6.2 Medication management reviews, 75 years and over

Why is this important?

A medication management review (MMR) is a comprehensive, structured assessment of a person's medicines. It aims to help people get the most benefit from their medicines and minimise their risk of experiencing medicines-related harm.[1,2]

Residential Medication Management Review (RMMR) and Home Medicines Review (HMR) are types of MMR for people living in an aged care facility, or at home, respectively, who are at risk of experiencing a medicines-related problem.

Most people who receive RMMRs and about half of those who receive HMRs are aged 75 years and over.[3] Many older people have several chronic diseases and need to take multiple medicines (polypharmacy) to manage them.[4] However, polypharmacy, frailty and age-related changes in the way the body responds to medicines increase the risk of medicines-related harm in older people.

RMMRs and HMRs are effective at detecting and resolving a variety of medicines-related problems[5,6], but the appropriate rate of MMR services for older people is unclear.

The fourth Atlas examines rates of people aged 75 years and over who had at least one Medicare Benefits Schedule (MBS)-subsidised service for an RMMR or HMR in Australia, in 2018–19.

What did we find?

About 5.4% of people aged 75 years and over had at least one MBS-subsidised service for an RMMR or HMR in 2018–19. The rate was **11.7 times as high** in the area with the highest rate compared to the area with the lowest rate.

Rates were generally higher in major cities than in other areas. Rates generally increased with socioeconomic disadvantage in major cities and outer regional areas. Patterns were similar to those of polypharmacy in many areas, suggesting appropriate targeting of MMRs in some but not in all areas.

What can be done?

RMMRs are recommended for new residents in aged care facilities, and for existing residents after changes in clinical condition or medicines.[7-9] System changes are needed to drive implementation of these recommendations across aged care facilities.[10]

Recent changes to funding arrangements to improve access to RMMR and HMR services in rural and remote areas should be evaluated for their effectiveness.[11]

Initiatives to improve medical practitioner uptake of pharmacist recommendations following MMRs should be a priority. One such initiative is the development of medication review indicators for aged care facilities.

Medication management reviews, 75 years and over

Context

This item examines the rate at which people aged 75 years and over obtained at least one MBS-subsidised service for an MMR (RMMR or HMR) in Australia in 2018–19.

What is a medication review?

An MMR – also known as a medication management review or medicines review – is a comprehensive and structured assessment of a person's medicines. The aim of an MMR is to help people get the maximum benefit from their medicines and to prevent medicine-related harm.[1,2]

This item examines rates of two types of MMR services that are funded under the MBS and dedicated Australian Government programs[12]:

- Residential Medication Management Review (RMMR)* – available to people living in an eligible Australian Government–funded aged care facility
- Home Medicines Review (HMR)†, also known as Domiciliary Medication Management Review – available to people living in their own home.

RMMR and HMR services have been available to Australians since 1997 and 2001 respectively.[13,14] They are effective in detecting medicine-related problems[5,6] and are commonly conducted for older people because older people have high rates of medicine-related problems and are particularly vulnerable to harms from medicines.[15-18] About 86% of all RMMRs and about half of all HMRs were for people aged 75 years and over in 2018–19.[3]

Use of multiple medicines (polypharmacy) is common among older people. This is largely because the prevalence of chronic diseases that are managed with medicines increases with ageing.[4,15,19] About two-thirds of Australians aged 75 years and over living at home are taking five or more medicines.[16] In residential aged care facilities, up to 95% of residents take five or more medicines, with 25% taking 10 or more.[20]

Older people often need to take many medicines, but are very susceptible to harms from medicines because of frailty and age-related changes in the way their bodies respond to medicines.[21] Polypharmacy increases the risk of medication-related harm, and leads to increased hospital admissions.[4] There are also risks associated with specific medicines that can be especially harmful for older people.[4,21] Over half the people living in aged care facilities are prescribed medicines that are considered potentially inappropriate in older people, and for which use should be avoided if possible.[21,22]

Rules and guidelines for conducting RMMR and HMR

RMMR and HMR services are carried out in a collaborative and structured way involving the patient, their medical practitioner (usually a general practitioner [GP]), an accredited pharmacist and sometimes carers and other clinicians. There are three key steps involved in conducting a review[1,23,24]:

1. Based on criteria for a review and risk factors for medicines-related harm, a medical practitioner identifies and assesses whether a patient will benefit from an MMR. With the patient's consent, the practitioner refers them to an accredited pharmacist – that is, a pharmacist who has undergone the required training in this area – to conduct the review.
2. The accredited pharmacist conducts the review together with the patient, and consults with other people such as carers and other members of the healthcare team. The pharmacist assesses the risks and benefits of each medicine, the complexity of the regimen and how the person is managing their medicines. They identify ways to resolve any medicine-related problems, and make recommendations about ongoing therapy in a report, which they send to the referring medical practitioner.
3. The referring practitioner reviews the report with the patient. The report forms the basis of an agreed-upon medicines management plan.

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* MBS item numbers 903 and 249
† MBS item numbers 900 and 245

Several rules and guidelines ensure that RMMR and HMR services are appropriately provided to people who may benefit from them while avoiding inappropriate reviews. These rules include the MBS criteria for medical practitioners[7,25], the RMMR and HMR program rules for accredited pharmacists[23,24], and other guidelines.[1,8,26,27] The rules set out how to identify whose medicines to review, and how and how often to perform reviews, which can affect rates of RMMR and HMR services.[5,6]

A person's need for an HMR is assessed according to a variety of risk factors for medicines-related harm or suboptimal use, such as whether they[25]:

- Are taking five or more medicines regularly
- Are taking more than 12 doses of medicine per day
- Are taking medicines that have a small difference between doses that are safe and doses that can be harmful (narrow therapeutic index)
- Are attending different doctors
- Have been discharged from a facility or hospital in the last four weeks
- Have difficulty managing their medication regimens because of literacy or language difficulties, physical difficulties – such as poor dexterity or impaired sight – or cognitive difficulties – such as confusion or dementia
- Are managing significant changes made to their medicines in the last three months
- Are experiencing symptoms suggestive of an adverse drug reaction
- Are displaying suboptimal responses to treatment with their medicines
- Are suspected of having problems with adhering to their medicines or problems managing medicine-related therapeutic devices – for example, inhalers for asthma.

