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

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.

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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

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.

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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

<table>
<thead>
<tr>
<th>Local Area</th>
<th>NSW</th>
<th>Vic</th>
<th>Qld</th>
<th>SA</th>
<th>WA</th>
<th>Tas</th>
<th>NT</th>
<th>ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest rate</td>
<td>28,261</td>
<td>25,906</td>
<td>17,939</td>
<td>21,369</td>
<td>15,544</td>
<td>9,573</td>
<td>20,093</td>
<td>19,146</td>
</tr>
<tr>
<td>State/territory</td>
<td>12,538</td>
<td>14,027</td>
<td>11,655</td>
<td>14,693</td>
<td>10,623</td>
<td>5,478</td>
<td>14,671</td>
<td>16,483</td>
</tr>
<tr>
<td>Lowest rate</td>
<td>4,529</td>
<td>5,780</td>
<td>4,967</td>
<td>8,072</td>
<td>1,843</td>
<td>3,244</td>
<td>4,612</td>
<td>14,644</td>
</tr>
</tbody>
</table>

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.

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

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.

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Resources


• 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.


