6.10 Anticholinesterase medicines dispensing 65 years and over

Context

This data item examines dispensing rates of anticholinesterase medicines for people aged 65 and over. The data are sourced from the PBS and relate to the number of prescriptions filled per 100,000 people.

Anticholinesterase medicines are used to treat conditions such as Alzheimer's disease. These medicines can slow the rate of symptom progression but do not modify or treat the disease. They may also offer some relief from the symptoms of Alzheimer's disease for some people for a limited time.

The effect of these medicines varies; some people do not notice any effect, some find their symptoms improve slightly, while others find their symptoms stay the same when they would have expected them to worsen. The areas in which some people with Alzheimer's disease may find improvement are:

- ability to think clearly
- memory
- function in daily activities
- behavioural and psychological symptoms.[1]

Trials indicate that on average, cholinesterase inhibitors delay the progression of symptoms for between nine and 12 months. Some people with dementia report benefits for longer periods, and recent research has shown that benefits may be sustained for up to five years.[1]

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Magnitude of variation

In 2013–14, there were 427,211 PBS prescriptions dispensed for anticholinesterase medicines, representing 12,650 prescriptions per 100,000 people aged 65 years and over (the Australian rate).

The number of PBS prescriptions dispensed for anticholinesterase medicines across 323* local areas (SA3s) ranged from 1,843 to 28,261 per 100,000 people aged 65 years and over. The number of prescriptions was **15.3 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 5,478 per 100,000 people aged 65 years and over in Tasmania, to 16,483 in the Australian Capital Territory.

After excluding the highest and lowest results, the anticholinesterase medicine prescription rate across the 298 remaining local areas was **3.7 times higher** in one local area compared to another.

Dispensing rates were higher in major cities than in regional and remote areas. There was an association between dispensing rates and socioeconomic status in major cities: dispensing rates were lowest in areas of low socioeconomic status, and highest in areas of higher socioeconomic status. This socioeconomic influence was less evident outside the major cities.

Interpretation

Potential reasons for the variations include differences in:

- density of aged-care facilities
- prescribing practices, training, knowledge and attitudes of clinicians
- the prescribing culture among people with dementia, general practitioners and specialists
- multiple repeat dispensing, which could influence recorded dispensing rates in local areas
- access to timely specialist services, particularly in rural and remote areas.

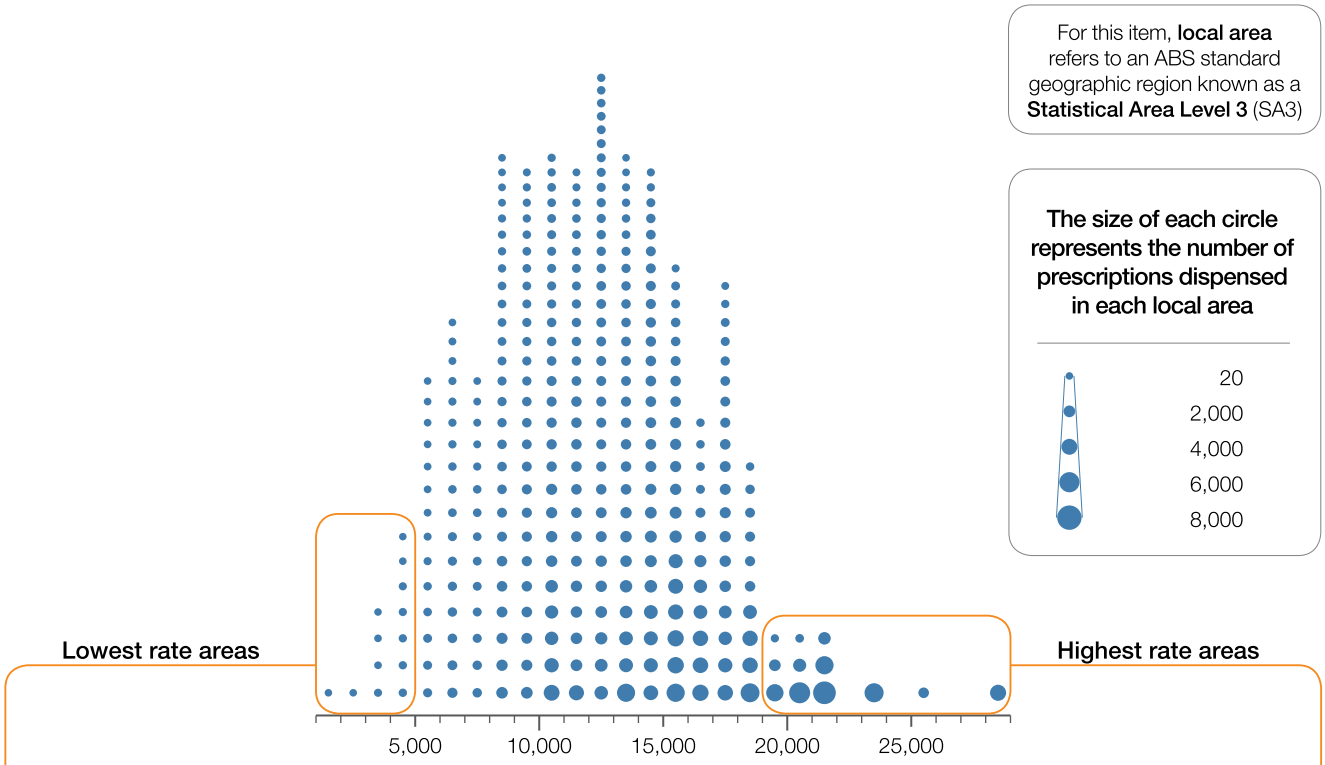
It is also important to note that the dispensing of anticholinesterase medicines in remote areas by some Aboriginal Health Services is not captured in the PBS database.

