

5.1 Opioid medicines dispensing

Context

This data item examines dispensing rates for opioid medicines. The data are sourced from the PBS and relate to the number of prescriptions filled per 100,000 people.

Opioids are medicines that relieve moderate to severe pain.^{1,2} According to available evidence, opioid therapy is particularly useful in managing acute pain, cancer pain and pain in the palliative care setting.

Opioids are also used for chronic non-cancer pain. However, evidence does not support the long-term efficacy and safety of opioid therapy for this purpose.³ In addition, evidence is growing that the use of opioids can lead to adverse events and harm.³ Despite this, a number of studies indicate increasing levels of opioid prescribing for chronic non-cancer pain, particularly by general practitioners.^{4,5} The adverse long-term effects of opioids include hormonal suppression and, paradoxically, increased pain sensitivity.³

For management of chronic non-cancer pain, a cautious approach is indicated, with opioid use having little or no role other than as part of a multimodal approach. The preferred multimodal approach includes patient education and self-management, supported by a general practitioner and multidisciplinary, allied health and nursing teams offering non-pharmacological treatments. For a small subset of individuals, cautious use of short-duration, low-dose, opioid treatments is often recommended in guidelines.⁶

While adverse events and the risk of mortality rise proportionally with the opioid dose⁷, analgesic and functional benefits do not. The mortality risk rises without increased benefit from a daily opioid dose of more than 100mg of oral morphine or the equivalent.⁸

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Magnitude of variation

In 2013–14, there were 13,905,258 PBS prescriptions dispensed for opioid medicines, representing 55,126 prescriptions per 100,000 people (the Australian rate).

The number of PBS prescriptions dispensed for opioid medicines across 325* local areas (SA3s) ranged from 10,945 to 110,172 per 100,000 people. The number of prescriptions was **10.1 times higher** in the area with the highest rate compared to the area with the lowest rate. The average number of prescriptions dispensed varied across states and territories, from 39,127 per 100,000 people in the Northern Territory, to 73,641 in Tasmania.

After excluding the highest and lowest results, the opioid medicine prescription rate across the 301 remaining local areas was **2.9 times higher** in one local area compared to another.

Dispensing rates were highest in areas of low socioeconomic status and decreased with areas of increasing socioeconomic status. Dispensing rates tended to be higher in inner and outer regional areas than in major cities or remote areas.

Interpretation

Potential reasons for the variation include differences in:

- prescribing practices, training, knowledge and attitudes of general practitioners⁹
- the understanding of individuals about the appropriate use of opioids to treat pain, the risks associated with high-dose and/or long-term opioid use, and the importance and efficacy of alternative non-pharmacological treatments

- the type of opioid dispensed and the number of authority or regulation 24 prescriptions supplied in each region
- access to pain specialists
- availability and accessibility of appropriate non-pharmacological treatment options, particularly in rural and remote locations
- access to alternate management, such as opioid dependency treatments.

