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National baseline report on Quality Use of Medicines and Medicines Safety

Phase 1: Residential aged care

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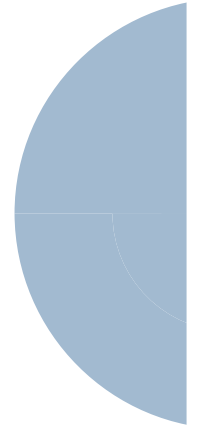
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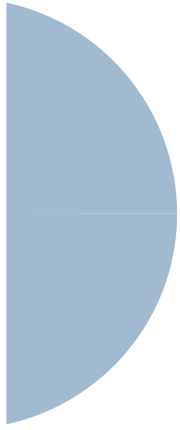
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Executive summary

The Australian Commission on Safety and Quality in Health Care (the Commission) is an Australian Government agency that leads and coordinates national improvements in the safety and quality of health care based on the best available evidence. By working in partnership with patients and their family members/carers, clinicians, the Australian, state and territory health systems, the private sector, managers and healthcare organisations, the Commission aims to ensure that the health system is better informed, supported and organised to deliver safe and high-quality care.

In November 2019, **Quality Use of Medicines and Medicines Safety was announced as Australia's 10th National Health Priority**. The Commission was assigned the responsibility of drafting the national baseline report on Quality Use of Medicines and Medicine Safety to inform new best practice models, new national standards and better medication management. The work to develop the national baseline report is divided into two Phases:

- Phase 1 focussed on aged care and issues of polypharmacy, use of antipsychotic medicines and transitions of care
- Phase 2 will investigate the broader issues of Quality Use of Medicines and Medicine Safety, as well as issues of medication safety during transitions of care.

The result of Phase 1 is this *National Baseline Report on Quality Use of Medicines and Medicines Safety – Phase 1 Residential aged care* (the Report). The Report identifies a potential roadmap to embed Quality Use of Medicine principles in the aged care sector, with the aim of reducing medication-related harm.

The Report builds on **Medication without harm – the World Health Organization (WHO) Global Patient Safety Challenge – Australia's response**, (the Response), which was published by the Commission in April 2020. In the Response, the Commission examined existing evidence and programs that reduce medication-related harm from inappropriate polypharmacy, the use of high-risk medicines, and at transitions of care.

The Response refined the parameters of the challenge for the Australian context, with the goal to reduce severe, avoidable medication errors, adverse drug events and medication-related hospital admissions by 50% by 2025.

There are opportunities to strengthen practices around the Quality Use of Medicine and medicines safety in residential aged care facilities (RACFs).

Strengthening existing structures in RACFs such as the Medicines Advisory Committees, to oversee the appropriate, safe, cost-effective and equitable use of medicines is needed. Workforce issues regarding the role of registered nurses, the role of pharmacists, and the coordinating role of GPs in medication reviews need to be clarified and able to be applied in all settings and locations. This includes strengthening the understanding of the rights and role of the resident in their own medication understanding, choices and informed consent.

Training of staff needs to be significantly improved to embed Quality Use of Medicines and medicines safety practices in RACFs. A 'single point of truth' medicine list in residential aged care facilities should be mandated such as the National Residential Medication Chart (NRMC). As the aged care sector increasingly moves towards digital technology adoption, the electronic version of the NRMC should be able to be uploaded to My Health Record, or sent digitally to a receiving clinical information system (CIS).

Transitions of care continue to be a time when there is a high risk of medication misadventure and less than optimal clinical outcomes as residents/patient traverse separate unconnected systems.

Recognising the frailty and complexity of residents being sent to hospital, RACFs need to improve the quality of medicines information accompanying the resident and provide clarity around the reason for admission. Hospital clinicians discharging patients back to residential aged care facilities need to consider the patient is going to a residential facility, but will have ongoing health and treatment requirements. Accordingly, clinical handover summaries must provide context as to why medicines were stopped or started, for how long they should be continued, who is to review them and when, and include a medication management plan. Interim medication charts offer a potential solution to minimise missed or delayed doses of medicines from a medicines list in the clinical handover summary. This information should be shared with the person, the RACF, the GP, and the pharmacy service supplying the medicines, to ensure accurate and timely changes can be implemented.

The person's journey from living independently in the community through home care to residing in residential aged care facilities (RACFs) provides many touch points where there is an opportunity for improved communication and planning about medicines, for example, medication reconciliation and inter-professional collaboration on medicines management. More widespread use of evidence-based tools to screen older Australians at risk of medication-related harm, access to standardised medication review processes with appropriately qualified health professionals, improved engagement of residents and their family members/carers in goal-setting, understanding and knowledge about their own medications, and decisions about their medicines are all identified as priority areas.

An overarching priority action is proposed to embed the quality use of medicines activities available in the Quality Use of Medicine Program in guidance that could be provided around Aged Care Quality Standards to be adhered to by RACFs.

Ten priority actions are proposed as part of the road map to improve Quality Use of Medicines and medicines safety in RACFs reducing the potential for medication-related harm for residents:

- 1 Implementation of evidenced-based screening tools to minimise medication-related harm post hospital discharge
- 2 Revision of access to Residential Medication Management Review at entry to RACFs
- 3 Undertake consultation with key stakeholders to develop a national guideline for medication review reporting templates for Residential Medication Management Review to improve quality of reports and achieve reporting consistency
- 4 Introduction of a revised national guideline for governance, composition and operation of Medication Advisory Committees within RACFs and strengthen medication management standards in RACFs
- 5 Introduction of standardised requirements for training of staff in residential aged care facilities on quality use of medicines relevant to their practice

- 6 Broad implementation of an evidence-based program of patient monitoring and interventions to reduce antipsychotic and benzodiazepine use in RACFs/development of nationally consistent guidelines for the appropriate use of psychotropic medications in people living with dementia and in residential aged care
- 7 Introduction and implementation of publicly reported quality and safety indicators for inappropriate polypharmacy and inappropriate use of antipsychotics in RACFs in line with the National Aged Care Mandatory Quality Indicator Program
- 8 Broad implementation of interim medication administration charts as part of the clinical handover at transition of care between hospital and residential aged care facilities consistent with Action 4.12 of the NSQHS Standards
- 9 Implementation of publicly reported quality and safety indicators for Quality Use of Medicines in RACFs
- 10 Further research:
 - a. Into the development and introduction of an evidence-based assessment tool which reviews exposure to types and doses of medicines that can cause adverse outcomes potentially placing people with dementia at risk of developing behavioural and psychological symptoms of dementia
 - b. Trialling the role and impact of pharmacists embedded in residential aged care facilities make on Quality Use of Medicines, medicines safety and resident outcomes.

