

6.1 Polypharmacy, 75 years and over

Why is this important?

Polypharmacy is defined by the World Health Organization (WHO) as the concurrent use of five or more medicines.¹ Polypharmacy is common in older people because they often have several chronic conditions requiring multiple medicines to prevent or control symptoms. About two-thirds of Australians aged 75 years and over are taking five or more medicines, including over-the-counter and complementary medicines.²

Polypharmacy may be necessary and appropriate for some people; however, there are risks associated with multiple medicines use.¹ Older people are more vulnerable to harms from polypharmacy because of increased frailty and age-related changes that alter the way their bodies respond to medicines.¹

Monitoring polypharmacy is recognised in the WHO's third Global Patient Safety Challenge: Medication without Harm as a way of identifying people at risk of medicine-related harm and who may benefit from a medicines review.¹ The fourth Atlas uses Pharmaceutical Benefits Scheme (PBS) prescription dispensing data to examine rates of polypharmacy for people aged 75 years and over.

What did we find?

In 2018–19, about 40% of people aged 75 years and over were dispensed five or more different medicines. Polypharmacy was **6.4 times as high** in the area with the highest rate as in the area with the lowest rate.

Rates of polypharmacy were higher in major cities than elsewhere. Areas with the most socioeconomic disadvantage had the highest rates of polypharmacy, except for remote areas.

What can be done?

We can:

- Implement interventions to identify people at risk of harm from polypharmacy, such as frail people and those with several chronic conditions, to prompt the timely review of their medicines; this could include increased monitoring of polypharmacy
- Raise awareness among consumers and clinicians about harms associated with multiple medicines use, and about lifestyle changes that can reduce the need for some medicines
- Support older people to keep an up-to-date medicines list
- Include information about deprescribing in medicines product information.

Polypharmacy, 75 years and over

Context

This item examines the rate of polypharmacy for people aged 75 years and over in Australia in 2018–19.

What is polypharmacy?

Polypharmacy is the use of multiple medicines to prevent or treat medical conditions. It is commonly defined as the concurrent use of five or more medicines by the same person. This definition is used by WHO and the Organisation for Economic Co-operation and Development.^{1,3} Medicines include prescription, as well as over-the-counter and complementary medicines.¹

This Atlas examines polypharmacy for people aged 75 years and over using prescription dispensing data from the Pharmaceutical Benefits Scheme (PBS). Over-the-counter and complementary medicines are not in the dataset and so are not counted. This means that Atlas findings are likely to be a conservative measure of polypharmacy in Australia.

Why examine polypharmacy in people aged 75 years and over?

Monitoring polypharmacy is one of the three key actions recommended in the WHO's third Global Patient Safety Challenge: Medication without Harm, to reduce the global burden of harm associated with medicine use.^{1,4} Monitoring polypharmacy also underpins recommendations in Australia's Choosing Wisely initiative, which advises to not prescribe additional medicines to people already taking five or more medicines without a comprehensive review of their medicines to ensure all are necessary.⁵

Polypharmacy is common in older people because they are more likely to be living with several chronic conditions, requiring medicines to prevent or control symptoms.^{6,7} About 80% of Australia's population aged 65 years and over have one or more chronic conditions, and over half (51%) have two or more.⁶ Because people become more sensitive to the effects of medicines as they age, the consequences of polypharmacy tend to be more serious in older people.^{8–10}

Polypharmacy is associated with an increased risk of adverse drug reactions, interactions with other medicines and increased likelihood of not taking medicines as prescribed.^{1,11–14} Errors associated with prescribing and monitoring medicines are more likely in older people, and the likelihood increases with the number of medicines taken.¹ The more medicines prescribed, the more complex medicine regimens become, which increases the risk of errors such as taking the wrong medicine or dose, missing a dose or taking it at the wrong time.^{1,15} Polypharmacy is also associated with harms including delirium and falls^{10,12,16}, hospitalisation¹¹, reduced quality of life¹⁷ and premature morbidity and mortality.^{12,16}

Polypharmacy may be appropriate when medicines are prescribed according to the best available evidence, and use for that person has been optimised to reduce the risk of medicine-related harm.^{1,14,17} For these reasons, definitions of polypharmacy are shifting from numeric thresholds – such as the use of five or more medicines – to emphasise the clinical appropriateness of polypharmacy.^{1,17} However, there are risks associated with using multiple medicines, even when each medicine on its own is appropriate.^{1,11,18} The benefits gained from each additional medicine are likely to be reduced when people take multiple medicines, and the risk of medicine-related harm increases.¹⁹

Polypharmacy is associated with an increased use of medicines that are considered potentially inappropriate in older people – where the risks of their use outweigh the benefits.^{12,20–23} Medicines considered potentially inappropriate in older people are best avoided or used extremely cautiously, with monitoring to ensure the benefits of taking the medicine outweigh the possible harms.

Examples of medicines considered potentially inappropriate in older people include²⁴:

- Medicines that cause sedation, dizziness and confusion, such as opioids, antipsychotics, anticholinergics, antidepressants and medicines for anxiety – these can increase the risk of confusion, falls or delirium
- Long-acting non-steroidal anti-inflammatory drugs – these are associated with increased risk of kidney failure, gastrointestinal bleeding and cardiac effects in older people
- Medicines that are removed from the body by the kidneys – reduced kidney function in older people can allow these to accumulate in the body and cause toxicity.

Prescribing medicines when they are no longer needed is common in older people and contributes to polypharmacy. A study of veterans in the United States found that 60% of people taking five or more medicines were taking one or more medicines that were no longer needed.²⁵

A prescribing cascade can exacerbate polypharmacy. This occurs when additional medicines are prescribed to treat the adverse effects caused by other medicines but misinterpreted as symptoms of a new condition.²⁶ Older people are at higher risk of experiencing prescribing cascades. This is because they often have several medical conditions that are treated by different clinicians. Clinicians may focus on managing a single disease state without considering the patient's other conditions and treatments.

Rates of polypharmacy in older people in Australia

Prevalence of polypharmacy in different Australian healthcare settings has been reported to range between 43% and 95%, with higher estimates for people in hospital and aged care homes.