To explore this variation, further analysis could focus on:

- investigating the individual- and system-level factors that influence variations in anticholinesterase medicine prescription rates
- identifying variations in prescription rates for older people living in aged-care facilities compared with older people living in the community
- connections between various datasets to better understand treatment patterns for older people with dementia, and outcomes such as ongoing care needs and admission to residential care.

*There are 333 SA3s. For this item, data were suppressed for 10 SA3s. This is because of confidentiality requirements given the small numbers of prescriptions dispensed in these areas.

Figure 141: Number of PBS prescriptions dispensed for anticholinesterase medicines per 100,000 people aged 65 years and over, age standardised, by local area, 2013–14



Local area	State	Rate	Prescriptions	Local area	State	Rate	Prescriptions
Gascoyne	WA	1,843	30	Sutherland - Menai - Heathcote	NSW	28,261	4,070
Kimberley	WA	2,020	36	Nillumbik - Kinglake	Vic	25,905	1,461
Burnie - Ulverstone	Tas	3,244	300	Cronulla - Miranda - Caringbah	NSW	23,391	5,482
Goldfields	WA	3,287	74	Geelong	Vic	21,407	7,190
West Coast	Tas	3,656	92	Charles Sturt	SA	21,369	5,077
Pilbara	WA	3,834	28	Pittwater	NSW	21,062	2,388
Central Highlands	Tas	4,008	58	Surf Coast - Bellarine Peninsula	Vic	20,709	2,667
Devonport	Tas	4,193	340	Boroondara	Vic	20,602	6,394
Hobart - North West	Tas	4,489	427	Darwin Suburbs	NT	20,093	570
Mount Druitt	NSW	4,529	390	Port Adelaide - West	SA	19,923	2,000
Daly - Tiwi - West Arnhem	NT	4,612	21	Gungahlin	ACT	19,146	356
Granite Belt	Qld	4,967	382	Lake Macquarie - East	NSW	19,092	4,655
North East	Tas	4,996	322				