These priority actions align with a number of the recommendations made in the Final Report of the Royal Commission into Aged Care Quality and Safety (Appendix 1).

Adoption of the priority actions is an investment in positive outcomes for residents of aged care facilities. Each of the priority actions can contribute to reductions in severe, avoidable medication misuse and errors, adverse drug events and medication-related hospital admissions.

The Commission thanks all those that have collaborated towards the development of this Report.

Introduction

Australian Commission on Safety and Quality in Health Care

The Commission is an Australian Government agency that leads and coordinates national improvements in the safety and quality of health care based on the best available evidence. By working in partnership with consumers and their family members/carers, clinicians, the Australian, state and territory health systems, the private sector, managers and healthcare organisations, the Commission aims to ensure that the health system is better informed, supported and organised to deliver safe and high-quality care.

Consultation process

A discussion paper for public consultation was developed by the Commission, utilising the advice of its committees. In August 2020, the [Quality Use of Medicines and Medicines Safety Discussion Paper](#) was sent to more than 75 stakeholders. It was also published on the Commission's website, where responses could be made directly.

This Report is informed by responses from 40 stakeholders. These included those involved in the prescribing, dispensing, storage, administration and review of medicines to residents of aged care facilities, along with colleges, societies, professional organisations, academics, primary health networks, Aged Care Quality and Safety Commission, peak industry bodies and consumer advocacy organisations.

The Commission thanks all those that sent responses, contributing to the development of this Report.



Background

Quality Use of Medicines and National Medicines Policy

The National Medicines Policy underpins people's access to, and wise use of medicines. The National Medicines Policy is subject to a separate review.

Quality Use of Medicines¹ is one of the central objectives of Australia's National Medicines Policy. Under the policy, Quality Use of Medicines means:

- Selecting management options wisely
- Choosing suitable medicines if a medicine is considered necessary
- Using medicines safely and effectively.

Implicit in this is the:

- Monitoring of outcomes (effectiveness and adverse effects)
- Minimising misuse, over-use and under-use, of medicines, improving people's ability to solve medication-related problems. For example ceasing medications that are not wanted, not of benefit or are doing harm to health, function or quality of life.

Medicines include prescription, non-prescription and complementary medicines.

Australia has a National Strategy for Quality Use of Medicines, the goal of which is to make the best possible use of medicines to improve the health outcomes of Australians.² There are five key principles underpinning the National Strategy for Quality Use of Medicines:

- Recognition of the primacy of consumers and their views
- Notion of partnership between key participants
- Need for consultation and collaboration and multidisciplinary activity in the design, implementation and evaluation of Quality Use of Medicines initiatives
- Support for existing Quality Use of Medicines activities and initiatives
- Need to adopt and embrace system-based approaches.

Within the National Strategy, six key building blocks support Quality Use of Medicines:

- Policy development and implementation
- Facilitation and coordination of Quality Use of Medicines initiatives
- Provision of objective information and assurance of ethical promotion of medicines
- Education and training
- Provision of services and appropriate interventions
- Strategic research, evaluation and routine data collection.

A number of guiding principles for medication management exist³:

- Guiding principles for medication management in the community
- Guiding principles to achieve continuity in medication management
- Guiding principles for medication management in residential aged care facilities.

The development of the first two guiding principles was overseen by the Australian Pharmaceutical Advisory Council, which has since been disbanded. In February 2021 the Australian Government Department of Health engaged the Commission to conduct a review and update of the national Quality Use of Medicines Guiding principles for medication management in residential aged care facilities.

Medicine usage

Medicines are the most common intervention in healthcare.

The Australian Institute of Health and Welfare *Australia's health 2020*⁴ reported that in 2017–18 more than 302 million prescriptions were dispensed under the Pharmaceutical Benefits Scheme, and the Repatriation Pharmaceutical Benefits Scheme. People aged 65 and over received 53% of all Pharmaceutical Benefit Scheme and Repatriation Pharmaceutical Benefits Scheme medicines dispensed. In 2017–18, the Australian Government recorded \$11.9 billion in spending on all PBS and RPBS medicines – \$485 per person. For all prescriptions dispensed in 2017–18, 70% were above co-payment – indicating that the patient paid the relevant co-payment and the remaining cost was subsidised by the Australian Government.

An NPS MedicineWise 2018 survey⁵ into the medicine-taking habits of Australians estimates more than 9 million people take a prescribed medicine every day, with 8 million taking two or more prescribed medicines in a week.

Total 2019–20 Pharmaceutical Benefits Scheme subsidised prescription volumes increased by 2.2% over two years to 208.5 million prescriptions, compared to 204.1 million for the 2017–18 financial year.⁶

While medicines can contribute to significant health improvement, they can also cause harm. Medication errors can cause serious harm, accidents and communication issues. These include:

- Healthcare professionals prescribing and administering medicine in ways that increase the risk of harm to consumers
- The complexity of medicine naming, dosing, indications, duration of therapy, monitoring, precautions, and interactions
- Consumers misunderstanding or receiving insufficient information and guidance on why and how to use their medicines.

The ultimate goal of the health system is to deliver high-quality care that is safe, of value, and provides an ideal experience for patients and their family members/carers. A person's care experience is influenced by the way they are treated as a person, and by the way they are treated for their condition. Person-centred care is respectful of, and responsive to, the preferences, needs and values of patients and consumers.⁷ A person-centred approach to decision-making processes in aged care is considered throughout this report.

In addition to medication-related problems such as errors and adverse events, other issues include⁸:

- Using too much medicine (overdosage)
- Using too little medicine (subtherapeutic dosage)
- Using the wrong medicine (improper selection)
- Using a medicine that is not necessary (using without indication)
- Not using a medicine that is necessary (untreated indications)
- Failing to receive a medicine
- Interactions because of medicine-medicine, medicine-food, or medicine-laboratory interaction.