A national census in 2012, which explored the use of prescription, over-the counter, and complementary medicine use in Australians aged 50 years and over living at home, found that 43% took five or more medicines.² The number of people taking five or more medicines increased with age, with two out of three Australians aged 75 years and over taking five or more medicines.

A study of Australians aged 70 years and older (average age 81.3), who had been admitted to hospital between July 2005 and May 2010, found that 75% of people took five or more medicines.⁷ In Australian aged care homes, up to 95% of residents are reported to take five or more medicines.^{27,28}

An analysis of PBS dispensing data found that, between 2006 and 2017, the prevalence of taking five or more medicines increased by 9% (from 33% to 36%) in Australians aged 70 years and over.²⁹ The prevalence among those aged 80–84 years and 85–89 years was 44% and 46%, respectively, in 2017.

Although many studies have described polypharmacy in Australia, the maps and graphs in this Atlas provide a novel way of analysing the issue and highlighting the areas and groups that may be more at risk of experiencing harm from polypharmacy.

Polypharmacy, 75 years and over

About the data

Data are sourced from the PBS dataset, which includes all prescriptions dispensed under the PBS and the Repatriation Pharmaceutical Benefits Scheme (RPBS), including under copayment prescriptions.

Data used in this report exclude doctors' bag items and any programs with alternative supply arrangements (section 100 of the *National Health Act 1953*) in which patient-level details are not available, such as direct supply to remote Aboriginal health services.

The PBS and RPBS do not cover medicines supplied to public hospital inpatients, over-the-counter medicines or private prescriptions.

The dataset does not allow analysis by Aboriginal and Torres Strait Islander status.

Rates are based on the number of people dispensed five or more different medicines per 100,000 people aged 75 years and over in 2018–19.

To be counted, a medicine must have had four or more prescriptions dispensed for it in the year. Medicines are counted as distinct if the Anatomical Therapeutic Chemical codes differ at the fourth level.

Patient count analysis reflects the number of unique patients that qualify according to the polypharmacy specification.

The analysis and maps are based on the patient's post code recorded in their Medicare file and not the location of the prescriber or the dispensing pharmacy.

Rates are age and sex standardised to allow comparisons between populations with different age and sex structures.

Some data have been suppressed to manage volatility and confidentiality. This process takes into account the Australian Government Department of Health's requirements for reporting PBS data (see the Technical Supplement). Data suppression for this item has been notably marked for remote areas of the Northern Territory. This is indicated on the maps in grey. Reporting for the Northern Territory was possible at a territory level.

What do the data show?

Magnitude of variation

In 2018–19, 690,516 people were dispensed five or more medicines, representing 40,226 people per 100,000 people aged 75 years and over (the Australian rate).

The number of people dispensed five or more medicines across 328* local areas (Statistical Area Level 3 – SA3) ranged from 11,206 to 72,059 per 100,000 people. The rate was **6.4 times as high** in the area with the highest rate compared to the area with the lowest rate. The number of people varied across states and territories, from 25,058 per 100,000 people in the Northern Territory to 41,446 in New South Wales. (Figures 6.2–6.5).

After the highest and lowest 10% of results were excluded and 264 SA3s remained, the number of people dispensed five or more medicines per 100,000 people was 1.4 times as high in the area with the highest rate compared to the area with the lowest rate.

* There are 340 SA3s. For this item, data were suppressed for 12 SA3s due to a small number of prescriptions dispensed and/or population in an area. Some SA3 rates are more volatile than others. These rates are excluded from the calculation of the difference between the highest and lowest SA3 rates in Australia.

For further detail about the methods used, please refer to the Technical Supplement.

Analysis by remoteness and socioeconomic status

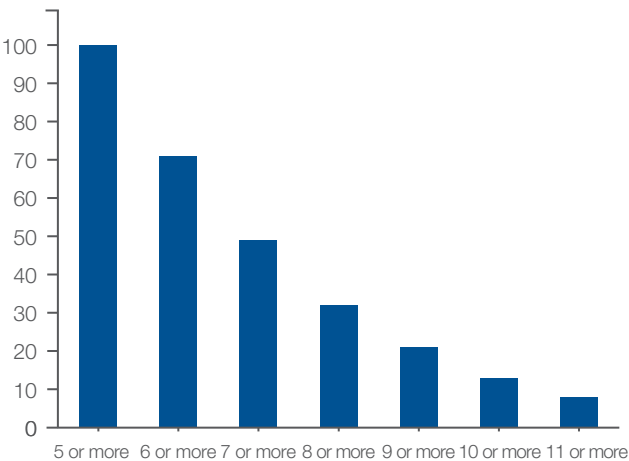
Rates of polypharmacy were higher in major cities and inner regional areas than in outer regional areas and remote areas. With the exception of remote areas, areas with the most disadvantage had the highest rates for polypharmacy compared to all other socioeconomic groups in the same remoteness category (Figure 6.6).

Analysis by number of medicines for people with polypharmacy

In 2018–19, of the 690,516 people with polypharmacy aged 75 years and over, 49% had seven or more medicines dispensed and 8% had 11 or more medicines dispensed (Figure 6.1).

The data and graphs for Figures 6.1, analysis by Primary Health Network (PHN), analysis by PHN and age group, and analysis by numbers of medicines for each age group, are available at safetyandquality.gov.au/atlas

Figure 6.1: Percentage of people by the number of medicines dispensed, for patients with polypharmacy aged 75 years and over, 2018–19



The data for Figure 6.1 are available at safetyandquality.gov.au/atlas

Notes:
For further detail about the methods used, please refer to the Technical Supplement.
Sources: AIHW analysis of Pharmaceutical Benefits Scheme data and ABS Estimated Resident Population 30 June 2018.

Polypharmacy, 75 years and over

Interpretation

The Atlas findings indicate that about 40% of people aged 75 years and over were taking five or more different medicines on an ongoing basis in 2018–19. The data do not allow assessment of the appropriateness of polypharmacy.

Variation in rates of polypharmacy in people aged 75 years and over are likely to be due to the geographical differences in the factors discussed below.

Variation between areas may not directly reflect the practices of the clinicians who are based in these areas. The analysis is based on where people live rather than where they obtain their health care. Patients may travel outside their local area to receive health care.