A person's need for an RMMR is based on whether they are[7]:

- A new resident to an aged care facility
- An existing resident who has had a significant change in their medical condition or medicines.

It is recommended that new residents of an aged care facility receive an RMMR as soon as possible after admission, and that it is completed within four weeks.[7] Under the program rules, a patient cannot receive another RMMR or HMR from a pharmacist within 24 months of an initial review. However, they can be referred by a medical practitioner within that period if there is a clinical need – for example, if there has been a change in their clinical condition or their medicines. Since April 2020, a patient can also receive two follow-up services to deal with any medicine-related problems identified at the initial RMMR or HMR.[11,23,24]

Medical practitioners' services are claimed through the MBS item numbers examined in this report. Medical practitioners can refer a person within 12 months of an earlier RMMR or HMR or at any time if there is a clinical need.[7,25] The HMR program had a cap of 20 HMR services per month per accredited pharmacist until March 2020, when the cap was increased to 30; there is no cap for RMMR services.[11,23,24]

Other types of MMRs

RMMRs and HMRs are not the only types of medication reviews that patients may be offered. Medication reviews are conducted by all hospitals and other health services as a requirement under the National Safety and Quality Health Service Standards.[28] Some health services also offer hospital outreach medication review services to improve medicines management during transitions of care to the community following a hospital stay.[29] GPs may conduct a medication review as part of a general consultation or chronic disease management service.[30] Community pharmacists may also conduct medication reviews outside of the HMR and RMMR arrangements. Examples include pharmacist services contracted by aged care facilities, and in-pharmacy MedsCheck and Diabetes MedsCheck services.[2]

Medication management reviews, 75 years and over

Effectiveness of RMMR and HMR

RMMRs and HMRs are effective in detecting medicine-related problems in older people.[5,6,31-33] Up to 98% of older people in Australian studies have at least one medicine-related problem detected at the time of a medicines review, with most having three[20,34-37], and some as many as five.[35] In Australian residential aged care facilities, over 95% of residents have at least one medicine-related problem detected at the time of review.[9,21,38-42] On average, three to four problems are identified per resident at the time of review.[21,43] The problems most commonly identified at the time of an RMMR or HMR are[20,31,32,43]:

- Inappropriate prescribing of medicines
- Prescribing of medicines that are no longer needed
- Not prescribing a medicine that is needed
- Failure to adhere to medicines regimens
- Lack of laboratory monitoring
- Adverse reactions to medicines.

HMRs can reduce the number of medicines prescribed[6,44], improve appropriateness of prescribing[6], and improve a person's understanding and adherence to medicines[6,32] and their confidence in managing their medicines.[6,13] RMMRs are effective in identifying and stopping medicines that are known to cause sedation and increase the risk of falls.[5] Like HMRs, they are effective in improving the appropriateness of prescribing and reducing the number of medicines prescribed.[5]

In studies of Australian war veterans, HMRs delayed hospitalisation in certain patient groups, such as people with heart failure and people taking warfarin.[45,46]

Improvements in management of chronic diseases, such as diabetes, have been shown when other types of medication reviews are conducted by pharmacists in community settings such as GP clinics, community pharmacies, and outpatient and specialist clinics.[47]

More research is needed to find out whether and how RMMRs and HMRs improve quality of life and reduce risk of hospital admissions associated with adverse medicine events – for example, by preventing a drug interaction that could lead to clinical deterioration.[5,6,44,48,49]

Factors influencing effectiveness of RMMR and HMR

GPs' uptake of recommendations to resolve medicine-related problems identified during reviews is variable. For example, the extent of collaboration between the GP and the pharmacist conducting the review affects acceptance and implementation of recommendations.[48,50]

The likelihood of accepting and implementing recommendations from HMRs has been reported to range between 17% and 86%[50], despite recommendations being based on evidence.[1]

Similar variability has been reported in studies examining the impact of RMMR, with 45% to 84% of recommendations accepted by GPs in a recent Australian systematic review.[43]

Rates of RMMR and HMR in Australia

A large-scale study in New South Wales of Pharmaceutical Benefits Scheme concession card holders examined HMR use in people aged 45 years and over between 2009 and 2014.[51] In this study, 5.2% of people aged 75 years and over had at least one HMR. Even in groups associated with high-risk prescribing, rates were still generally below 10%. Rates increased with age, and were higher in people receiving more medicines and in people who had recently been discharged from hospital.[51] Higher rates of HMR were found in smokers, people with obesity, and people with diabetes and broader health issues such as impaired physical functioning.[51] Living in a rural or remote area, having a lower level of education, and lower household income were also associated with higher rates of HMR services.[51]

Earlier studies of HMR conducted in older Australians reported participation rates ranging from 3.6% to 5.5%.[52-54] Rates increased with age and were higher in women, people taking more medicines, people who had more visits to a GP, people who had had a previous review, and people who had had a hospital admission. Rates were lower in people who used more dispensing pharmacies, had more specialist visits, and were at greater socioeconomic advantage.[52]

Studies of Australian aged care facilities found that less than half of residents received a RMMR in 2013–14.[55-56] Less than 22% of new residents received a timely RMMR between 2012–2015 in a study of residents in aged care homes.[57]

Why map rates of RMMR and HMR?

RMMRs and HMRs can detect and resolve medicine-related problems and improve medicines use in older people, but uptake of services has stabilised despite Australia's ageing population.[5,6,51,57] Appropriate rates for RMMR and HMR services are unclear. Mapping rates of MMR is one way of exploring the appropriate use of these services.

About the data

Data are sourced from the MBS dataset. This dataset includes information on MBS claims processed by Services Australia. It covers a wide range of services (attendances, procedures, tests) provided across primary care and hospital settings.

The dataset does not include:

- Services for publicly funded patients in hospital
- Services for patients in hospital outpatient clinics where claims are not made to the MBS
- Services covered under the Department of Veterans' Affairs arrangements.

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

The dataset includes the MBS claims for RMMR or HMR services provided by medical practitioners. These claims are made after the accredited pharmacist conducts the review and the medical practitioner discusses it with the patient. Claims made by accredited pharmacists for conducting the review are funded under the Community Pharmacy Agreement, which is a separate dataset.