The third World Health Organisation Global Patient Safety Challenge – Medication without harm, aims to improve each stage of the medication process, including prescribing, dispensing, administering, monitoring and use.⁹

Australia's response to the third World Health Organisation Global Patient Safety Challenge – *Medication without harm* covers the large breadth of activities related to medication safety and outlines priority actions to address inappropriate polypharmacy, high-risk medicines, and transitions of care.¹⁰

A report¹¹ of the Pharmaceutical Society of Australia published in 2019, estimates that there are 250,000 hospital admissions annually in Australia due to medication-related problems. The report also estimated that:

- 1.2 million Australians have experienced an adverse drug event in the last six months
- More than 90% of patients have at least one medication-related problem after discharge from hospital
- 98% of residential aged care residents have at least one medication-related problem.

A subsequent report¹² of the Pharmaceutical Society of Australia published in 2020, summarises research into the extent of medication-related problems, inappropriate medicine use, and administration errors in residential aged care facilities.

Phase 1: Residential aged care

The Australian health care system is complex. In the broader aged care sector, older Australians find it complex to navigate the health care system.¹³ One of the complexities is the use of medicines. Figure 1 provides a system map of medication management in Australia.

This Report focuses predominantly on older people living in RACFs as well as their transitions to and from hospital.

Demographics

The Australian Institute of Health and Welfare report¹⁴ that more than 1.2 million people received aged care services during 2017–18. Of Australians aged 65 years and older in 2017–18, 7% accessed residential aged care. As at June 2018, 59% of people accessing residential aged care are aged 85 years or older. At 30 June 2019, about 183,000 people were in permanent residential aged care, and just over half (53%) had been diagnosed with dementia.¹⁵ In addition, half of those entering residential care will be there for two years or less.¹⁶

The Australian Institute of Health and Welfare reported in 2016 that 37% of people aged 65 and over were born overseas, and that the majority of these were born in a non-English speaking country. About 6% reported speaking another language and English only poorly, or not at all. These older Australians may face substantial language barriers in accessing services. Those with differing cultural practices and norms can lead to a lack of understanding of, and barriers to, service use.¹⁷ In February 2019 *Actions to support older Culturally and Linguistically Diverse people – A guide for aged care providers* was published. It aims for all older people to experience a high-quality aged care system that ensures equitable access and outcomes embracing their diverse characteristics and life experiences.

Commonly older people are unwell when they move into permanent residential aged care.¹⁸

Many older people take multiple medicines. The following evidence shows that as more medicines are consumed, there are many things to consider which may affect the quality use of medicines.

Medicine complexity

The systems and practices of informing and consenting, prescribing, preparing and dispensing, administering and monitoring and reviewing medicines for use by older people living in residential aged care facilities involves the consumer and their family members/ carer(s), along with a range of health professionals, including GPs, specialists, nurse practitioners, registered nurses, enrolled nurses, community pharmacists, medicine packaging services, accredited pharmacists, and allied health professionals supporting residential aged facilities.

As Australia's population continues to age, there is likely to be a larger number of older Australians who will present with increasingly complex and chronic medical conditions often with co-morbidities. This can result in them taking multiple medicines, making them vulnerable to the adverse effects of medicines.

Medicines use in older people is a complex balance between changing wishes and goals of care, managing disease and avoiding medicines-related problems such as side effects, interactions and medicine errors.¹⁹ In 2015 Hubbard et al reported that three-quarters of older patients assessed were receiving five or more medicines, and more than one-fifth were receiving 10 or more, on admission to hospital.²⁰

Complex medication regimens are highly prevalent in residential aged care facilities. A study²¹ published in 2018 outlined the development and validation of an implicit tool to guide medication simplification in aged care – the Medication Regimen Simplification Guide for Residential Aged Care (MRS GRACE) implicit tool. Simplification was possible for all residents with five or more administration times.

Another study²², Simplification of Medications Prescribed to Long-term care Residents (SIMPLER) Cluster Randomized Controlled Trial, demonstrated that the application of a structured tool to reduce medication regimen complexity may enable staff in residential aged care facilities to shift time to other resident care activities.

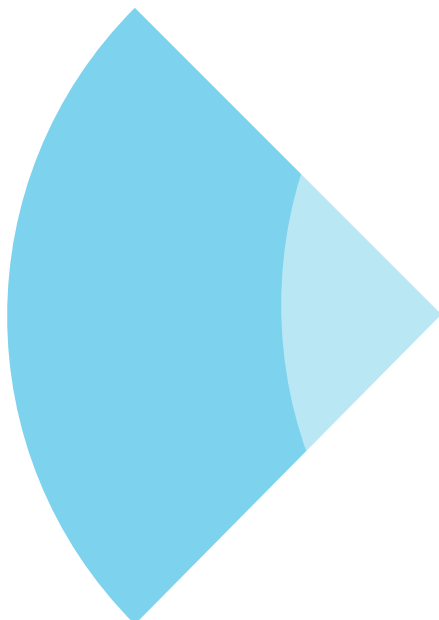
Deprescribing, the process of tapering or stopping medicines, aimed at minimising inappropriate polypharmacy may have a role in reducing medicine complexity. This is explored in [Topic 1: Polypharmacy](#).

Medicine adherence

The literature identifies the difference between adherence, compliance and concordance.²³ Adherence and compliance relate to the medicine-taking behaviour of the patient. This can be measured quantitatively, for example using prescription records, or pharmacy dispensing data. Concordance does not refer to a patient's medicine-taking behaviour, but rather to the nature of the interaction between clinician and patient. It is based on the notion that consultations between clinicians and patients are a negotiation between equals, where the aim is the establishment of a therapeutic alliance between clinician and patient. Concordance is synonymous with person-centred care.

The literature highlights the importance of medicine adherence in optimising health outcomes. In 2018, the International Pharmaceutical Federation published a report, highlighting the greater consequences of non-adherence in older people because they often require multiple medicines for chronic conditions with co-morbidities, and they often have greater difficulty managing their medicines because of declining cognitive function, memory, mobility and manual dexterity.²⁴

In older patients, medication adherence can be a major challenge. Smaje A et al²⁵ conducted a systematic review of factors associated with medication adherence in older patients, concluding that multimorbidity, cognitive impairment, complex regimens with multiple prescribing physicians, and problems with medication storage or formulation were negatively associated with adherence. The frequency of medication review and patient knowledge regarding the purpose of the medicine were positively associated with adherence.