Possible reasons for variation in rates of polypharmacy

Rates of underlying disease, social determinants of health and lifestyle factors

Areas with higher rates of chronic disease or people living with several chronic conditions are expected to have higher rates of polypharmacy. The higher rates of polypharmacy observed in socioeconomically disadvantaged areas may reflect a higher prevalence of multimorbidities (having several chronic conditions), and lifestyle factors that increase the risk of chronic disease. These factors include obesity, smoking, poor diet and alcohol intake. People living in disadvantaged areas may be restricted in their ability to afford, choose or find healthier lifestyle options, exacerbating rates of polypharmacy.¹

Number of prescribers and dispensing pharmacies

The number of prescribers involved in a person's care may contribute to variation in rates of polypharmacy. One clinician rarely has oversight of prescribing a person's medicines, because different specialists provide care for different conditions. The number of medicines prescribed is known to increase with the number of prescribers involved in a person's care.³⁰

It is unclear whether digital health systems (such as My Health Record) that can sort and centralise a person's medicines information affect rates of polypharmacy.

The number of pharmacies where people obtain their medicines may also contribute to the variation seen. Having medicines dispensed at the same pharmacy gives the pharmacist an awareness of a patient's dispensing history, which may allow pharmacists and pharmacy staff to identify people taking multiple medicines who might benefit from a medicines review.

Age and location of aged care homes

Areas with more aged care homes are likely to have higher rates of polypharmacy because residents of aged care homes generally take more medicines than people of the same age living in their own home.^{2,29} Because Atlas data are age and sex standardised – to control for differences in population structures between areas – variation in rates between areas cannot be explained solely by the proportion of older people in an area.

Clinical decision making and access to care

Variation in rates may be influenced by different prescribing practices of clinicians. Many clinical guidelines are based on research in adults aged under 65 years with a single disease state. Application of these guidelines to older people with multimorbidity has been found to exacerbate polypharmacy.^{1,18}

The number of clinicians providing services in the area, and the ability to see a specific clinician, may influence the likelihood of people seeking care. The practice styles of individual clinicians may be more likely to affect rates in areas with fewer clinicians, such as rural and regional locations, than in areas with more clinicians.

Promoting appropriate care

Reducing the risk of harms from polypharmacy in older people requires a multifaceted and collaborative approach with a variety of strategies and interventions to support appropriate medicines use.^{14,31,32}

Strategies should aim to improve health outcomes, increase engagement with consumers, and promote appropriate use of healthcare resources.¹

Australia's response to the WHO Global Patient Safety Challenge: Medication without Harm, proposes four priority actions to reduce harms from polypharmacy and the use of potentially inappropriate medicines⁴:

- Broad and consistent implementation of evidence-based primary care programs for medication reconciliation and review services
- Consumer communications to raise awareness of programs aimed at improving consumer ability to manage their medicines
- Broad and complete implementation of the National Safety and Quality Health Service (NSQHS) Standards Medication Safety Standard in health service organisations
- Broad implementation of medicines review and promotion of deprescribing best practice throughout Australia's health system.

Initiatives supporting these actions are discussed below.

Medication management review

A comprehensive and structured review of a person's medicines is key to identifying whether polypharmacy is appropriate. Studies examining the appropriateness of polypharmacy in older Australians have found that one in five people are taking a medicine considered potentially inappropriate when use should generally be avoided³³, increasing to half in those living in aged care facilities.^{34,35}

Medication management reviews (also known as medicines reviews) are effective in minimising harms from polypharmacy and improving the safe use of medicines.¹ Services in Australia include home medicines review (HMR), residential medication management review (RMMR), in-pharmacy medicine checks (MedsCheck) and medicine reviews as part of multidisciplinary care plans.³⁶ Further detail about HMR and RMMR are available in Chapter 6.2. There are also specific programs that focus on improving medicines use in the Australian veteran community.³⁷ Medicines review is also a requirement for all health service organisations under the NSQHS Standards.³⁸

Shared decision making

Partnering with consumers and their families or carers in shared decision making and empowering people to have a more active role in their care are key strategies for minimising harms from polypharmacy.^{38,39}

Discussions between consumers and clinicians about the benefits and risks of medicines before prescriptions are issued, and an assessment of the person's perspective on their health and their need to take multiple medicines, may lead to fewer medicines being prescribed.¹⁶

Consumers may be more receptive to stopping medicines when they have a greater understanding of the risks of continuing their medicine, particularly if a medicine has limited expected benefit or is no longer of benefit.^{40,41} About 90% of Australians have reported they would be willing to stop taking one or more of their medicines if their clinician thought it was appropriate to do so.⁴²

Polypharmacy, 75 years and over

Medicines lists

Supporting people to know what medicines they are taking can help minimise harms from polypharmacy.

Tools such as the NPS MedicineWise Medicines List (see 'Australian initiatives' on page 318) can help people to take an active role in managing their medicines and improve communication with their clinicians. Medicines lists can improve a person's understanding and adherence to medicines regimens¹², and are useful at transitions of care for ensuring the accurate transfer of medicines information and minimising unintended medicine changes.³⁸ Smartphone apps to store a person's medicines information may also be useful, but further evaluation is required to determine their benefits.¹⁶ A limitation of technology-based tools like smartphone apps currently identified is that older people, who are the main target for interventions to reduce harm from polypharmacy, are the least likely to use them.

Digital systems such as My Health Record may also help with maintaining lists and allow better identification of people who may benefit from a medicines review.

Over-the-counter and complementary medicines were not included in the Atlas analysis. However, they are commonly used by older people^{2,6,43} and contribute to polypharmacy.^{2,44} GPs and pharmacists should routinely ask about use of over-the-counter and complementary medicines and record them as part of a patient's medication history.² Patients should be encouraged to record them as part of their medicines list.