Rates are based on the number of people who had at least one MBS-subsidised service for a medication management review (RMMR or HMR) per 100,000 people aged 75 years and over in 2018–19. Patient counts reflect the number of unique patients, regardless of the number of services a patient may have received in the year.

The analysis and maps are based on the patient's postcode recorded in their Medicare file and not the location of the service.

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

Medication management reviews, 75 years and over

For all MBS items in the Atlas, 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 MBS data (see the Technical Supplement). Data suppression for this item has been extensive, and affects all of the Northern Territory, and remote areas of Western Australia and Queensland. Reporting for the Northern Territory was possible at the territory level. Most local areas (Statistical Area Level 3 – SA3) were suppressed to prevent identification of the provider (practitioner or business entity). This is indicated on the maps in grey.

What do the data show?

Magnitude of variation

In 2018–19, 96,533 people aged 75 years and over had at least one MBS-subsidised service for a medication management review (RMMR or HMR), representing 5,392 people per 100,000 people aged 75 years and over (the Australian rate).

The number of people who had at least one MBS-subsidised service for a medication management review (RMMR or HMR) across 314* local areas (Statistical Area Level 3 – SA3) ranged from 1,618 to 19,006 per 100,000 people aged 75 years and over. The rate was **11.7 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 1,224 per 100,000 people in Northern Territory to 7,037 per 100,000 people in Tasmania. (Figures 6.7–6.10).

After the highest and lowest 10% of results were excluded and 252 SA3s remained, the number of people per 100,000 people was 2.0 times as high in the area with the highest rate compared to the area with the lowest rate.

Analysis by remoteness and socioeconomic status

Rates for medication management reviews were generally higher in major cities than elsewhere. Rates generally increased with socioeconomic disadvantage in major cities and in outer regional areas. There was unclear patterning elsewhere (Figure 6.11).

Analysis by age group

In 2018–19, 45,592 people aged 75–84 years had at least one medication management review, representing 3,896 people per 100,000 people (the Australian rate for this age group).

In 2018–19, 49,665 people aged 85 years and over had at least one medication management review, representing 10,180 people per 100,000 people (the Australian rate for this age group).

Data and graphs for analysis by age group and analysis by Primary Health Network are available at safetyandquality.gov.au/atlas

* There are 340 SA3s. For this item, data were suppressed for 26 SA3s due to one or more of a small number of services or population in an area, or potential identification of individual patients, practitioners or business entities.

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.

Interpretation

The Atlas found that about 5.4% of people aged 75 years and over had at least one MBS-subsidised MMR in 2018–19. This equates to about 1 in 7 people aged 75 years and over with polypharmacy (people dispensed five or more medicines) receiving an MMR in the year. While not all people with polypharmacy may need an MMR and some people with polypharmacy may receive a medication review that is not counted in MBS data, this ratio may be helpful in monitoring changes in MMR use. MBS statistics for the same period show that 62.5% of MBS-subsidised MMR services processed for people aged 75 years and over were RMMRs and the remaining 37.5% were HMRs.[3]

Rates for medication management reviews were higher in major cities, which raises concern about access in other areas, a finding previously highlighted in HMR program evaluations.[64] Data suppression was extensive in remote areas and must be considered in the interpretation of the findings.

Rates were higher in socioeconomically disadvantaged areas of major cities, which is consistent with previous Australian research and suggests appropriate targeting of MMRs in these areas.[6,52]

Possible reasons for variation in rates of MMR

Variation between areas may not directly reflect the practices of the clinicians who are based in those 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.

Variation in rates is likely to be due to the geographical differences in the factors discussed below.

Patient need

Variation is warranted when it reflects patient need. Nationally, higher rates of MMR were seen in people aged 85 years and over than in people aged 75–84 years, which is consistent with higher polypharmacy rates seen in the older age group.

Because the data are age and sex standardised – to control for differences in population structures between areas – variation in rates cannot be explained by higher proportions of older people. However, areas with aged care homes would be expected to have higher rates than areas without, given the higher numbers of RMMRs compared to HMRs.[3]

Areas with higher rates of underlying chronic disease are expected to have higher rates of polypharmacy. Higher rates of MMR are likely in these areas, given MMRs are recommended for people taking five or more medicine.[7,25] High rates of MMRs observed in some disadvantaged areas may reflect the prevalence of multimorbidities and risk factors for chronic disease in these areas.

Access to services

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 and therefore rates of MMR. 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.

In particular, the number of accredited pharmacists providing MMRs, and ease of access to them, may affect rates. This may be an issue in rural and remote areas, where there may be fewer accredited pharmacists available to provide services compared to major cities.[6,13,58]

Medication management reviews, 75 years and over

The program rules for MMR services may also affect access.[5,6] The program cap of 20 (now 30) HMR services per month per accredited pharmacist may disproportionately affect participation rates in rural areas because there are fewer accredited pharmacists in these areas.[6] Differences in providers' perceptions of the program rules (for example, that the rules are stringent) could also influence rates in some areas.[5,6] The 24-month restriction on patients receiving another review and introduction of a 30-day deadline to submit claims had an immediate and lasting influence on overall rates of RMMR when introduced in 2014.[5]

Knowledge of MMR processes by clinicians, as well as time taken to generate referrals, previous experience with referrals and the strength of working relationships between medical practitioners and accredited pharmacists may influence rates of MMRs.[51,59]

Rates of MMRs may also be influenced by rates of other medication reviews conducted in the community, such as reviews conducted by GPs (for example, as part of routine consultations, or as part of a health assessment for people aged 75 years and over[30], or as part of a chronic disease management plan), and medication reviews conducted by community nurses and community pharmacists outside the RMMR and HMR programs.

Clinical decision-making

Variation in medical practitioners' views on the benefits of MMRs is a likely contributor to the variation seen.[13,59]

Most GPs are supportive of MMR services[59,60], with general agreement that they reduce inappropriate polypharmacy and potentially improve medicine safety, as well as a person's understanding of and adherence to medicines regimes.[31,60] GPs have also reported that MMRs provide helpful insights into all the medicines a person is taking – including complementary and over-the-counter medicines.[60]

However, not all GPs are convinced of their value.[13,59] Some believe they don't offer any new insights about a person's medicines or provide clinically significant recommendations.[59] The complexity of the process, time constraints, and the volume of paperwork associated with reviews, as well as inconsistencies in the format and quality of reports generated by pharmacists have been cited by GPs as barriers to participation in MMR services.[13,60,61]

Consumer awareness

Consumer awareness of MMR services, their level of comfort in having a pharmacist visit them at home and their attitude towards medication reviews may affect rates.