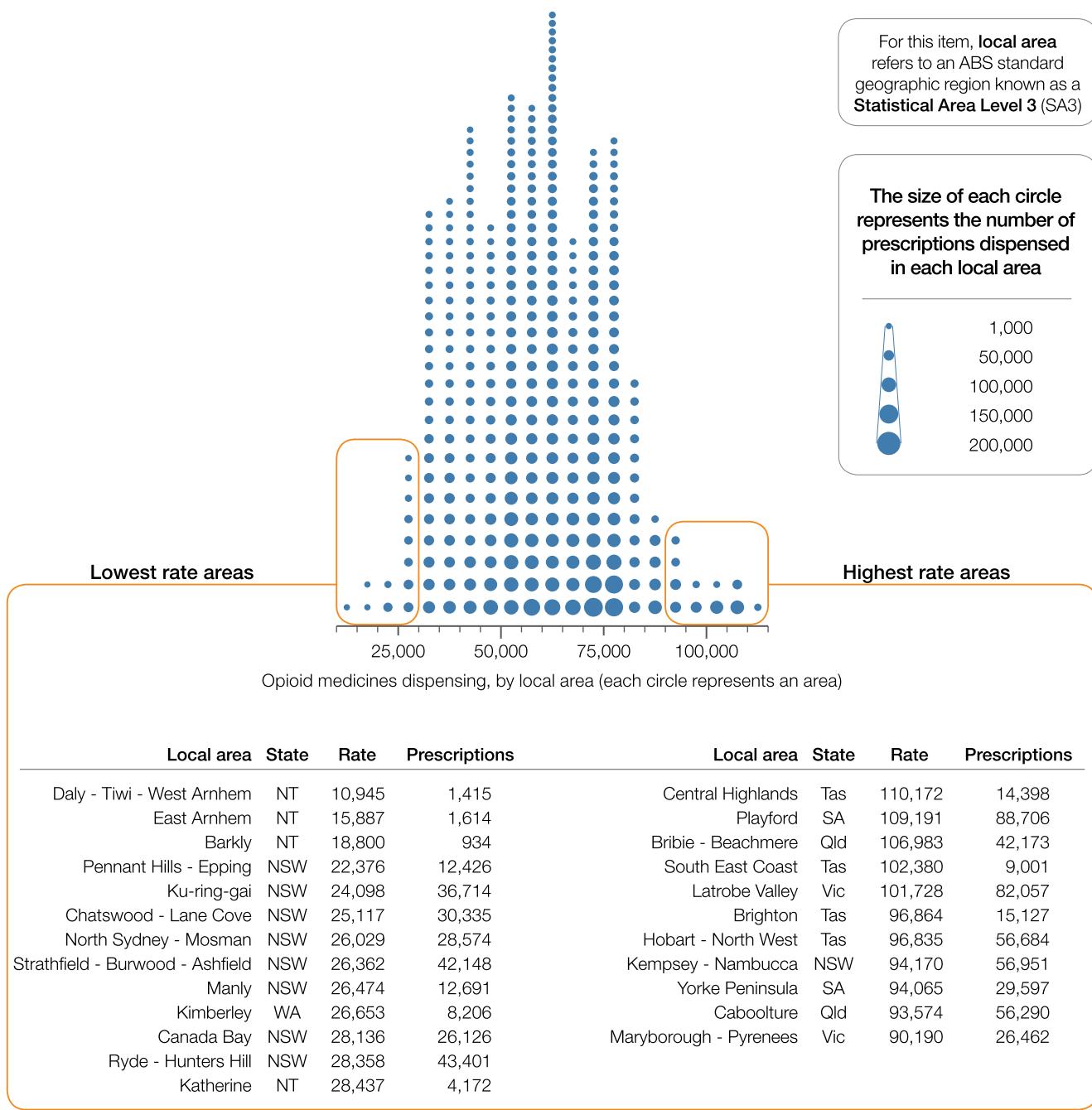
It is important to note that the PBS data used in this item could potentially underestimate the use of opioid medicines as it does not capture over-the-counter medicines from pharmacies. The only opioids available over the counter are codeine in combination with simple analgesics.

To explore this variation, further analysis could focus on:

- understanding the considerable variation in opioid dispensing rates among states and territories, particularly the reason for very high rates in some jurisdictions and very low rates in others
- analysis by volume provided (in oral morphine equivalents)
- analysis of the ratio of simple analgesic use to opioid use
- analysis of weak and strong opioid use
- distinguishing between low-dose and high-dose prescribing of opioids, to assess the extent of inappropriate prescribing practices.

*There are 333 SA3s. For this item, data were suppressed for 8 SA3s. This is because of confidentiality requirements given the small numbers of prescriptions dispensed in these areas.

Figure 103: Number of PBS prescriptions dispensed for opioid medicines per 100,000 people, age standardised, by local area, 2013–14



Notes:

Rates are standardised based on the age structure of the Australian population in 2001.

State/territory and national rates are based on the total number of prescriptions and people in the geographic area.

The term local area refers to an ABS standard geographic region known as a Statistical Area Level 3 (SA3).