Medicine overuse

Ageing places individuals at risk of multimorbidity due to associated physiological and pathological changes and increases the chances of being prescribed multiple medicines.

Taking multiple medicines increases the possibility of prescribing cascades. Especially when additional medicines are prescribed to treat consequences or adverse effects of other medicines. This is the potential result of misinterpreting the adverse effects as a new medical condition, which requires treatment. This example of increasing the number of medicines, or polypharmacy, highlights the gradual path to unnecessary use of medicines.²⁶

Choosing Wisely Australia and the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists identify the importance of prescribers **recognizing and stopping the prescribing cascade.**

Choosing Wisely Australia and the Pharmaceutical Society of Australia recommend that **medicines are not initiated to treat symptoms, adverse events, or side effects (unless in an emergency) without determining if an existing therapy or lack of adherence is the cause, and whether a dosage reduction, discontinuation of a medicine, or another treatment is warranted.**²⁷

A systematic review²⁸ published in 2019 examined the evidence of deprescribing as an effective strategy for improving medicine adherence amongst older, community dwelling adults. It concluded that there is insufficient evidence to show that deprescribing improves medication adherence, but that bio-psycho-social factors including health literacy and multidisciplinary team interventions influence adherence.

There is a role for the use of evidence-based deprescribing guidelines. These are designed to help clinicians take action on reducing or stopping medicines that may not be having the desired effect, may be causing more harm than benefit or are no longer compatible with the person's goals and wishes. A Canadian study²⁹ published in 2018 concluded that implementation of evidence-based deprescribing guidelines appears to increase clinicians' self-efficacy in developing and implementing a deprescribing plan for specific medicine classes for residents in long-term care.

Medication errors

Medication errors and adverse drug events often lead to hospital admissions.

In Australia, it is estimated that there are 250,000 hospital admissions annually as a result of medication-related problems.¹⁰ In a 2016 paper, Roughead et al estimated that between 2% and 3% of all hospital admissions are medication-related in Australia.³⁰

Medication errors can cause serious harm, accidents and communication issues. These include:

- Healthcare professionals prescribing and administering medicine in ways that increase the risk of harm to consumers
- Consumers misunderstanding why and how to use their medicines
- Insufficient monitoring of effect and impact of high-risk medications.

Medication issues can arise due to the complexity of medicine naming, dosing, indications, duration of therapy, monitoring, precautions, and interactions.

In 2019, the New South Wales Aged Care Roundtable published a report on avoidable hospitalisations from residential aged care facilities.³¹ The report included a recommendation to improve medication management to address an important and direct cause of avoidable hospital admissions.

Mohanan et al³² examined the extent and nature of 31,863 medication-related hospital admissions in the Illawarra Shoalhaven Local Health District between 2011 and 2016 for individuals with and without dementia, finding:

- Almost one fifth of medication-related adverse events occurred in hospital
- 7% of medication-related adverse events occurred in individuals with dementia
- More than 20% of individuals with and without dementia were re-admitted for a medication-related adverse event.

Analgesics (both opioid and non-opioid) were the major contributor to medication related adverse events in individuals without dementia. Antihypertensive medicines were the major contributor in patients with dementia. They concluded that medication-related adverse events are a concern for both individuals living with and without dementia.

The 2019 *Medicine Safety: Take Care* report³³ developed for the Pharmaceutical Society of Australia by the Quality Use of Medicines and Pharmacy Research Centre at the University of South Australia, states:

- 98% of people living in aged care facilities have at least one medication-related problem identified at review
- Up to 80% are prescribed potentially inappropriate medicine
- 17% of unplanned hospital admissions by people living in aged-care facilities are caused by an inappropriate medicine.

One of the tools used to measure patient exposure to medicines with anticholinergic and sedative activity is the Drug Burden Index. The Drug Burden Index was developed to measure the cumulative exposure to these medications in older adults and its impact on physical and cognitive function.³⁴ Higher Drug Burden Index scores have been associated with poorer physical and cognitive function in community-dwelling older people. Anticholinergic effects of medicines include dry mouth and related dental problems, blurred vision, tendency toward overheating, and in some cases, confusion and cognitive impairment.

In 2020, McDerby et al³⁵ reported on the impact of an on-site pharmacist on indicators of quality use of medicines in one RACF in the ACT. Outcomes used to indicate quality use of medicines were:

- Polypharmacy
- Drug Burden Index
- Antipsychotic and benzodiazepine use
- Hospital admission rates and length of stay
- Emergency Department presentation rates.

The proportion of residents with at least one hospitalisation in the preceding six months had reduced significantly at the six-month follow-up. There were no significant differences observed in any of the outcomes relating to:

- Antipsychotic and benzodiazepine use
- The median number of medicines used per resident
- The median Drug Burden Index scores.

The authors concluded that embedding a pharmacist may positively influence quality use of medicines indicators. However, further research with larger study populations across multiple sites is required to evaluate the effects and feasibility of on-site pharmacists in improving the quality use of medicines for residential aged care home residents.

Workforce

The Australian Institute of Health and Welfare reported that in 2016 there were around 154,000 direct care workers in the residential aged care sector.³⁶

The capacity, aptitude and capability of the aged care workforce is extremely important given the complexity of the work involved and the responsibility borne by those involved in providing care and support for older people.³⁷

The workforce serving the aged care sector comprises nurses, doctors, pharmacists, physiotherapists, podiatrists and other allied health professionals, along with personal care workers. The range of health care professionals involved is broad. Many of these will have an impact on the use of medicines in residential aged care facilities, and they will all need to engage with residents respecting the resident's preferences.

The interaction between residents, medical and pharmacy services outsourced by residential aged care facilities, and the nurses and care workers employed in residential aged care facilities is critical to the quality use of medicines for people living in RACFs.

In 2018, Australia's Aged Care Workforce Strategy³⁸ was released. Strategic action 3 seeks to reframe the qualifications and skills framework addressing competencies, and Strategic action 4 seeks to define new career pathways, including how the workforce is accredited. Strategic action 9 seeks to strengthen the interface between aged care and primary/acute care. Workforce competency gaps are identified within Strategic action 3, including for care workers in areas such as:

- Specialist knowledge in areas like oral health, diversity, mental health, medication management, dementia and end-of-life care
- Personal skills such as communication, assisted decision-making, diversional therapy, person-centred care and client relationships.