A study of older people living in regional Australia taking five or more different medicines showed 15% were aware of HMR services.[62] Reasons for lack of awareness included not being informed about the services by GPs or pharmacists, and not seeing leaflets or advertising material relating to HMRs.

Not knowing the pharmacist who is providing the service has been reported by GPs as a barrier for people when deciding whether to participate in an HMR, as they feel uncomfortable having a stranger in their home conducting the review.[60]

The level of concern a person has about their medicine may influence rates. In one Australian study, people aged 75 years and over at high risk of medicine-related harm were least likely to worry about their medicines and participate in an MMR.[63]

A clinician's ability to be clear about the benefits of MMRs may also influence whether a person will have a review.[13,59]

People's attitudes towards MMR may affect rates. Some people associate a sense of independence with managing their own medicines, and so they may perceive an MMR as a sign of losing independence.[13]

Promoting appropriate care

System changes are needed to improve access to MMRs for older people who are at risk of medicine-related harm and likely to benefit from a review.

RMMRs are recommended for new residents on admission to aged care facilities and existing residents after changes in their clinical condition or medicines.[7-9] However, compliance to this recommendation is poor. A national study of 143,676 people aged 65 years and over who first entered permanent residential aged care in Australia between January 2012, and December 2015 found that 21.5% received an RMMR within 90 days. In only 6.2% of the aged care facilities did more than 50% of new residents receive a timely RMMR.[57]

The recommendation for use of RMMR was reiterated in the 2017 review of national aged care quality regulatory processes[9] and in the 2021 final report on the Royal Commission into Aged Care Quality and Safety.[10] More needs to be done to implement the recommendation.

Other priorities to improve the appropriate use of MMRs include:

- Improving access to MMR services in rural and remote areas
- Improving medical practitioner uptake of pharmacist recommendations following MMRs.

To deal with these concerns, regulatory changes to the RMMR and HMR programs were introduced in early 2020.[11,23,24] Key changes included expanding referral of RMMRs and HMRs to medical practitioners other than GPs, increasing the number of HMR services accredited pharmacists can provide from 20 to 30 per month, and allowing up to two services after an initial review for follow-up of recommendations made in the pharmacist's initial report. Improving access to RMMR or HMR following a hospital stay may also reduce medicine-related problems, especially within the first 10 days of discharge from hospital.[13,14] Frameworks have been developed to support medical practitioners in hospital to identify and refer people at high risk of medicine-related harm following a hospital stay for an RMMR or HMR.[64] These changes must be evaluated for their effectiveness.

Audit and monitoring

The development of medication review indicators for aged care facilities could help support the appropriate use of RMMR. Indicators could measure the proportion of people taking five or more medicines who receive a review[9], the percentage of people who receive a timely review on admission to an aged care facility, or the percentage of pharmacist recommendations that are acted on.

Improving collaboration between pharmacists and GPs

Team-based models of general practice that include pharmacists could improve collaboration between GPs and pharmacists and increase the likelihood that a pharmacist's recommendations are acted upon. While these models are well established internationally, more research regarding their effectiveness in the Australian is needed.[65]

Good working relationships between GPs and pharmacists conducting reviews have been found to influence uptake of MMR services by GPs. Some have reported that the role of HMR may be limited in major cities by a lack of opportunity to build relationships between GPs and pharmacists.[59] GPs that interact with pharmacists throughout the review process are more likely to initiate reviews and implement recommendations than those who do not, highlighting the importance of collaboration.[48,50] Australian research has shown that greater collaboration between GPs and pharmacists conducting HMRs can improve management or resolve up to 81% of identified medicine-related problems.[31] Changes to RMMR and HMR programs that allow pharmacists to conduct two follow-up reviews could improve collaboration between GPs and pharmacists.

Medication management reviews, 75 years and over

Use of evidence based-tools to support reviews

Electronic decision support tools have been found to be an important adjunct in clinical decision-making for pharmacists conducting MMRs.[66] However a person's individual needs and preferences for treatment must also be taken into account by the pharmacist or reviewer when assessing recommendations generated by these tools.[67]

The Goal-directed Medication review Electronic Decision Support System provides clinical decision support to clinicians conducting medication reviews, and has been shown to be useful when conducting an HMR.[68] Research is continuing to examine the effect of the tool on clinical outcomes.[69]