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 2,230 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 19/03/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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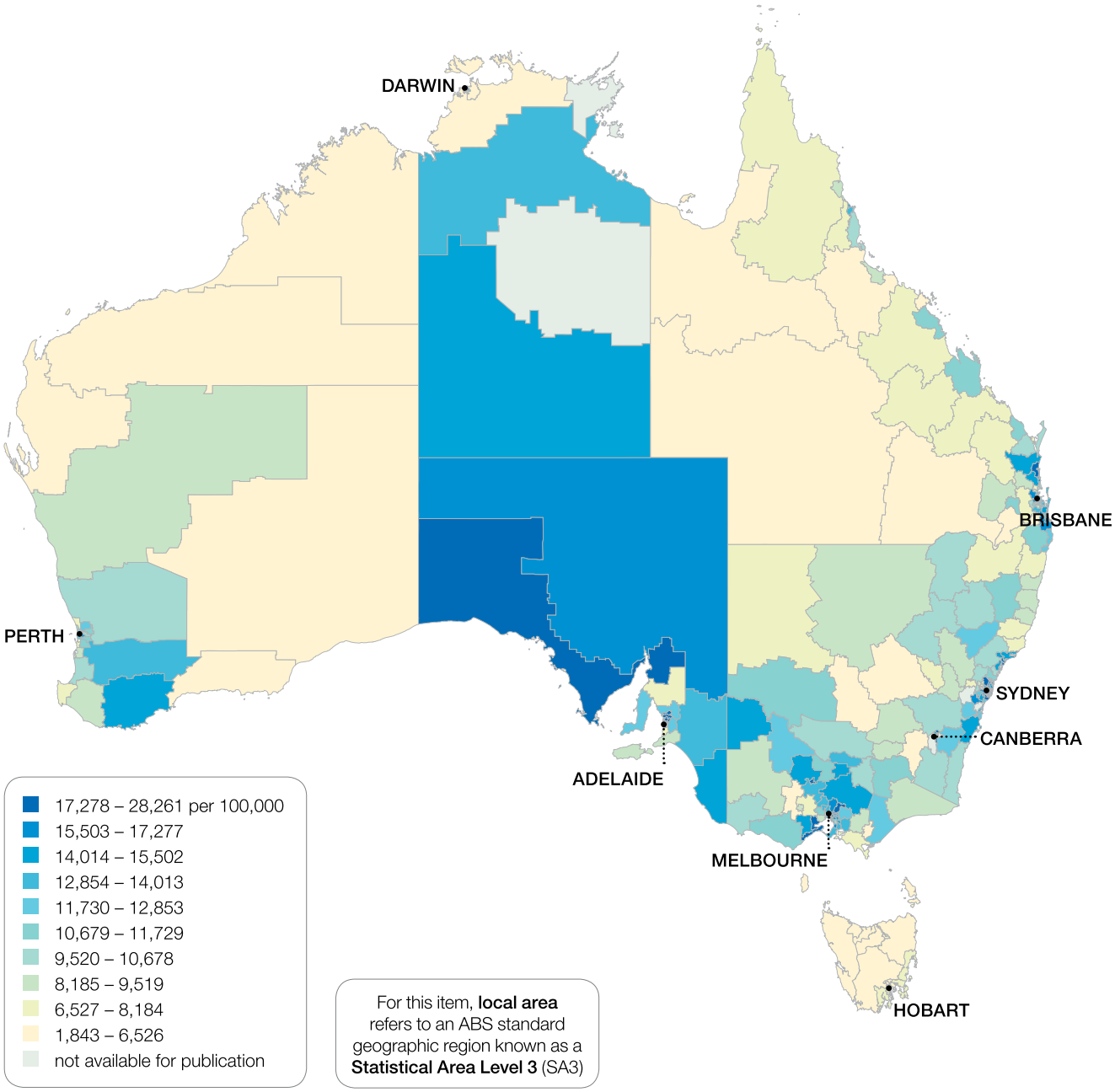