Workforce training and education is required to equip all working in the sector with the knowledge and skills to provide quality aged care. The scope of practice of care workers in RACFs does not include medication management. However, there is an opportunity to provide training about the challenges of administering medicines, and the need for monitoring the effects of medicines typically used in RACF residents

(for example, sedatives, antipsychotics, anticoagulants, diabetic medications and medicines with a high anticholinergic burden). Providing guidance to care workers on how to escalate concerns to registered nurses and enrolled nurses is likely to improve medication management and **person-centred care** for the resident. Recommendation 78 of the Final Report of the Royal Commission into Aged Care Quality and Safety supports mandatory minimum qualifications for personal care workers.

One of the challenges for providers of residential aged care services is the role performed by Assistants in Nursing (VET Certificate qualification) and aged care workers (VET Certificate qualification) in assisting residents with self-administration of medicines. Defined position descriptions covering rights and responsibilities regarding the administration of medicines are needed to provide role clarity. Ensuring clinical governance, supervision and training of Assistants in Nursing and personal care workers who may be assisting residents with medication administration requires appropriate support. Recommendation 77 of the Final Report of the Royal Commission into Aged Care Quality and Safety³⁹ supports the establishment of a registration scheme for people in roles such as 'personal care worker (health)' and Assistants in Nursing, along with mandatory minimum qualifications for these roles. Recommendation 79 supports a review of certificate-based courses for aged care.

The Australian College of Nursing emphasises the importance of nursing skill-mix and availability to deliver appropriate care to people with complex care needs in RACFs.⁴⁰ The delivery of evidence-based training from accredited resources such as NPS MedicineWise, the Commission and others targeted to registered nurses and enrolled nurses working in RACFs could be considered as part of Australian Health Practitioner Regulatory Authority requirements for registration through their annual Continuing Professional Development (CPD) requirements

The Federation of Ethnic Communities Councils of Australia advocates building cultural competence of health professionals and aged care workers who care for culturally and linguistically diverse (CALD) older Australians residing in aged care facilities. This is important and necessary for quality use of medicines and medicines safety in this vulnerable population.

Standards and guidelines for health professionals

The Australian Health Practitioner Regulatory Authority supports the National Boards of Australia for the following areas of practice for Australian health professionals:

- Aboriginal and Torres Strait Islander Health
- Chinese medicine
- Chiropractic
- Dental
- Medical
- Medical radiation practice
- Nursing and midwifery
- Occupational therapy
- Optometry
- Osteopathy
- Paramedicine
- Pharmacy
- Physiotherapy
- Podiatry
- Psychology.

Many of these National Boards have codes of conduct, guidelines and policies to provide guidance to the profession.

Many professional colleges and societies also have codes of conduct, guidelines and policies to provide guidance to the professions and for specific areas of professional practice, as the following examples illustrate.

The Royal Australian College of General Practitioners' aged care guidelines⁴¹ provide general practitioners and other health professionals including residential aged care nurses, with resources for delivering quality health care in clinical practice or residential aged care facilities.

In 2020, the Standard of practice in geriatric medicine for pharmacy services (Standard), which references and relies upon the Society of Hospital Pharmacists of Australia Standards of Practice for Clinical Pharmacy Services was published.⁴² The purpose of the Standard is to describe best practice provision of clinical pharmacy services for older people in hospitals, residential aged care facilities, transition care services and in the community.

In 2020, the Medicines Use Evaluation guideline was published.⁴³ The guideline is to provide pharmacists with a process to follow in order to implement quality, safety and cost-effectiveness improvement of medicines use within healthcare organisations. This is an integral part of quality use of medicines.

In 2020, the Pharmaceutical Society of Australia (PSA) revised its guidelines for pharmacists delivering Medication Management Review and Quality Use of Medicines services programs.⁴⁴ There is a single guideline focused on medication management reviews (including Home Medicines Reviews and Residential Medication Management Reviews). Medication reviews are addressed in more detail in [Topic 1](#), [Topic 3](#) and [Appendix 2](#). There is a separate PSA guideline on Quality Use of Medicines services. The Quality Use of Medicines (QUM) program is discussed in more detail in [Topic 3](#). Together these PSA guidelines aim to support pharmacists to deliver a high standard of professional pharmacist practice.

Health professionals practicing in residential aged care need to be aware of the Aged Care Quality Standards.

Aged care providers in Australia are expected to comply with the Aged Care Quality Standards⁴⁵, which are assessed and monitored by the Aged Care Quality and Safety Commission. The Aged Care Quality Standards require clinical care to be best practice and that high-prevalence or high-impact risks associated with the care of each resident, such as managing medications safely, are managed effectively. Aged care services are also required to have a clinical governance framework in place, where clinical care is provided. The Final Report of the Royal Commission into Aged care Quality and Safety has recommended a review of these standards.⁴⁶

Rural and remote areas

The Rural, Remote and Metropolitan Area (RRMA) classification divides Australia into three zones and seven classes:

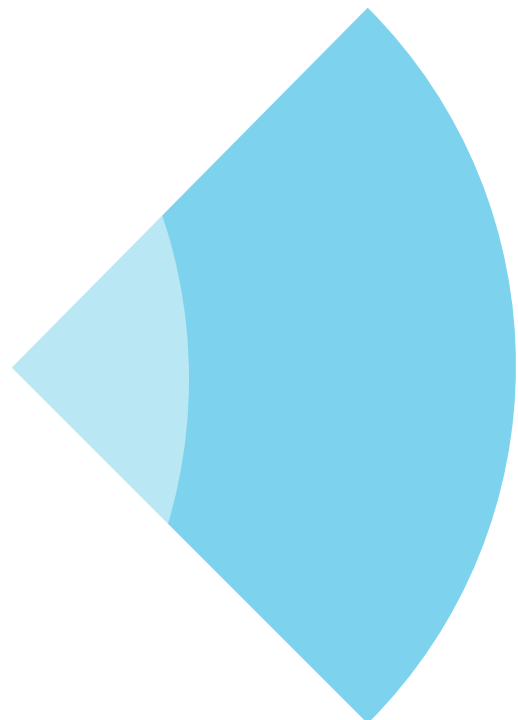
- Metropolitan zone (RRMA 1 and 2)
- Rural zone (RRMA 3 to 5)
- Remote zone (RRMA 6 and 7).