Lifestyle factors

Addressing lifestyle factors that increase the risk of chronic disease or experiencing symptoms may reduce the need for medicines use that can contribute to polypharmacy.¹

Lifestyle factors should be discussed with people when considering medicines use or undertaking a medication review. This is especially important in

areas that have a higher prevalence of risk factors for chronic disease, such as areas with higher socioeconomic disadvantage.¹⁹

Medication reconciliation at transitions of care

More than 50% of medication errors occur at transitions of care – when people move from one healthcare setting to another.⁴⁵ The probability of such errors increases with the number of medicines prescribed.²

Medication reconciliation is the process of working with patients and their carers to develop an accurate medicines history in order to ensure the accurate transfer of information about their medicines, and is an effective way of minimising harms from polypharmacy.^{1,4,38} It can reduce discrepancies and medication errors during transitions of care by 50–94%³⁸, with most success seen in high-risk populations such as older people experiencing polypharmacy.^{1,46} It is a requirement for all Australian health service organisations under the NSQHS Standards.³⁸

Guideline adaptation and comorbidities

Developing guidelines that take into account multimorbidity in older people could help reduce complex medicine regimens and minimise harms from polypharmacy.¹⁷ Evidence-based guidelines commonly recommend treatments for a single disease state. Lack of guidance on the management of multimorbidity can be a driver of polypharmacy.¹

Deprescribing

Deprescribing is the supervised process of reducing or stopping medicines that may no longer be of benefit or may be causing harm.^{34,47} Deprescribing can reduce the number of medicines taken by frail older people living in aged care homes with no harm to clinical outcomes.¹⁵ It may also reduce medicine complications such as the number of falls experienced by older people.^{34,48}

Initiatives need to address the known barriers to deprescribing. Examples include clinician reluctance to deprescribe because of clinical complexity, incomplete information on the rationale for the medicines, ambiguous or frequently changing care goals, uncertainty about the harms of continuing or stopping medicines, a perception that it is the responsibility of another clinician to deprescribe medicines, and lack of a defined process for deprescribing.^{49–53} Patients may be reluctant to stop their medicines because they are worried about their symptoms returning, or they are confused, having been told previously that they needed them. Opinions of their family members or information from other sources, such as the media, may also be influencing factors.⁴⁰

The National Strategic Plan to Improve the Quality Use of Medicines in Older Adults³⁴ recommends that all Australian Approved Product Information (PI) leaflets for prescribing medicines and all Consumer Medicines Information (CMI) leaflets include information on ‘cessation’ or ‘deprescribing’. An analysis of Australian Approved PI leaflets for the 99 most commonly dispensed medicines in 2015 found that only a quarter provided guidance on how to discontinue use.⁵⁴ Consumer testing showed that CMI leaflets with information about stopping medicines have been positively received by Australians aged 65 years and over.⁵⁵

Active ingredient prescribing

Inconsistency in the way medicines are described can cause confusion for patients, who may inadvertently take multiple doses of the same active ingredient if it is prescribed under different brand names. The risk is increased in older people and those who take many medicines.⁵⁶ To reduce these risks and support people to better understand their medicines, prescriptions supplied under the PBS from February 2021 must describe the medicine by its active ingredient, and not the brand name.⁵⁶

Electronic decision support tools

Electronic decision support tools may be useful in minimising harms from polypharmacy in older people.^{57,58} The Goal-directed Medication review Electronic Decision Support System provides clinical decision support to clinicians conducting medication reviews, and has shown to be useful when conducting an HMR.⁵⁸ Research is continuing to examine the effect of the system on clinical outcomes.⁵⁹

Monitoring of polypharmacy

Monitoring rates of polypharmacy can identify people who may have an increased risk of medicine-related harm. It can prompt a medicines review to ensure that prescribed medicines are appropriate for that person.⁴ This approach has been used successfully in aged care homes in Victoria, through the development of a quality indicator that reports on the proportion of residents using nine or more medicines.⁴

Australia’s National Indicators for Quality Use of Medicines in Australian Hospitals 2014 can be used for monitoring safe and appropriate medicines use.⁶⁰ Another set of indicators has been proposed for use in Australian hospitals by the New South Wales Therapeutic Advisory Group. These indicators identify people at high risk of medicine-related harm, including inappropriate polypharmacy.⁴

People are often discharged from hospital with more medicines than they were previously taking; this is especially common in older people.^{7,61} Monitoring rates of polypharmacy at the time of hospital discharge could help identify people who may be at risk of medicine-related harm and may benefit from a medication review.

The correlation between rates of polypharmacy and rates of medication management reviews (MMRs, reported in Chapter 6.2) could also be a useful indicator. Areas with high rates of polypharmacy but low rates of MMRs should be further investigated.