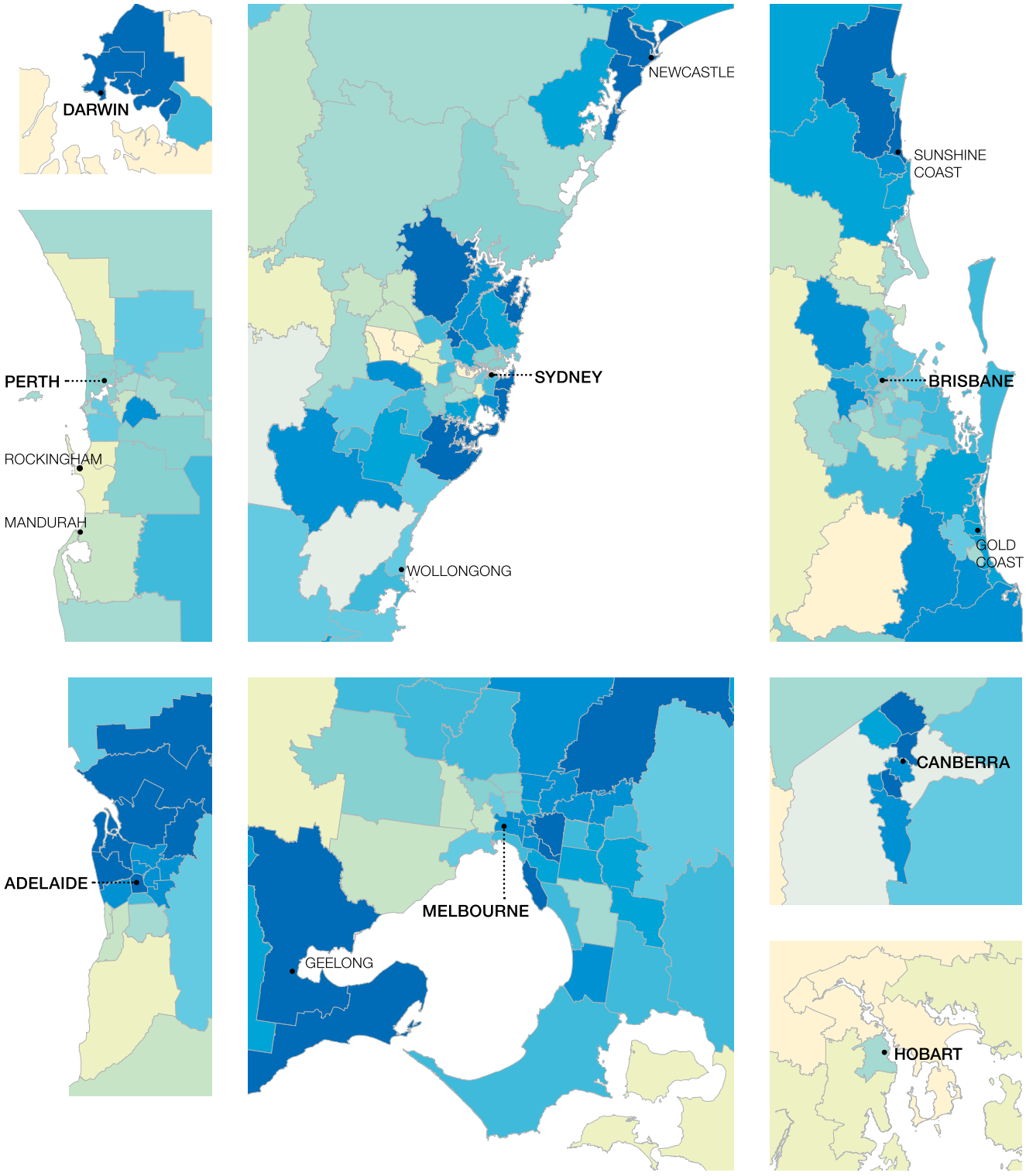
Figure 142: Number of PBS prescriptions dispensed for anticholinesterase medicines per 100,000 people aged 65 years and over, age standardised, by local area, 2013–14



Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 19/03/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

The number of PBS prescriptions dispensed for anticholinesterase medicines across 323 local areas (SA3s) ranged from 1,843 to 28,261 per 100,000 people aged 65 years and over. The number of prescriptions was **15.3 times higher** in the area with the highest rate compared to the area with the lowest rate.

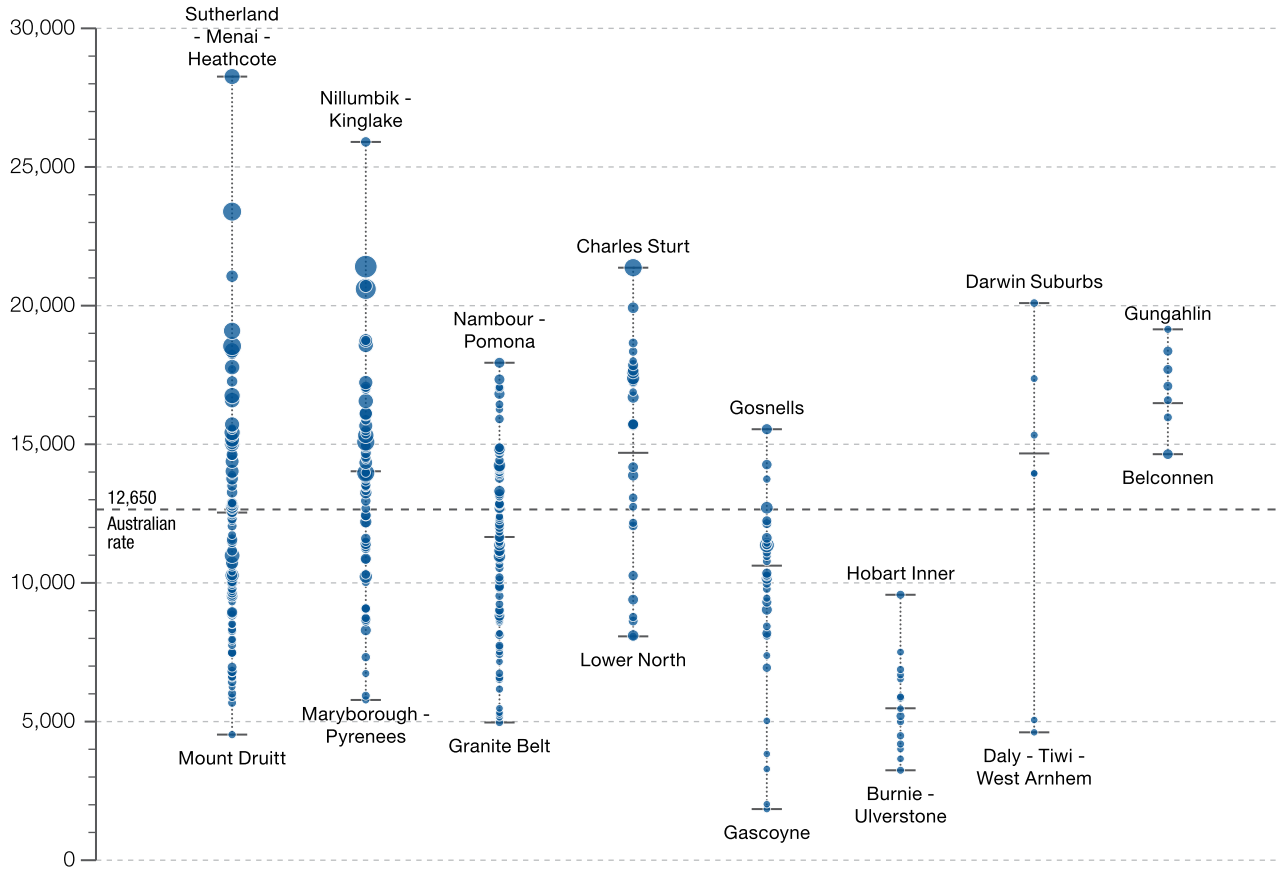


Sources: National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 19/03/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

Anticholinesterase medicines dispensing 65 years and over

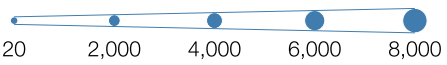
Figure 143: Number of PBS prescriptions dispensed for anticholinesterase medicines per 100,000 people aged 65 years and over, age standardised, by local area, state and territory, 2013–14

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
Highest rate	28,261	25,905	17,939	21,369	15,544	9,573	20,093	19,146
State/territory	12,538	14,027	11,655	14,693	10,623	5,478	14,671	16,483
Lowest rate	4,529	5,780	4,967	8,072	1,843	3,244	4,612	14,644
No. prescriptions	144,908	122,708	70,675	43,399	32,440	4,740	1,361	6,921