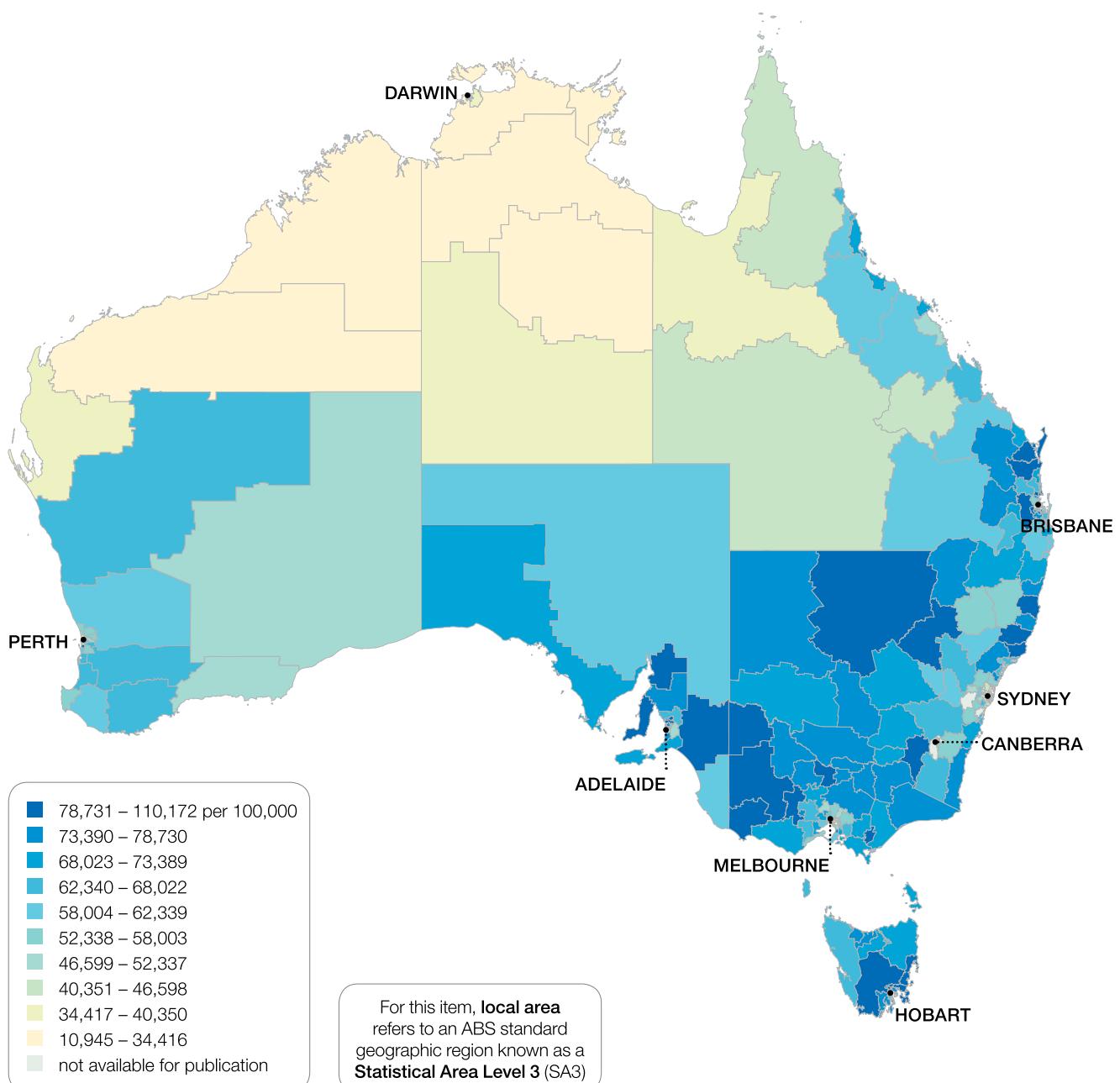
PBS prescriptions include all medicines dispensed under the PBS or RPBS, including medicines that do not receive a Commonwealth subsidy. They exclude a large proportion of public hospital drug usage, direct supply to remote Aboriginal Health Services, over-the-counter purchases and private prescriptions. SA3 analysis excludes approximately 48,610 prescriptions from GPO postcodes 2001, 2124, 3001, 4001, 5001, 6843 but these data are included in state/territory and national level analysis.

For more technical information please refer to the Technical Supplement.

Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 11/02/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

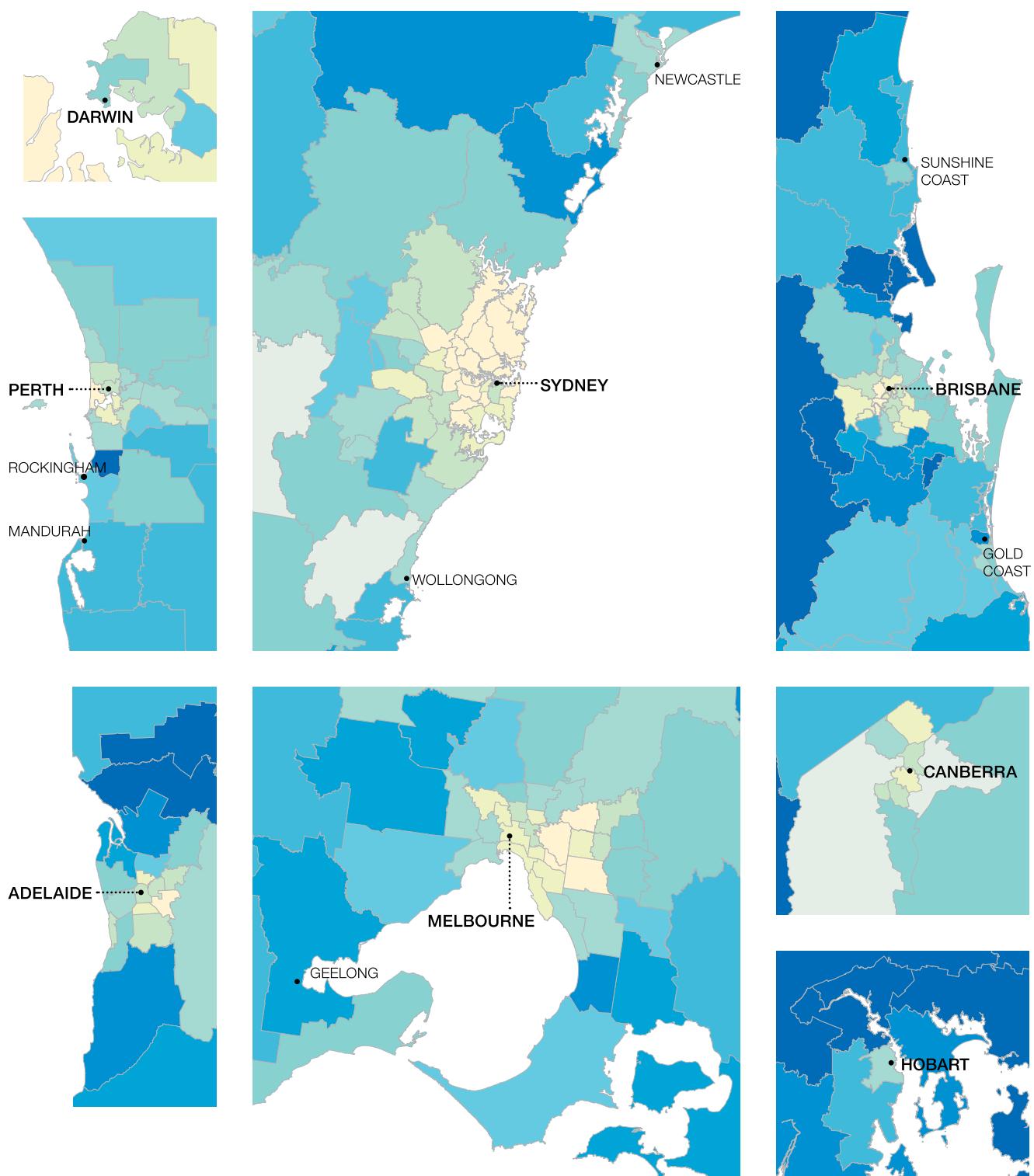
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Figure 104: Number of PBS prescriptions dispensed for opioid medicines per 100,000 people, age standardised, by local area, 2013–14



Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 11/02/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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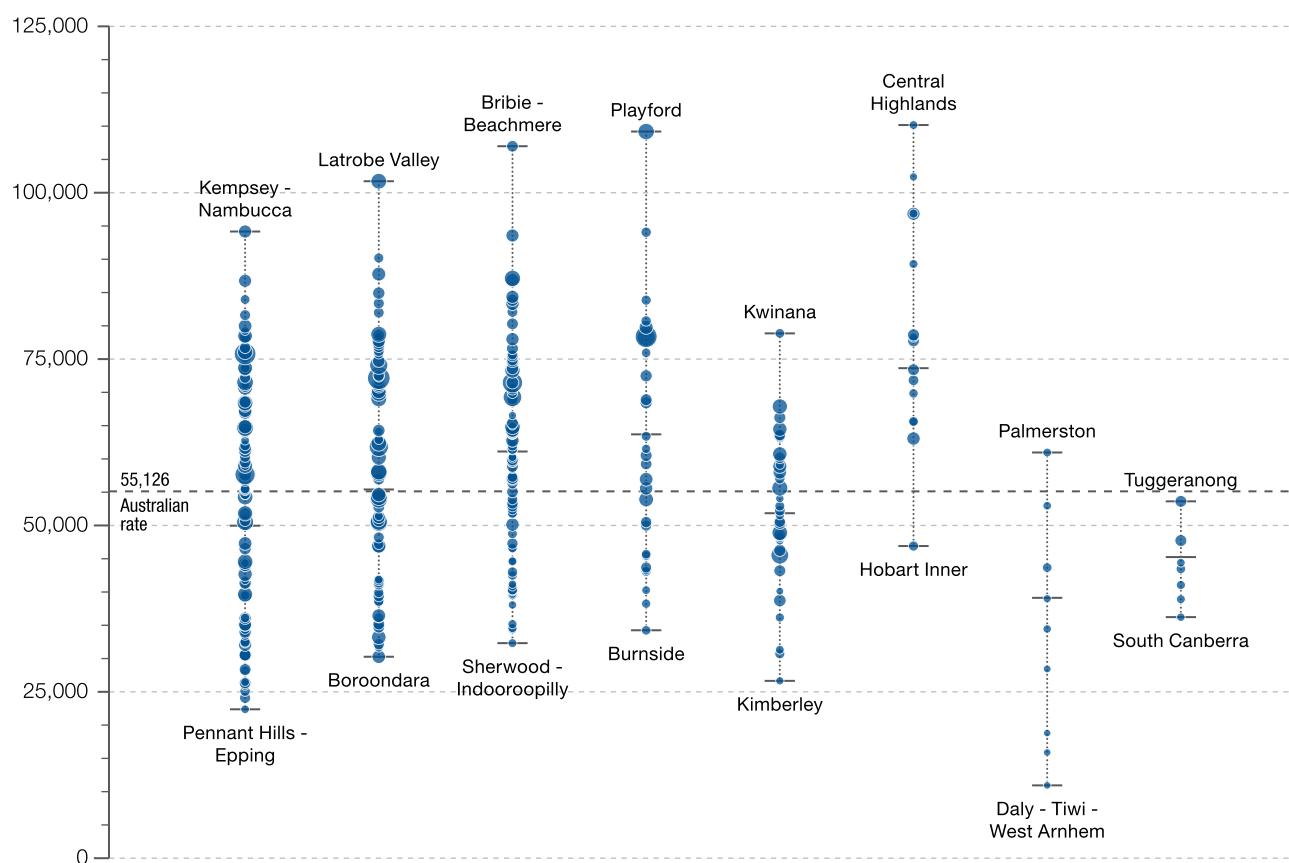


Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 11/02/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Figure 105: Number of PBS prescriptions dispensed for opioid medicines per 100,000 people, age standardised, by local area, state and territory, 2013–14

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
Highest rate	94,170	101,728	106,983	109,191	78,866	110,172	60,962	53,620
State/territory	49,967	55,414	61,115	63,688	51,842	73,641	39,127	45,252
Lowest rate	22,376	30,272	32,318	34,245	26,653	46,911	10,945	36,222
No. prescriptions	4,100,081	3,456,533	2,953,710	1,226,901	1,325,226	436,257	74,369	168,155



For this item, **local area** refers to an ABS standard geographic region known as a **Statistical Area Level 3 (SA3)**.