Polypharmacy, 75 years and over

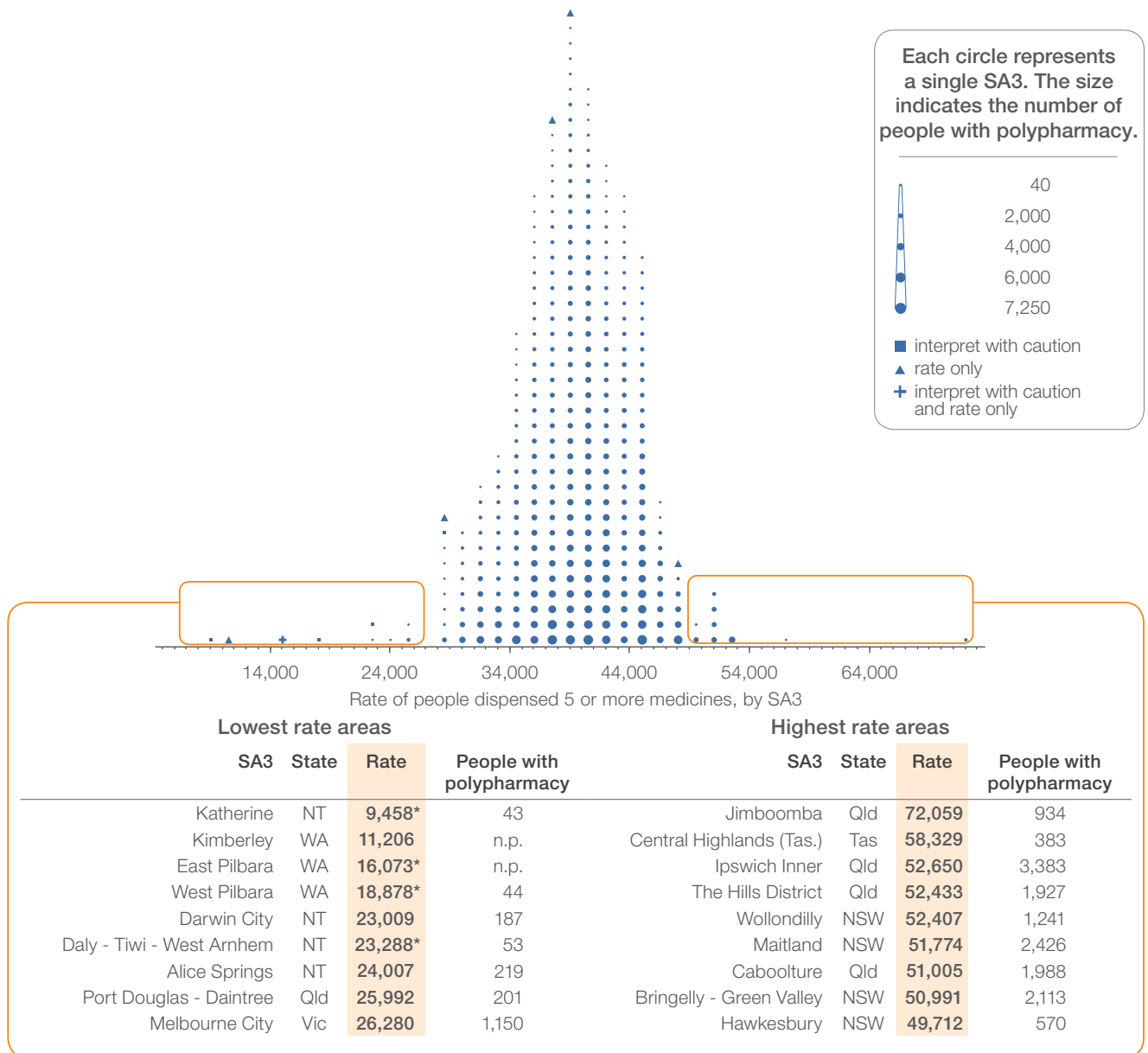
Promoting existing initiatives

Recommendations have been made as part of the Royal Australasian College of Physicians EVOLVE program and Australia's Choosing Wisely initiative to minimise harms associated with polypharmacy. These focus on^{5,62}:

- The importance of recognising and avoiding prescribing cascades
- Reducing the use of medicines when more effective non-pharmacological management strategies are available
- Stopping medicines when they are no longer of benefit
- Conducting a comprehensive review of existing medicines before prescribing further medicines in people who are already taking five or more.

Rates by local area

Figure 6.2: Number of people dispensed 5 or more medicines per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



Notes:

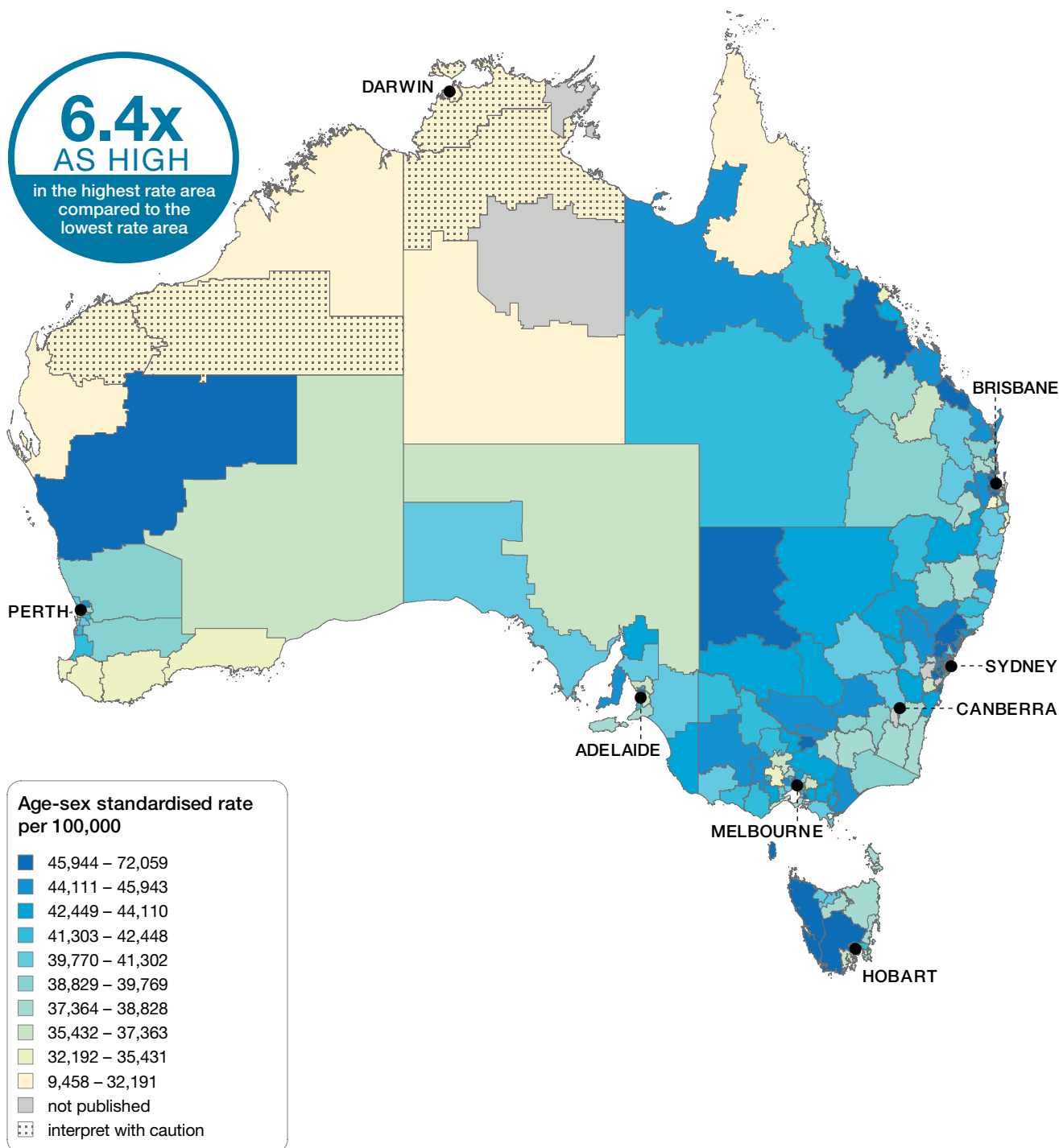
Squares (■) and asterisks (*) indicate rates that are considered more volatile than other published rates and should be interpreted with caution. Triangles (▲) indicate SA3s where only rates are published. The numbers of people are not published (n.p.) for confidentiality reasons. Crosses (✚) indicate SA3s where rates should be interpreted with caution, and the numbers of people are not published for confidentiality reasons. For further detail about the methods used, please refer to the Technical Supplement.