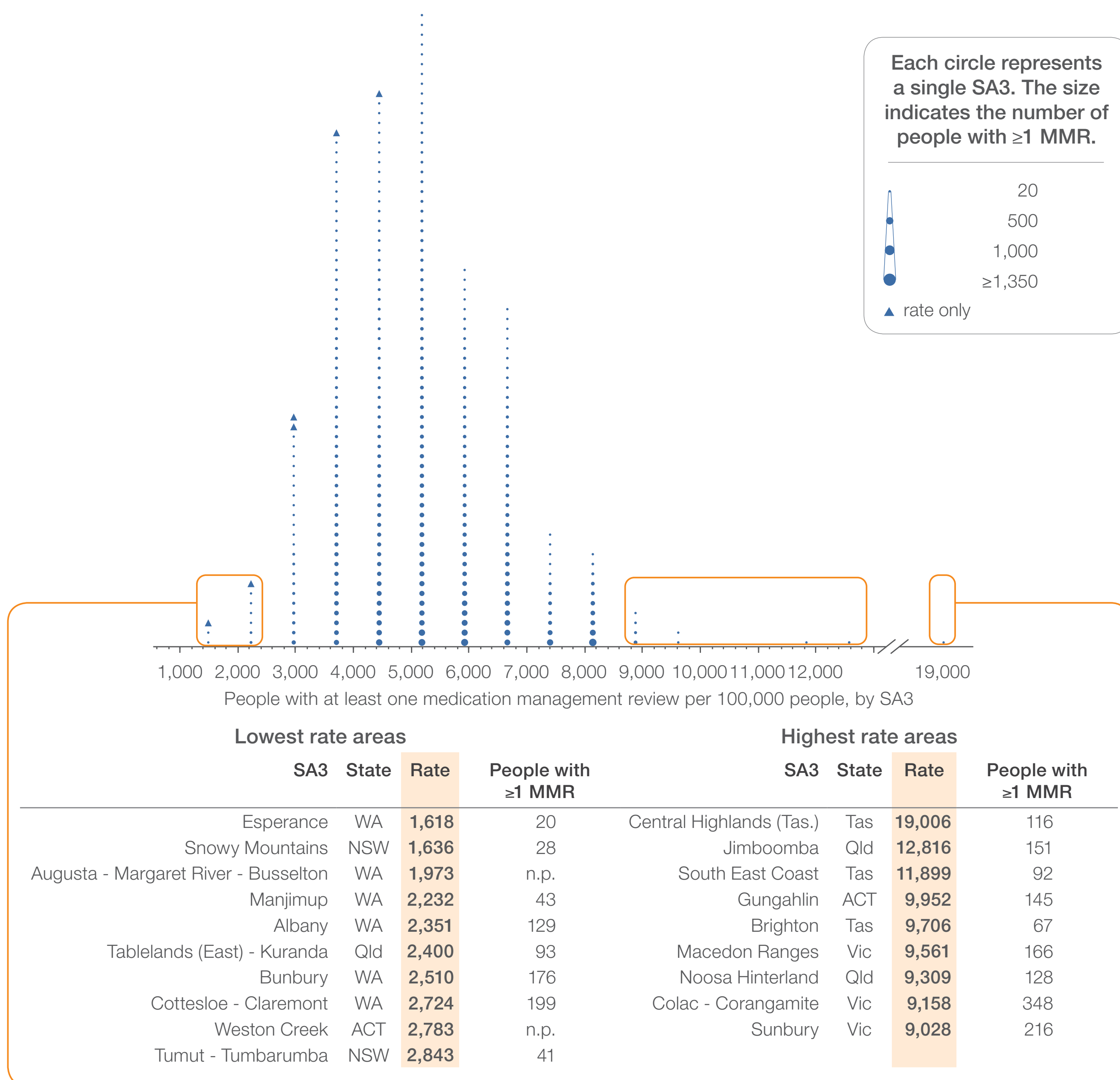
Tools to support simplification of medicine regimens for residents of aged care facilities have also been developed and validated.[70] The MRS GRACE Tool helps pharmacists identify how to reduce the complexity of a resident's regimen. The tool has been shown to be especially useful in those taking five or more medicines a day. In two-thirds of residents, medicines can be taken in a simpler way without changing the goals of therapy. High rates of acceptance and implementation of recommendations have been found, with some recommendations – such as reducing the number of medicine times – implemented in 62% of residents, as well as sustained results 12 months later at follow-up.[71]

Consumer awareness

Improved consumer awareness about programs aimed at improving their ability to manage their medicines and the benefit of MMR services could support uptake[62], particularly of HMRs. Consumer research has found that people are more likely to participate in a review if they understand the reasons for having one, and their GP thinks it will be beneficial.[13,59]

Rates by local area

Figure 6.7: Number of people who had at least one MBS-subsidised service for a medication management review (MMR) per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



Lowest rate areas

SA3	State	Rate	People with ≥1 MMR
Esperance	WA	**1,618**	20
Snowy Mountains	NSW	**1,636**	28
Augusta - Margaret River - Busselton	WA	**1,973**	n.p.
Manjimup	WA	**2,232**	43
Albany	WA	**2,351**	129
Tablelands (East) - Kuranda	Qld	**2,400**	93
Bunbury	WA	**2,510**	176
Cottesloe - Claremont	WA	**2,724**	199
Weston Creek	ACT	**2,783**	n.p.
Tumut - Tumbarumba	NSW	**2,843**	41

Highest rate areas

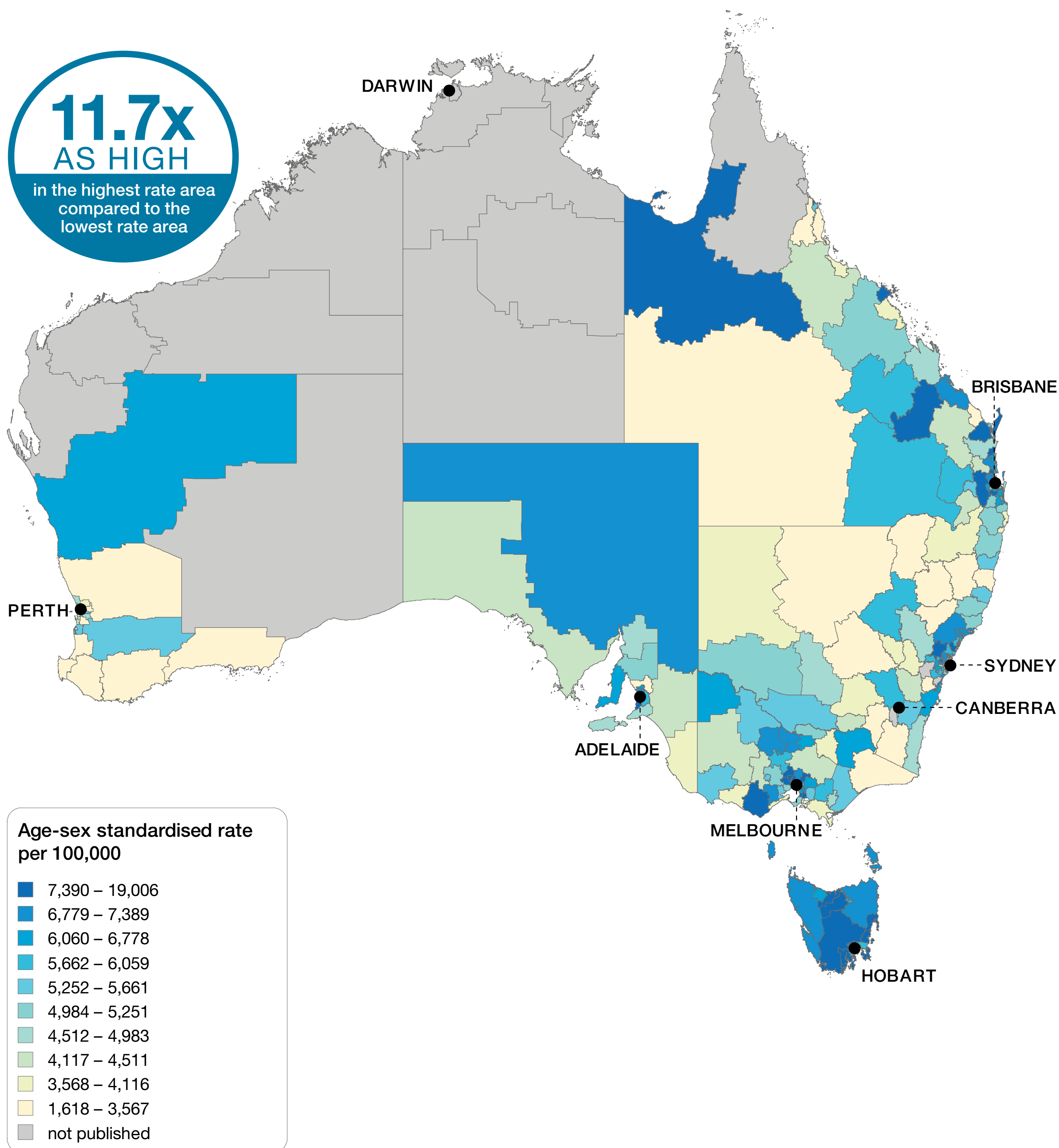
SA3	State	Rate	People with ≥1 MMR
Central Highlands (Tas.)	Tas	**19,006**	116
Jimboomba	Qld	**12,816**	151
South East Coast	Tas	**11,899**	92
Gungahlin	ACT	**9,952**	145
Brighton	Tas	**9,706**	67
Macedon Ranges	Vic	**9,561**	166
Noosa Hinterland	Qld	**9,309**	128
Colac - Corangamite	Vic	**9,158**	348
Sunbury	Vic	**9,028**	216