Remote zones present unique challenges in delivering equity of access to and compliance with Aged Care Quality Standards requiring timely and appropriate referrals to individuals, other organisations and providers of other care and services.

The degree of remoteness together with a range of socio-economic, geographic, climatic, demographic and cultural factors can have a significant impact on the provision and delivery of all aged care health services. Feedback received from the consultation process in relation to medication management, included:

- Large numbers of the ageing population being cared for in residential aged care facilities
- Shortages and turnover in RACF workforce and in aged care service providers interrupts continuity of care
- Issues recruiting, training and retaining RACF workforce
- Provision of patient advocacy and health literacy services to Aboriginal and Torres Strait Islander communities
- Timely access to specialist and pharmacist services and advice
- Logistical challenges delivering patient reviews, writing prescriptions, updating medication charts, and delivering medicines.

Responses received from the public consultation identified that in rural Australia, Quality Use of Medicines and medicines safety needs to be responsive to the diversity, complexities and circumstances of rural and remote communities, while being underpinned by the same robust governance and accountability as metropolitan Australia. High-level strategies to remove barriers to Quality Use of Medicines and medicines safety in rural and remote Australia are needed. These could include better integration with state health systems, use of telehealth to access expertise, and utilisation of 'Communities of Practice' similar to those initiated by PHNs to address information sharing during the COVID-19 pandemic.





Topic 1:

Polypharmacy

The definition of polypharmacy used in this Report is five or more medicines being used at the same time, including prescription, over-the-counter and complementary medicines.⁴⁷

Not every case of polypharmacy has negative consequences. However, older people are at risk of inappropriate polypharmacy as they have increased frailty and are more likely to have multiple chronic co-morbidities, each often treated with multiple medicines. Research has shown that older people taking five or more medicines are at higher risk of delirium and falls, independent of medication indications.⁴⁸

Australian experience

In 2019–20, 208.5 million Pharmaceutical Benefits Scheme subsidised prescriptions were dispensed. Australians are also high consumers of complementary and over-the-counter medicines.⁴⁹

Over-the-counter medicines, such as non-steroidal anti-inflammatory drugs used for pain and inflammation and some medicines for allergies and coughs may interact with prescribed medicines and have the potential to cause harm. Traditional and complementary medicines may also contribute to polypharmacy and have the potential to cause harm.⁵⁰

Prescribing in older adults is complicated by multimorbidity, polypharmacy, age-related physiological changes, which alter medicine pharmacokinetics and pharmacodynamics, and the involvement of multiple healthcare providers.⁵¹ Up to 91% of individuals in Australian residential aged care facilities are prescribed more than five concomitant medicines, and up to 74% of residents take more than nine medicines.⁵²

Prevalence of polypharmacy

A 2014 literature review⁵³, highlighted studies in the Australian residential aged care setting reporting up to 95% of residents being prescribed five or more medicines, with an average of 7–10 per resident. The authors identified another study of more than 2,000 residents at 41 residential aged care facilities, with approximately 25% of residents prescribed 10 medicines or more. In Australian hospitals, the average number of medicines prescribed for older inpatients is 9–10 per patient, with an average of five to seven medicine changes (addition, cessation and dose changes) made between admission and discharge.

A study published in 2015⁵⁴ concluded that polypharmacy is common among older people aged 70 years and older, admitted to general medical units of Australian hospitals, with no clinically meaningful change to the number or classification of medicines made by treating physicians.

A study published in 2019,⁵⁵ estimated the prevalence of polypharmacy in 2017 at 36.1% amongst Australians aged 70 years and older, up from 33.2% in 2006.

The results of a cross-sectional study in long-term care facilities in regional and rural Victoria published in 2017,⁵⁶ demonstrated prevalence of polypharmacy varied widely across facilities. The authors concluded that polypharmacy was associated with a range of medicines including antithrombotic, beta-blocking and lipid-modifying agents, antidepressants, antipsychotics, analgesics, proton-pump inhibitors and high-ceiling diuretics.

Potentially inappropriate medicines and deprescribing

The INSPIRED study⁵⁷ examined the association between Drug Burden Index, potentially inappropriate medicines and quality of life of individuals living in residential aged care facilities in Australia. The authors concluded that exposure to anticholinergics and sedatives and potentially inappropriate medicines occurred in over three-quarters of a population of older adults in residential care and was associated with a lower quality of life.

Another study⁵⁸ identified that older adults with dementia, who have similar co-morbidities to those without dementia, are at higher risk of experiencing medication-related harm. The authors suggest evidence-based strategies such as deprescribing, regular medication reviews, improving communication between health care providers and medication reconciliation between hospital and community settings could be implemented.

These studies demonstrate the important role deprescribing can play in reducing the number of medicines used in older people. A full understanding of barriers and enablers to changing prescriber behaviour has been identified as critical to the development of targeted interventions aimed at deprescribing potentially inappropriate medicines and reducing the risk of iatrogenic harm.⁵⁹

In a review published in 2020⁶⁰, deprescribing is defined as the process of withdrawing an inappropriate medicine, supervised by a healthcare professional with the goal of managing polypharmacy and improving outcomes, is increasingly recognised as part of good clinical care. The review advocates that deprescribing should be part of comprehensive medication management reviews with a holistic view of the patient and their medicines, including consideration of adherence, ability to manage medicines, appropriateness of dosing and undertreatment. The author concludes different tools may be beneficial to the clinician in different scenarios, for different patients.

The Veterans' MATES program within the Australian Government Department of Veterans' Affairs, published a guide to deprescribing in polypharmacy in 2018.⁶¹ They also publish a Therapeutic Brief on medicines as a contributor to falls and hip fractures in older people.⁶²

Medication reviews

Medication reviews provide opportunities for a comprehensive assessment to identify, resolve and prevent medication-related problems. These problems could be due to multiple chronic conditions, comorbidities, age, social circumstances, characteristics of their medicine, complexity of their medication regimen, change in patient goals, priorities and wishes or limited knowledge and skills to use their medicines effectively and safely⁶³ (Appendix 2).