Sources: AIHW analysis of Pharmaceutical Benefits Scheme data and ABS Estimated Resident Population 30 June 2018.

Polypharmacy, 75 years and over

Rates across Australia

Figure 6.3: Number of people dispensed 5 or more medicines per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



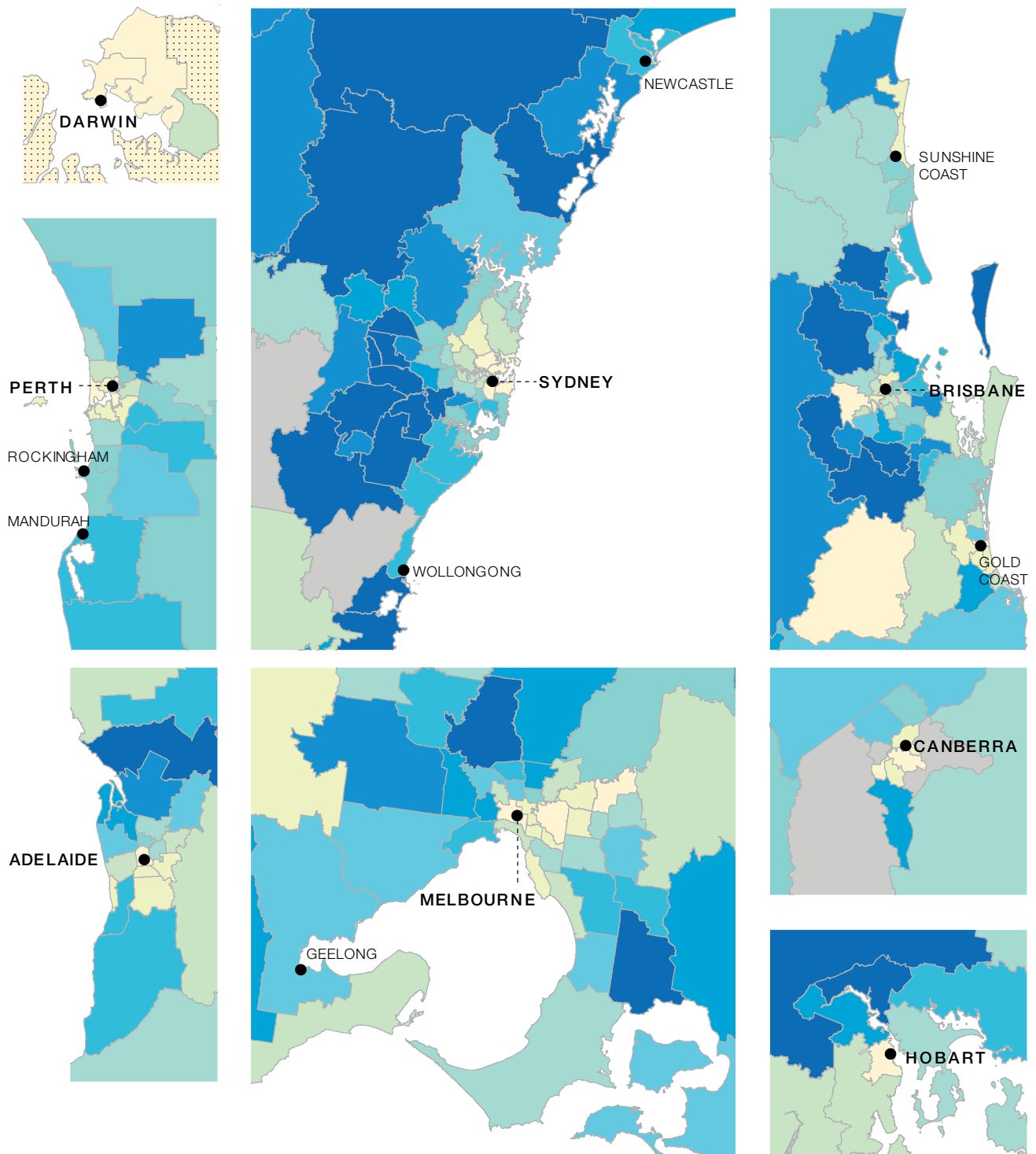
Notes:

Dotted areas indicate rates that are considered more volatile than other published rates and should be interpreted with caution. These rates are excluded from the calculation of the difference between the highest and lowest SA3 rates in Australia.
For further detail about the methods used, please refer to the Technical Supplement.

Sources: AIHW analysis of Pharmaceutical Benefits Scheme data and ABS Estimated Resident Population 30 June 2018.

Rates across capital city areas

Figure 6.4: Number of people dispensed 5 or more medicines per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



Notes:

Dotted areas indicate rates that are considered more volatile than other published rates and should be interpreted with caution. For further detail about the methods used, please refer to the Technical Supplement.