Notes:
Triangles (▲) indicate SA3s where only rates are published. The numbers of people are not published (n.p.) for confidentiality reasons.
For further detail about the methods used, please refer to the Technical Supplement.
Sources: AIHW analysis of Medicare Benefits Schedule data and ABS Estimated Resident Population 30 June 2018.

Medication management reviews, 75 years and over

Rates across Australia

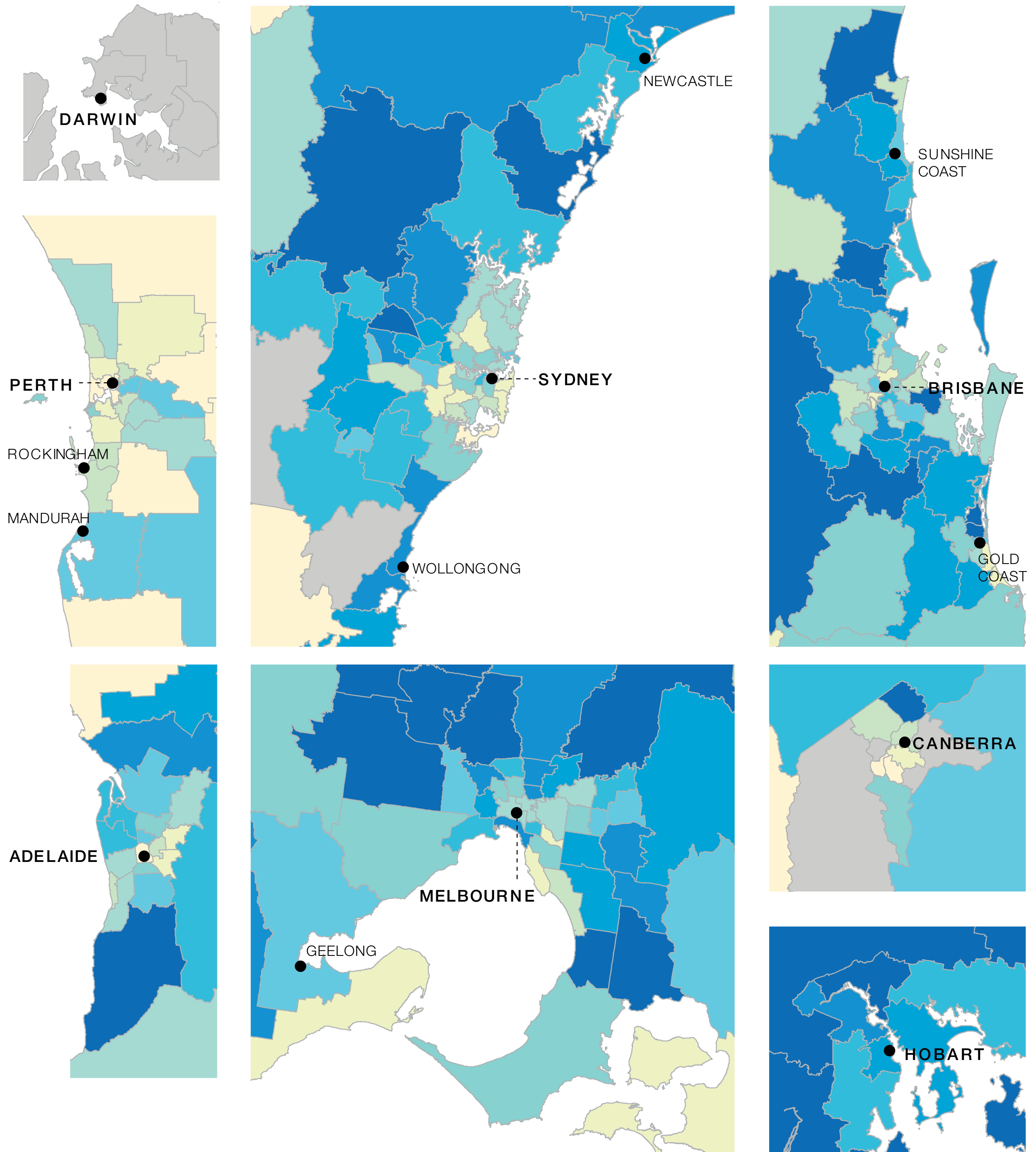
Figure 6.8: Number of people who had at least one MBS-subsidised service for a medication management review per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