The size of each circle represents the number of prescriptions dispensed in each local area

A horizontal number line with five tick marks labeled 1,000, 50,000, 100,000, 150,000, and 200,000. Each tick mark has a blue dot above it.

Notes:

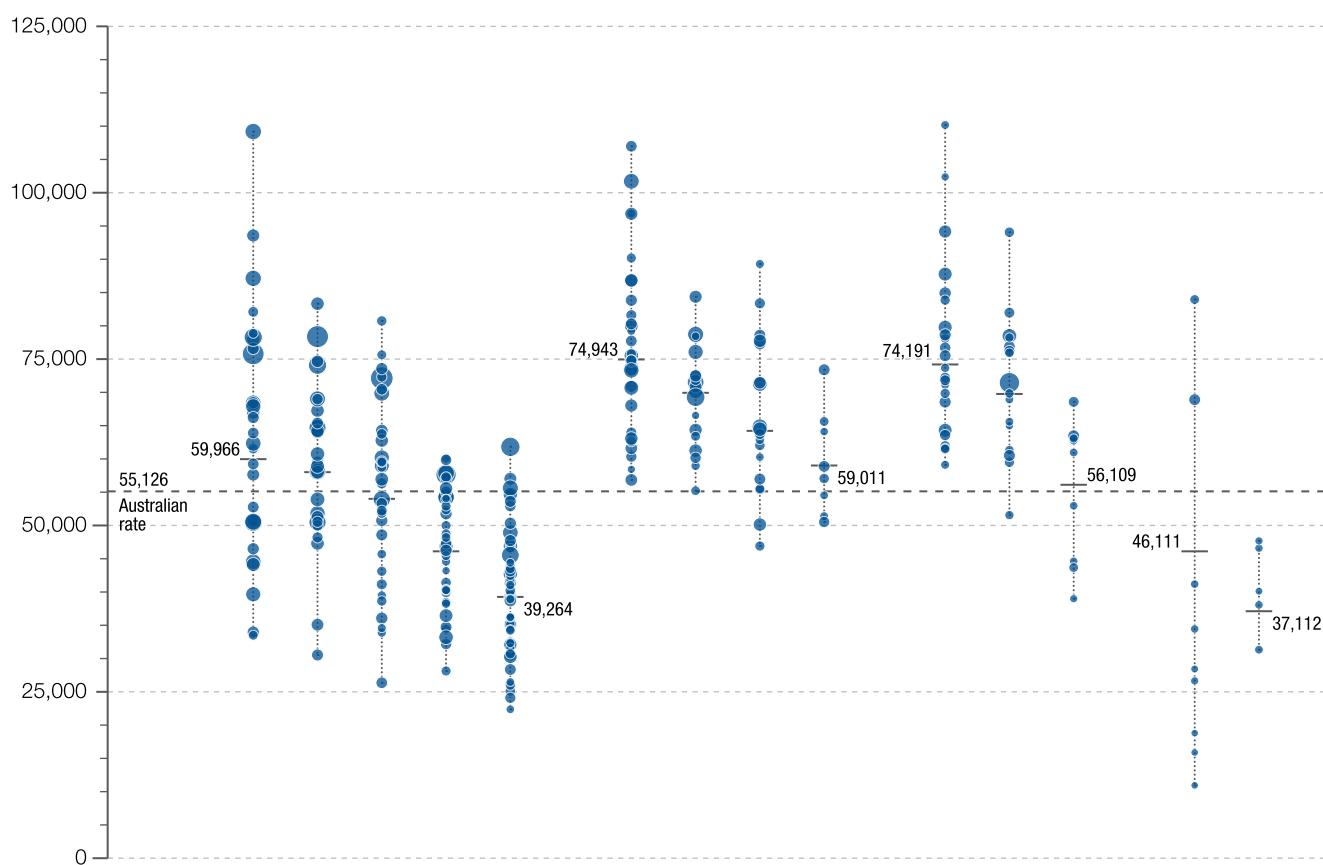
Rates are standardised based on the age structure of the Australian population in 2001.

State/territory and national rates are based on the total number of prescriptions and people in the geographic area.

Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 11/02/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

Figure 106: Number of PBS prescriptions dispensed for opioid medicines per 100,000 people, age standardised, by local area, remoteness and socioeconomic status (SES), 2013–14

Remoteness	Major cities					Inner regional				Outer regional			Remote	
SES quintiles	1	2	3	4	5	1	2	3	4+	1	2	3+	1	2
Average rate	59,966					74,943				74,191			46,111	37,112
	Low SES	High SES				Low SES	Higher SES				Low SES	Higher SES		Low SES Higher SES



For this item, **local area** refers to an ABS standard geographic region known as a **Statistical Area Level 3 (SA3)**

The size of each circle represents the number of prescriptions dispensed in each local area



Notes:

Rates are standardised based on the age structure of the Australian population in 2001.

The national rate is based on the total number of prescriptions and people in Australia.

Average rates are based on the total number of prescriptions and people in the local areas within each group.

Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 11/02/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Resources

- Faculty of Pain Medicine, Australian and New Zealand College of Anaesthetists. *Principles regarding the use of opioid analgesics in patients with chronic non-cancer pain*. 2010. Available at: www.fpm.anzca.edu.au/resources/professional-documents/documents/PM1%202010.pdf.
- NPS MedicineWise. *Continuing professional development and learning*. 2015. Available at: www.nps.org.au/health-professionals/cpd.
- Australian Government Department of Health. *National guidelines for medication-assisted treatment of opioid dependence*. 2014. Available at: www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/ngmat-op-dep.
- Drug Utilisation Sub Committee (DUSC) of the Pharmaceutical Benefits Advisory Committee (PBAC). *Opioid analgesics: Overview*. 2014. Available at: www.pbs.gov.au/info/industry/listing/participants/public-release-docs/opioid-analgesics-overview.
- Pharmaceutical Benefits Scheme. *Australian Statistics on Medicines*. 2015. Available at: www.pbs.gov.au/info/browse/statistics.
- NSW Agency for Clinical Innovation (ACI) Pain Management Network. *Opioid recommendations in General Practice*. 2014. Available at: www.aci.health.nsw.gov.au/__data/assets/pdf_file/0004/212746/Opioid_recommendations_in_General_Practice.pdf.

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- 1 Macintyre PE, Schug SA, Scott DA, Visser EJ, Walker SM; APM:SE Working Group of the Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine. Acute Pain Management: Scientific Evidence (3rd edition), ANZCA & FPM, Melbourne, 2010.
 - 2 Australian Institute of Health and Welfare. National opioid pharmacotherapy statistics 2014. Bulletin no. 128. Cat. no. AUS 190. Canberra: AIHW, 2015.
 - 3 Chou R, Turner JA, Devine EB, Hansen RN, Sullivan SD, Blazina I et al. The effectiveness and risks of long-term opioid therapy for chronic pain: a systematic review for a National Institutes of Health Pathways to Prevention Workshop. Annals of internal medicine 2015;162(4):276–86.
 - 4 Nicholas R, Lee N, Roche A. Pharmaceutical drug misuse in Australia: complex problems, balanced responses. Adelaide: National Centre for Education and Training on Addiction (NCETA), Flinders University, 2011.
 - 5 Blanch B, Pearson SA, Haber PS. An overview of the patterns of prescription opioid use, costs and related harms in Australia. BJCP 2014;78(5):1159–66.
 - 6 Chou R, Turner JA, Fanciullo G, Fine P, Adler J, Sullivan SD et al. Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain, J Pain 2009;Feb;10(2):113–130.
 - 7 Bohnert AS, Valenstein M, Bair MJ, Ganoczy D, McCarthy JF, Ilgen MA et al. Association between opioid prescribing patterns and opioid overdose-related deaths. JAMA 2011;305(13):1315–21.
 - 8 NSW Agency for Clinical Innovation (ACI) Pain Management Network. Opioid recommendations in General Practice. Sydney: ACI, 2014.
 - 9 Holliday S, Morgan S, Tapley A, Dunlop A, Henderson K, van Driel M et al. The Pattern of Opioid Management by Australian General Practice Trainees. Pain medicine (Malden, Mass) 2015.