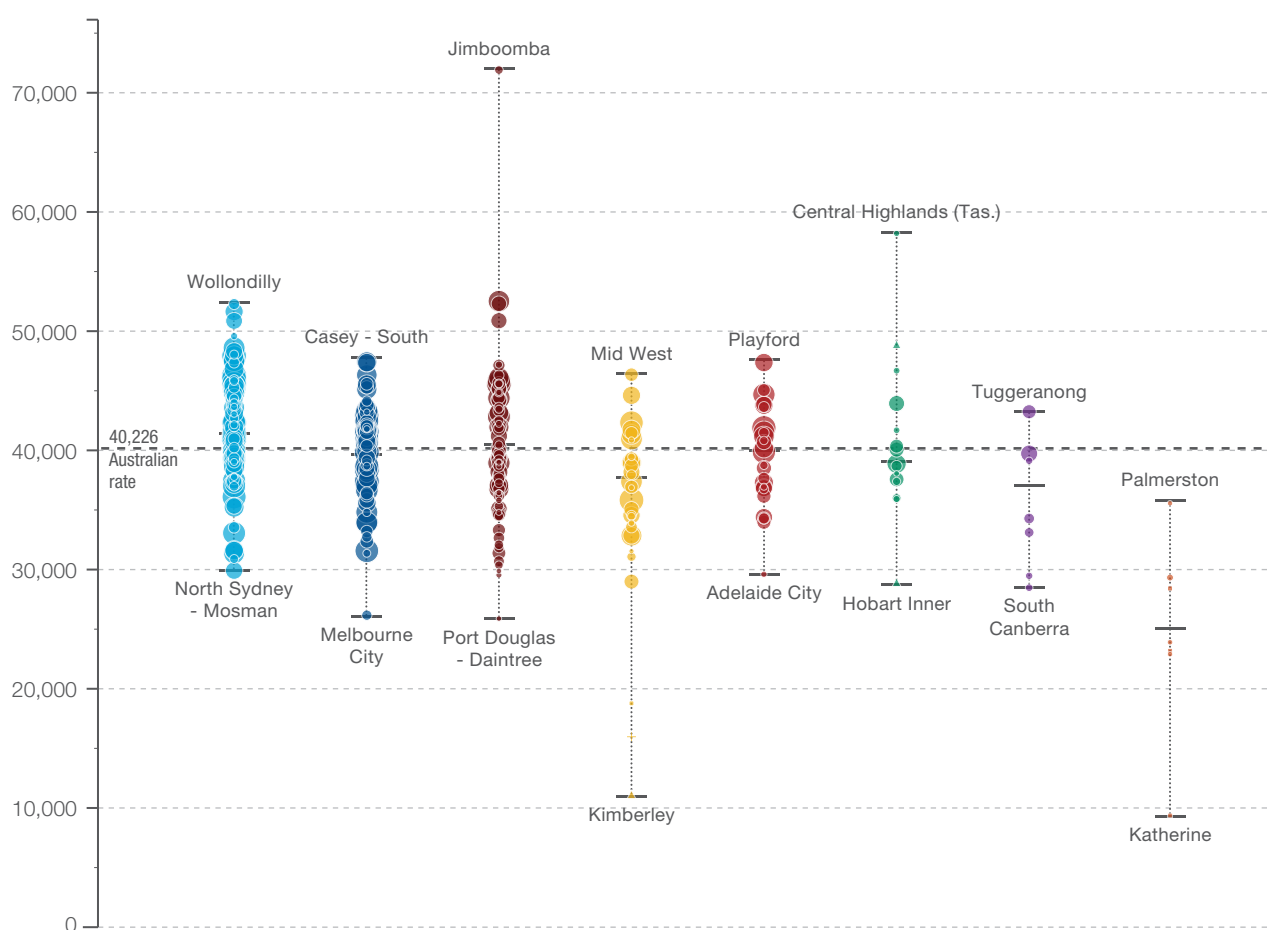
Sources: AIHW analysis of Pharmaceutical Benefits Scheme data and ABS Estimated Resident Population 30 June 2018.

Polypharmacy, 75 years and over

Rates by state and territory

Figure 6.5: Number of people dispensed 5 or more medicines per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Highest rate	52,407	47,550	72,059	46,474	47,492	58,329	43,364	35,675
State/territory	41,446	39,786	40,540	37,814	40,104	38,993	37,189	25,058
Lowest rate	30,025	26,280	25,992	11,206	29,715	29,030	28,588	9,458*
Total patients	238,296	177,272	129,940	60,162	58,214	16,934	8,245	1,379



Each circle represents a single SA3. The size indicates the number of people with polypharmacy.

- ▲ rate only
- interpret with caution
- + interpret with caution and rate only



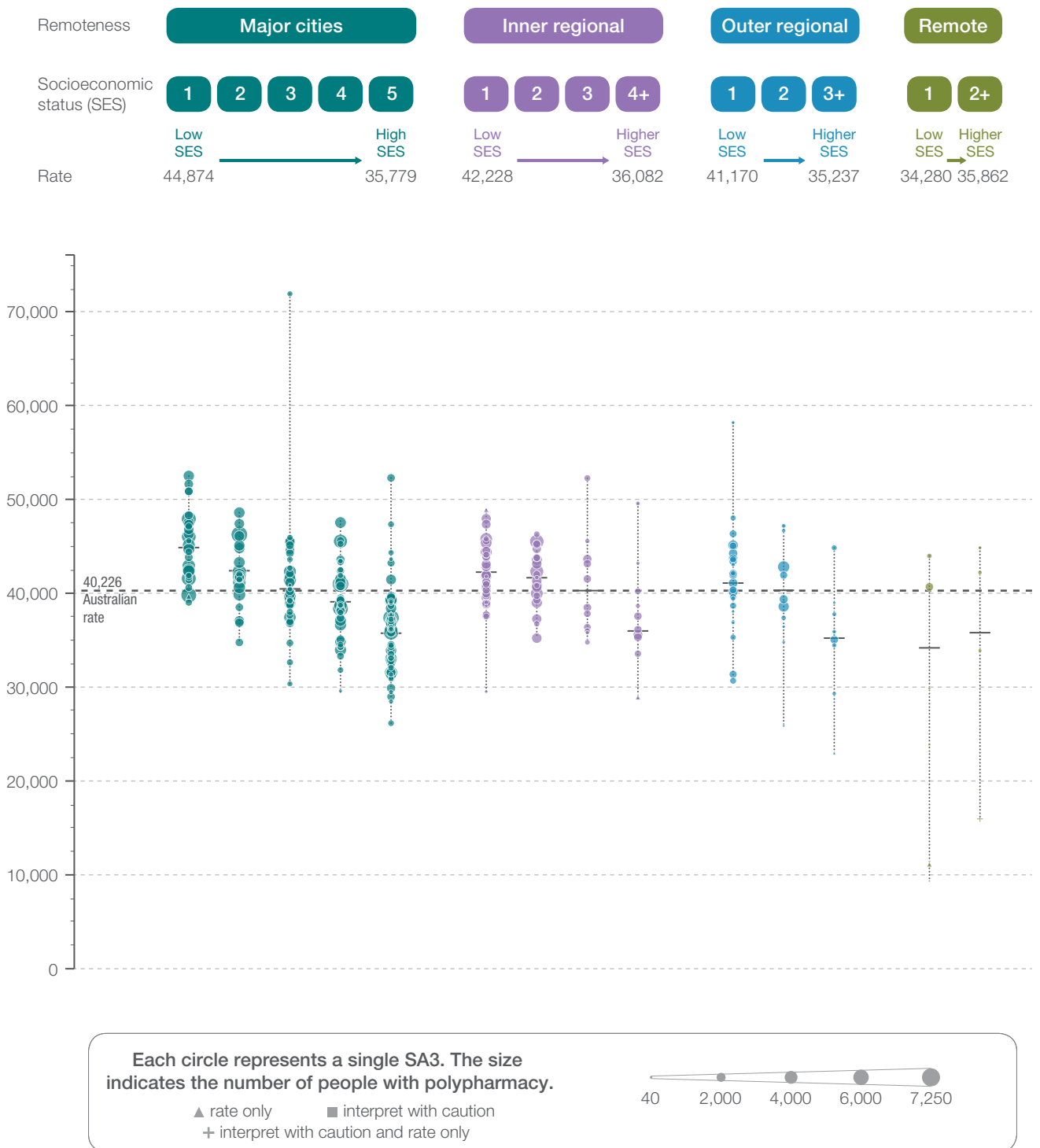
Notes:

