitative Study. *Contemporary Drug Problems* 2023; **50**(1): 105-20.
20. Lintzeris N, Hayes V, Arunogiri S. Interim guidance for the delivery of medication assisted treatment of opioid dependence in response to COVID - 19: a national response. Royal Australasian College of Physicians, 2020.
21. Hall NY, Le L, Majmudar I, Mihalopoulos C. Barriers to accessing opioid substitution treatment for opioid use disorder: A systematic review from the client perspective. *Drug and Alcohol Dependence* 2021; **221**: 108651.
22. Australian Institute of Health Welfare. National Opioid Pharmacotherapy Statistics Annual Data collection. Canberra: AIHW, 2023.
23. IQVIA Australia & New Zealand. Navigating COVID-19 Impact: An initial assessment of the pandemic's effect on Australian healthcare. *White paper series - Part 1*, 2020. <https://www.iqvia.com/-/media/iqvia/pdfs/library/white-papers/iqvia-anz-covid-19-white-paper.pdf> (accessed 20 July 2023).
24. Australian Government Department of Health and Aged Care. Post-market Review of PBS Opioid Dependence Treatment Program medicines: Interim Report to the Pharmaceutical Benefits Advisory Committee. Canberra, 2023.
25. Pharmaceutical Benefits Advisory Committee. Positive Recommendations made by the PBAC in March 2001. Canberra: Australian Government Department of Health and Aged Care; 2001.
26. Pharmaceutical Benefits Advisory Committee. Positive Recommendations made by the PBAC November 2005. Canberra: Australian Government Department of Health and Aged Care; 2005.
27. Pharmaceutical Benefits Advisory Committee. Positive Recommendations made by the PBAC March 2011. Canberra: Australian Government Department of Health and Aged Care; 2011.
28. Chidwick K, Bharat C, Gisev N, Farrell M, Degenhardt L. NDARC Technical Report: Real-world dosing intervals of long-acting buprenorphine for opioid agonist treatment. Sydney: UNSW, 2023.
29. Reece AS, Norman A, Hulse GK. Acceleration of cardiovascular-biological age by amphetamine exposure is a power function of chronological age. *Heart Asia* 2017; **9**(1): 30-8.

30. Valerio H, Alavi M, Silk D, et al. Progress Towards Elimination of Hepatitis C Infection Among People Who Inject Drugs in Australia: The ETHOS Engage Study. *Clinical Infectious Diseases* 2021; **73**(1): e69-e78.
31. Haber PS, Elsayed M, Espinoza D, Lintzeris N, Veillard AS, Hallinan R. Constipation and other common symptoms reported by women and men in methadone and buprenorphine maintenance treatment. *Drug and Alcohol Dependence* 2017; **181**: 132-9.
32. Kelty E, Hulse G. Rates of Hospital and Emergency Department Attendances in Opiate-dependent Patients Treated With Implant Naltrexone, Methadone, or Buprenorphine. *Addictive Disorders & Their Treatment* 2017; **16**(2): 39-48.
33. Larance B, Degenhardt L, Grebely J, et al. Perceptions of extended-release buprenorphine injections for opioid use disorder among people who regularly use opioids in Australia. *Addiction* 2020; **115**(7): 1295-305.
34. Larney S, Lai W, Dolan K, Zador D. Monitoring a Prison Opioid Treatment Program Over a Period of Change to Clinical Governance Arrangements, 2007-2013. *Journal of Substance Abuse Treatment* 2016; **70**: 58-63.
35. Jamshidi N, Athavale A, Murnion B. Buprenorphine not detected on urine drug screening in supervised treatment. *Journal of Opioid Management* 2021; **17**(7): 69-76.
36. Australian Bureau of Statistics. Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016 ABS: Canberra; 2018.
37. Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016. ABS: Canberra; 2018.
38. Australian Bureau of Statistics. National, state and territory population, September 2022. Canberra: ABS; 2023.
39. Bharat C, Larney S, Barbieri S, et al. The effect of person, treatment and prescriber characteristics on retention in opioid agonist treatment: a 15-year retrospective cohort study. *Addiction* 2021; **116**(11): 3139-52.