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

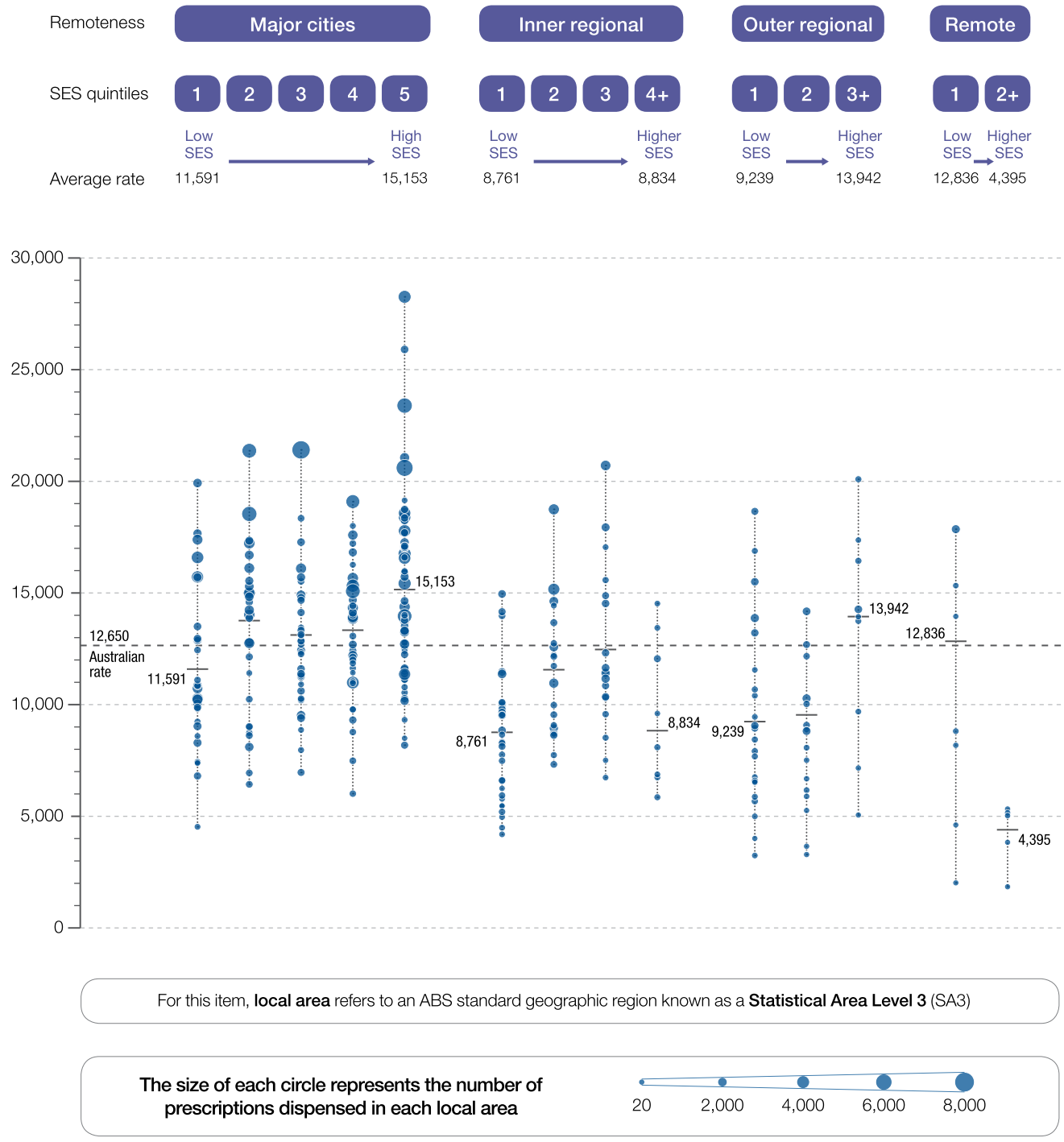
The size of each circle represents the number of prescriptions dispensed in each local area



Notes:
Rates are standardised based on the age structure of the Australian population in 2001.
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 19/03/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

Figure 144: Number of PBS prescriptions dispensed for anticholinesterase medicines per 100,000 people aged 65 years and over, age standardised, by local area, remoteness and socioeconomic status (SES), 2013–14



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

20 2,000 4,000 6,000 8,000

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 19/03/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Resources

- NPS MedicineWise. *Drugs for Alzheimer's disease – PBS criteria no longer include referral to a specialist*. NPS Radar July 2012. Available at: www.nps.org.au/publications/health-professional/nps-radar/2011/november-2011/brief-item-alzheimers-change-listing.

- GP notebook. *NICE guidance – cholinesterase inhibitors (donepezil, galantamine, rivastigmine) and memantine for the treatment of Alzheimer's disease*. 2013. Available at: www.gpnotebook.co.uk/simplepage.cfm?ID=1577451585.

- McKay R, Casey J, Stevenson J, McGowan H. *Psychiatry services for older people: A report on current issues and evidence to inform the development of services and the revision of RANZCP Position Statement 22*. Royal Australian and New Zealand College of Psychiatrists. 2015. Available from: www.ranzcp.org/Files/Resources/College_Statements/Position_Statements/RPT-FPOA-Psychiatry-services-for-older-people-revi.aspx

- Le Couteur DG, Robinson M, Leverton A, Creasey H, Waite L, Atkins K et al. *Adherence, persistence and continuation with cholinesterase inhibitors in Alzheimer's disease*. Australas J Ageing 2012;31:164–9.

- The Pharmaceutical Benefits Scheme. *Australian Statistics on Medicines*. 2015. Available at: www.pbs.gov.au/info/browse/statistics.

- Australian Commission on Safety and Quality in Health Care. *A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital*. 2014. Available at: www.safetyandquality.gov.au/our-work/cognitive-impairment/better-way-to-care/.

1 Alzheimer's Australia. Drug treatments for Alzheimer's disease – Cholinesterase inhibitors Help Sheet. Canberra: Alzheimer's Australia, 2013.