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Sources: AIHW analysis of Pharmaceutical Benefits Scheme data and ABS Estimated Resident Population 30 June 2018.

Rates by remoteness and socioeconomic status

Figure 6.6: Number of people dispensed 5 or more medicines per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



Notes:

Squares (■) indicate rates that are considered more volatile than other published rates and should be interpreted with caution. Triangles (▲) indicate SA3s where only rates are published. The numbers of people are not published for confidentiality reasons. Crosses (+) indicate SA3s where rates should be interpreted with caution, and the numbers of people are not published for confidentiality reasons. For further detail about the methods used, please refer to the Technical Supplement.

Sources: AIHW analysis of Pharmaceutical Benefits Scheme data and ABS Estimated Resident Population 30 June 2018.

Polypharmacy, 75 years and over

Resources

- Australian Commission on Safety and Quality in Health Care, *Medication safety*⁶³, safetyandquality.gov.au/our-work/medication-safety
- NSW Clinical Excellence Commission, *A guide to medication reviews for NSW health services 2019*⁶⁴, cec.health.nsw.gov.au/keep-patients-safe/medication-safety/continuity-of-medication-management/medication-review
- Pharmaceutical Society of Australia. *Guidelines for comprehensive medication management reviews (2020)*⁶⁵, psa.org.au/mmg/
- National Institute for Health and Care Excellence (UK), *Multimorbidity and polypharmacy*¹⁹, nice.org.uk/advice/ktt18/chapter/evidence-context#polypharmacy
- National Institute for Health and Care Excellence (UK), *Multimorbidity: clinical assessment and management*⁶⁶, nice.org.uk/guidance/ng56
- National Institute for Health and Care Excellence (UK), *Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes*⁶⁷, nice.org.uk/guidance/ng5
- American Geriatrics Society, 2019 Updated AGS Beers criteria® for potentially inappropriate medication use in older adults²⁴
- American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity, Guiding principles for the care of older adults with multimorbidity: An approach for clinicians⁶⁸

Australian initiatives

The information in this chapter will complement work already under way to minimise harms from polypharmacy in Australia. At a national level, this work includes:

- NHMRC Cognitive Decline Partnership Centre, University of Sydney, Australian Deprescribing Network, NPS MedicineWise, development of recommendations for a national strategic plan to reduce inappropriate polypharmacy³⁴
- NPS MedicineWise, Keeping a medicines list⁶⁹, nps.org.au/consumers/keeping-a-medicines-list
- Society of Hospital Pharmacists of Australia, Standard of practice in geriatric medicine for pharmacy services⁷⁰
- The Veterans MATES program, funded by the Australian Government Department of Veteran's Affairs³⁷, veteransmates.net.au/
- EVOLVE⁶² and Choosing Wisely Australia⁵ – includes advice about recognising and avoiding prescribing cascades, deprescribing medicines when they are no longer needed, and not prescribe medicines to people already taking five or more medicines without first undertaking a comprehensive review to ensure use of all medicines is necessary
- National Aged Care Mandatory Quality Indicator Program – quality indicator requiring that, from 1 July 2021, all Commonwealth-subsidised residential aged care facilities are to report on polypharmacy as part of optimising medicines use.⁷¹

Many state and territory initiatives are also in place, including:

- Deprescribing guides and resources for clinicians and consumers, developed by a translational research project team lead by Prof Sarah Hilmer, available from NSW Therapeutic Advisory Group website⁷², nswtag.org.au/deprescribing-tools/
- Resource Kit for Measuring Strategies to Reduce Harm from Polypharmacy in Australian Hospitals: QUM Indicators, Patient Reported Experience Measures and Risk Stratification Tools, NSW Therapeutic Advisory Group⁷³, nswtag.org.au/polypharmacy-qum-indicators-and-resources/
- The Goal-directed Medication review Electronic Decision Support System; tools include the Goals of Care Management Tool, the Drug Burden Index Calculator, and the revised Patients' Attitudes Towards Deprescribing questionnaire⁷⁴
- Polypharmacy in older inpatients elearning module, Health Education and Training Institute, NSW⁷⁵, heti.nsw.gov.au/education-and-training/courses-and-programs/polypharmacy-in-older-inpatients-
- The Statewide Frailty Initiative, Agency for Clinical Innovation, NSW⁷⁶
- Managing medicines, Primary Health Tasmania⁷⁷, primaryhealthtas.com.au/for-health-professionals/programs/managing-medicines/
- Standardised Care Process for Polypharmacy Management in Residential Aged Care, Department of Health and Human Services, Victoria⁵⁶, health.vic.gov.au/ageing-and-aged-care/residential-aged-care/safety-and-quality/improving-resident-care/standardised-care-processes
- Quality indicator to monitor the proportion of residents using nine or more medicines, Department of Health and Human Services, Victoria⁷⁸, health.vic.gov.au/about/publications/policiesandguidelines/section-3-indicator-4-use-of-nine-or-more-medicines
- Improving medication reconciliation in community settings pilot, Pharmacy Guild of Victoria.⁷⁹

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