In March 2020, the Pharmaceutical Society of Australia updated practice guidelines⁶⁴ for pharmacists on conducting comprehensive medication management reviews to incorporate current best practice when providing these services. The guidelines apply to comprehensive medication reviews regardless of practice setting and funding mechanisms. HMRS and RMMRs are types of medication management review programs that may be government funded. The main purpose of a comprehensive medication management review is to improve the appropriateness of medicines, reduce harm and improve health outcomes, while incorporating the patient's preferences, beliefs, attitudes and priorities. The guidelines include guidance on considerations when recommending and undertaking follow-up after the initial medication management review. The guidelines establish criteria to deliver high quality and safe reviews, including:

- Communicating with patients in a way that supports effective partnerships and shared decision making, to the extent that the patient chooses
- Developing strategies to improve cultural awareness and safety to meet the needs of Aboriginal and Torres Strait islander patients.

Older people's knowledge regarding the purpose of medicines has been positively associated with adherence. Ensuring quality and safe use of medicines for older Australians with a culturally and linguistically diverse (CALD) background requires pharmacists, GPs, nurses and allied health professionals who prescribe, dispense, store, administer, monitor and review medicines for CALD residents of aged care facilities do so in a culturally appropriate and informed way for this cohort. Interpreting services may need to be used to enable the consumer to have adequate information, understanding and conversation about their choices and consent. The Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islander People (QUMAX) Program supports services provided by Aboriginal Community Controlled Health Organisations (ACCHOs) and community pharmacists to support quality use of medicines services, reduce adverse events and associated hospital admissions or medical presentations.

A review of the Australian literature conducted for the Australian Commission on Safety and Quality in Health Care in 2021 did not identify any studies examining actual patient outcomes from medication management services for Aboriginal and Torres Strait Islander people. However, the literature review highlights the very important role that Aboriginal and Torres Strait Islander Health Workers and Aboriginal Health Services play in the delivering medication management services to Aboriginal and Torres Strait Islander people. In particular the studies reviewed indicated the key role they can play in collaboration with accredited pharmacists in ensuring medication review services can be delivered in a way that is culturally appropriate and culturally safe.

International experience

Internationally there has been a lot of work to explore the links between multi-morbidity (the co-existence of multiple health conditions), polypharmacy, and potentially inappropriate prescribing, as the following studies demonstrate.

Multimorbidity and polypharmacy

To respond to the serious challenge in health and social care caused by the rise of multimorbidity, a shift is required from a disease focus to a person-centred integrated care. In 2015, the European Commission started the Sustainable, integrated care models for multimorbidity: delivery, financing and performance (SELFIE) program. This European program aimed to improve patient-centred care for patients with multimorbidity. It proposed evidence-based, economically sustainable integrated chronic care models that stimulate cooperation across health and social care sectors, supported by appropriate financing/payment schemes.⁶⁴ The SELFIE framework in integrated care for multimorbidity can be applied to different stakeholders to guide development, implementation, description and evaluation.⁶⁵

Published in 2019, a systematic review⁶⁶ of studies conducted in a range of countries in Europe, the United States, Canada and Australia, identified the prevalence of polypharmacy ranged from 25% to 98% for people with dementia or cognitive impairment. The prevalence of potentially inappropriate prescribing for people with dementia ranged from 14% to 74%. The authors concluded that variations in potentially inappropriate prescribing across the 26 studies reviewed may be explained in part by variations in application of tools to identify potentially inappropriate prescribing.

A systematic guideline review⁶⁷ of the clinical management of patients with multimorbidity and polypharmacy published in 2018 highlighted that traditional disease-oriented guidelines can be inadequate. This complicates clinical decision-making. The authors concluded that the medication review must take into consideration both patient's conditions and treatments. They argue the production of separate guidelines addressing either multimorbidity or polypharmacy seemed arbitrary and combining them would relieve the burden for developers and users. They argue that an integrated approach to multimorbidity and polypharmacy should be considered for development of future medication review guidelines.

Management of inappropriate polypharmacy

In a study conducted in 2016 across eight European Union countries⁶⁸, researchers provided definitions for, and a rationale for the use of the terms 'appropriate polypharmacy' and 'inappropriate polypharmacy'. This reduced emphasis on the number of medicines a person is taking. Appropriate polypharmacy was defined as optimal prescribing of multiple medicines. Inappropriate polypharmacy was defined as prescribing multiple medicines where potential harms outweigh the potential benefits. However, the authors stated that the number of medicines does increase the likelihood of adverse drug events, medicine interactions, medication-related hospitalisations, and contributes to non-adherence and higher health care costs.

Following a similar theme, an international study published in 2018⁶⁹, discussed the correlation of risk of adverse drug events to:

- Very old age
- Multiple co-morbidities
- Dementia
- Frailty
- Limited life expectancy.

The study identified polypharmacy as the major contributor. The study points out that current models for development of clinical guidelines are based on evidence proven in younger/healthier adult populations using a single disease model. The study concluded that the application of these guidelines to older adults with multimorbidity, in whom testing has not been conducted, yields a different risk-benefit prospect and makes inappropriate medication use and polypharmacy inevitable. The authors recommend a shift from the current model that focuses on single conditions to one

that simultaneously considers multiple conditions and patient priorities. This approach reframes the clinician's role as a professional providing care, rather than a disease technician.

A study by researchers based in Belgium and Italy⁷⁰ published in 2016 examined the optimisation of medicines use in older people in the hospital setting. The authors identified screening of older patients at risk of medication-related problems and adverse drug reactions as the first critical step within a multi-step approach to medication management in older people. In order to reduce potentially inappropriate prescribing in this cohort, interventions such as pharmacist-led medication reviews, educational interventions, computerised decision support systems, and comprehensive geriatric assessment were highlighted. The authors found that when these interventions are combined within the context of a multidisciplinary team, positive effects on patients' health outcomes could be expected.

In the United Kingdom, a number of approaches for medicines management in care homes have been suggested:⁷¹

- A lead general practitioner (GP) for each care home
- Appropriate monitoring of residents taking high-risk medicines and all medication to be reviewed by a pharmacist
- One person (possibly a pharmacist) having overall responsibility for medicines used in the care home
- Constant review of the use and accuracy of medication administration documentation (lack of protocols and adequate staff training was identified as an issue)
- Prescribing medicines for administration at different times to ease busy morning medicine rounds which can often be interrupted
- Monitoring of omitted doses and medication administration systems
- Electronic administration systems
- Prescribing audits.