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

Rates across capital city areas

Figure 6.9: Number of people who had at least one MBS-subsidised service for a medication management review per 100,000 people aged 75 years and over, age and sex standardised, by Statistical Area Level 3 (SA3) of patient residence, 2018–19



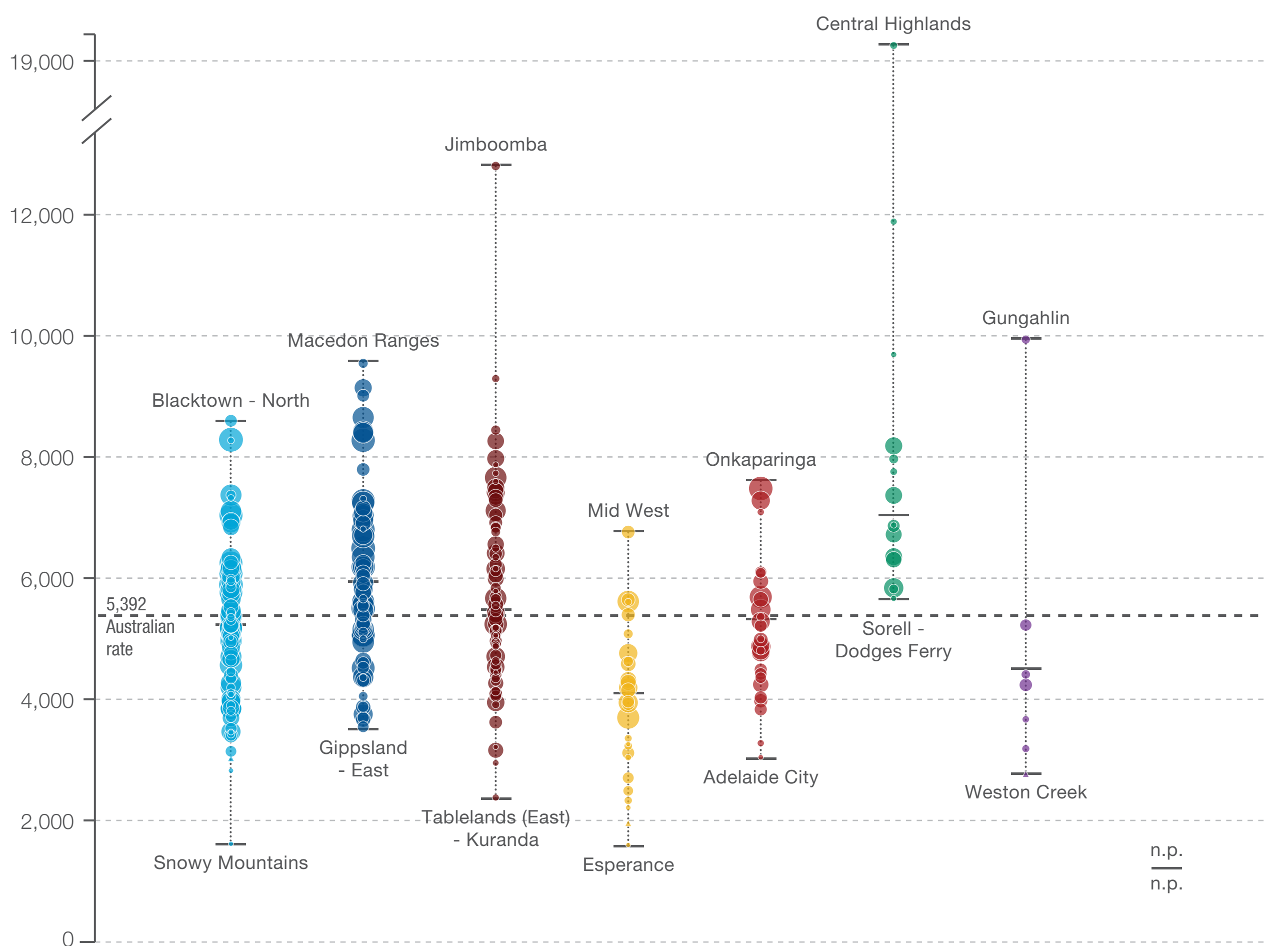
Notes:
For further detail about the methods used, please refer to the Technical Supplement.
Sources: AIHW analysis of Medicare Benefits Schedule data and ABS Estimated Resident Population 30 June 2018.

Medication management reviews, 75 years and over

Rates by state and territory

Figure 6.10: **Number of people who had at least one MBS-subsidised service for a medication management review (MMR) 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	8,614	9,561	12,816	6,778	7,497	19,006	9,952	n.p.
State/territory	5,233	5,937	5,481	4,119	5,315	7,037	4,524	1,224
Lowest rate	1,636	3,567	2,400	1,618	3,065	5,684	2,783	n.p.
Total patients	31,667	27,725	18,006	6,728	8,180	3,132	1,030	60



Each circle represents a single SA3. The size indicates the number of people with ≥1 MMR.

▲ rate only

20 500 1,000 1,350

Notes:

Triangles (▲) indicate SA3s where only rates are published. The numbers of people are not published (n.p.) for confidentiality reasons.

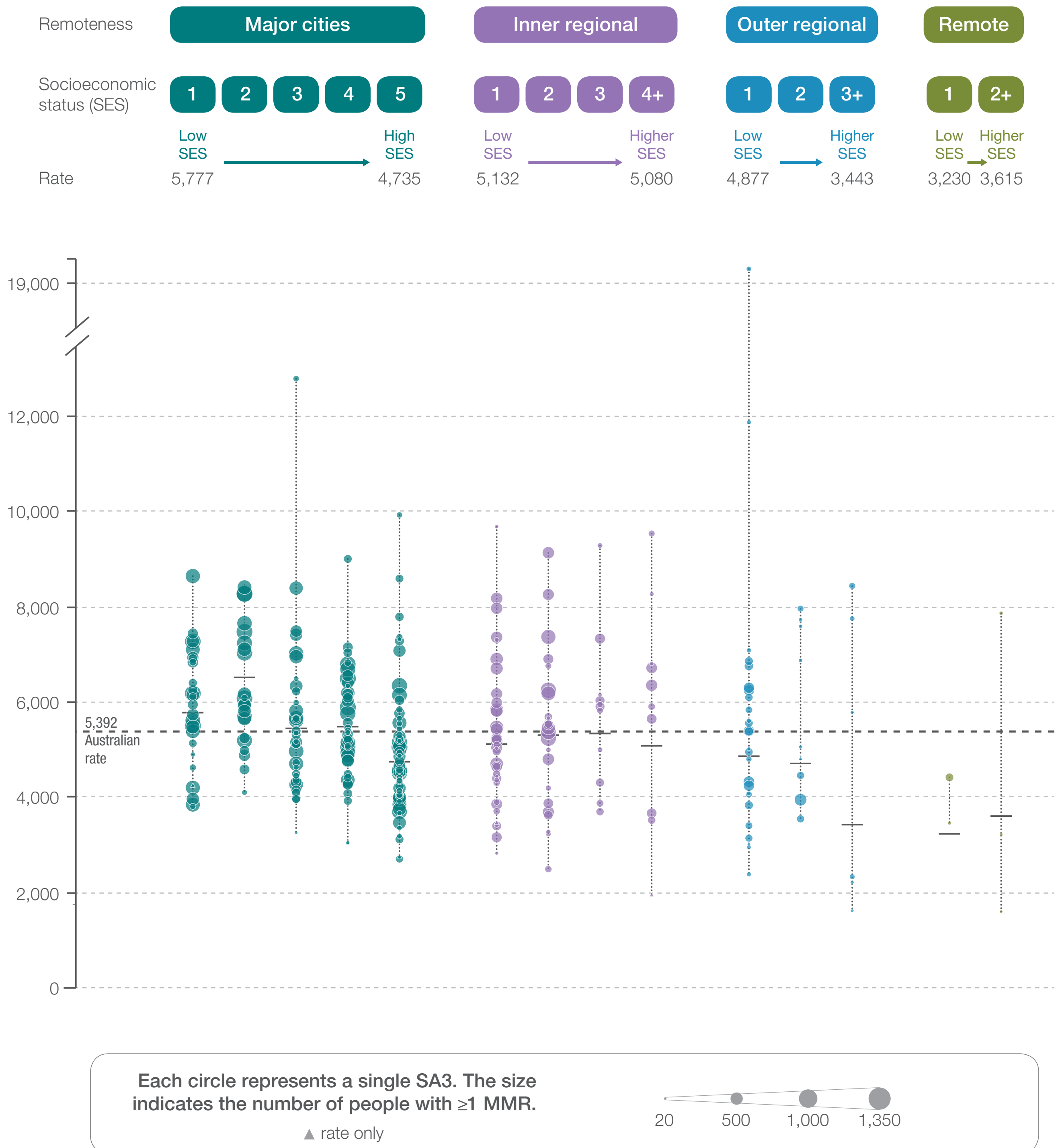
Rates for SA3s in the NT are not published for reliability and/or confidentiality reasons.

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

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

Rates by remoteness and socioeconomic status

Figure 6.11: Number of people who had at least one MBS-subsidised service for a medication management review (MMR) 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:
Triangles (▲) indicate SA3s where only rates are published. The numbers of people are not published for confidentiality reasons.
For Remote and SES of 1, the remoteness and SES rate is lower than the minimum SA3 rate as it includes SA3 rates that are not published for reliability and/or confidentiality reasons.
For further detail about the methods used, please refer to the Technical Supplement.
Sources: AIHW analysis of Medicare Benefits Schedule data and ABS Estimated Resident Population 30 June 2018

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Resources

- Australian Government Department of Health. Medication management reviews[12], health.gov.au/internet/main/Publishing.nsf/Content/medication_management_reviews.htm
- Australian Government Department of Health. *Program Rules: Home Medicines Review*[23], ppaonline.com.au/wp-content/uploads/2019/01/HMR-Program-Rules.pdf
- Australian Government Department of Health. *Program Rules: Residential Medication Management Review and Quality Use of Medicines*[24], ppaonline.com.au/wp-content/uploads/2019/01/RMMR-and-QUM-Program-Rules.pdf
- Pharmaceutical Society of Australia. *Guidelines for Quality Use of Medicines (QUM) Services (2020)*[27], psa.org.au/mmg/
- Pharmaceutical Society of Australia. *Guidelines for Comprehensive Medication Management Reviews (2020)*[1], psa.org.au/mmg/
- Australian Government Department of Health. *Guiding Principles for Medication Management in the Community*[72], health.gov.au/internet/main/publishing.nsf/Content/Publications-16
- Australian Government Department of Health. *Guiding Principles for Medication Management in Residential Aged Care Facilities*[8], health.gov.au/internet/main/publishing.nsf/Content/Publications-16
- Australian Government Department of Health. *Guiding Principles to Achieve Continuity in Medication Management*[73], health.gov.au/internet/main/publishing.nsf/Content/Publications-16
- Australian Government Department of Health. *National Guidelines to Achieve the Continuum of Quality Use of Medicines Between Hospital and Community*[74], health.gov.au/internet/main/publishing.nsf/Content/Publications-16

Australian initiatives

Information in this chapter will complement work already under way in Australia regarding medication review and MMR services. At a national level this work includes:

- NPS MedicineWise, Managing your medicines – includes resources to getting an HMR and supporting patients with keeping a medicines list[75], nps.org.au/consumers/managing-your-medicines
- Society of Hospital Pharmacists of Australia. Hospital-initiated medication reviews (HIMR)[64]
- The Veterans MATES program, funded by the Australian Government Department of Veteran's Affairs[76], veteransmates.net.au/

Many state and territory initiatives are also in place to improve medication review and support uptake of MMR services, including:

- 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 questionnaire[77]
- Consumer information leaflet – *Rethink your medications*[78], Primary Health Tasmania, primaryhealthtas.com.au/wp-content/uploads/2018/06/Rethinking-Your-Medications-consumer-brochure.pdf
- *Standardised Care Process for Polypharmacy Management in Residential Aged Care*, Department of Health and Human Services, Victoria[54], health.vic.gov.au/ageing-and-aged-care/residential-aged-care/safety-and-quality/improving-resident-care/standardised-care-processes

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