Deprescribing

In the United Kingdom in 2018, an editorial in the *Pharmaceutical Journal* of the Royal Pharmaceutical Society⁷² announced that 'deprescribing: the fightback against polypharmacy had begun'. With polypharmacy among older people at an all-time high, it highlighted renewed focus on withdrawing inappropriate medicines. It states that evidence-based guidelines are needed to overcome barriers to deprescribing. The editorial canvassed opinion from practitioners and researchers from the UK, Canada, and Australia.

A study⁷³ published in 2019 conducted in Switzerland explored attitudes, beliefs, and concerns towards deprescribing among older, multi-morbid patients with polypharmacy who chose not to pursue at least one of their GP's offers to deprescribe. It identified patient involvement in deprescribing decisions and coordination of care as key issues for deprescribing among older multi-morbid patients with polypharmacy.

In Canada, the Institute for Safe Medication Practices advises that deprescribing should:

- Be done in partnership with the patient
- Use validated processes, algorithms and tools to help incorporate deprescribing into clinical practice
- Require close, consistent monitoring of the patient to ensure that the medication taper or discontinuation is both safe and effective.⁷⁴

The American Geriatrics Society Beers Criteria[®] for Potentially Inappropriate Medication Use in Older Adults are widely used by clinicians, educators, researchers, healthcare administrators and regulators. Since 2011, the American Geriatric Society has been the steward of the criteria and has produced updates on a three-year cycle. The most recent update was published in 2019.⁷⁵ This guideline for health professionals aims to help improve safety of prescribing medicines for older adults.

Another screening tool developed to provide explicit, evidence-based rules of avoidance of commonly encountered instances of potentially inappropriate prescribing and potential prescribing omissions is the STOPP (Screening Tool of Older Persons' Prescriptions)/START (Screening Tool to Alert to Right Treatment) tool. Applying STOPP/START criteria improves clinical outcomes in multi-morbid older people.⁷⁶

A study from Finland published in 2019,⁷⁷ reported on collaborative medication review practices after 10 years of development. It found that different medication reviews in varying settings were available and in routine use. The majority were comprehensive medication reviews for primary outpatient care and for older adults. The authors concluded that even though practices might benefit from national standardisation, flexibility in their customisation according to context, medical and patient needs, and available resources is important.

Several studies in Germany have highlighted the importance of medication reconciliation. In one study⁷⁸ interprofessional collaboration increased medication safety, while another identified high discrepancy between medicines used at home by the patient, and the medicines documented by the primary care physician.⁷⁹ The authors of the second study concluded that interprofessional collaboration could reveal and solve discrepancies in the patient's list of medicines and improve medication safety.

Considerations

In patients with multiple co-morbidities, polypharmacy may sometimes be rational, based on individual disease treatment protocols. However age-related physiological changes altering the pharmacokinetics and pharmacodynamics of medicines, complicate the prescribing of medicines in older people. These, and the involvement of multiple healthcare providers, increase the risk of potentially inappropriate medicines continuing to be prescribed.

The [Medicare Benefits Schedule for Item 903](#) sets out the patient eligibility, regulatory requirements, claiming process and other guidance for GPs providing the Residential Medication Management Review (RMMR) service (Appendix 2).

For those living in residential aged care facilities regular assessment of their medicines via an RMMR provides the opportunity to assess and address medicine usage, appropriateness, adherence, and adverse events.

Discussion points

Best practice

Best practice is outlined in the [Guiding principles for medication management in residential aged care facilities](#) (2012), and ensures the establishment and empowerment of a multidisciplinary Medication Advisory Committee to support the safe and effective management and Quality Use of Medicines in the facility. A 2020 study⁸⁰ in Victoria concluded that opportunities exist to improve the composition and structure, proactive identification and response to emerging issues, and systems for staff, resident and family member/carer training. There is an opportunity to strengthen governance, composition and operation of Medication Advisory Committees in overseeing medication management and Quality Use of Medicine in RACFs.

Interdisciplinary case conferencing involving GP, accredited pharmacist, supply pharmacist, RACF registered nurse, and as needed medical specialists, and allied health practitioners meeting face-to-face with the resident has been shown to achieve reductions in unnecessary medicines. In rural and remote areas telehealth can provide access to multidisciplinary care. The integration of this into the resident's care plan, with clear governance protocols and clinical guidance, has the potential to transform Quality Use of Medicine and medicines safety for residents of regional, rural and remote RACFs.

Feedback from the public consultation supported all consumers entering RACFs should have an RMMR performed at the time of admission or readmission following a return from hospital to:

- Ensure that prescribed medicines are recorded including their reason for use and end date identified – for example high-risk medicines such as antimicrobials, opioid analgesics or antipsychotics
- Any new potential problems are identified
- Medication changes are recorded
- Communicated to the interdisciplinary team.

This is consistent with Recommendation 64 of the Final report of the Royal Commission into Aged Care Quality and safety.

Best practice RMMRs incorporate gathered information, provide assessment on prescribing/dosage adjustment/re-prescribing/deprescribing, discussion with the resident and/or their family member/carer and communicate recommendations on monitoring and evaluation to the resident and treating health care team. This is coordinated through the patient's GP with the consent of the resident and/or their family member/carer.

At the same time, the public consultation revealed there is a need for higher quality RMMR reports. There is an opportunity to develop a national guideline for presentation of RMMR reports. RMMR reports should comprehensively capture relevant information and data and provide reasons and recommendations to inform decision-making between the GP and the resident. The [Guidelines for comprehensive medication management reviews](#) developed by the Pharmaceutical Society of Australia in 2020 should be the foundation of the framework for the national guideline.

There may be a need to support interactions between accredited pharmacists conducting medication management reviews and GPs to action RMMR reports. Feedback received from the public consultation included suggestions to examine the role practice improvement incentives could play in improving the quality of the RMMR process and the implementation of actions recommended through the RMMR process. Recommendation 64 from the Final Report of the Royal Commission into Aged Care Quality and Safety supports increased access to medication management reviews, along with monitoring quality and consistency of medication management reviews.

System-wide challenges

The role of GPs in the management of patients residing in RACFs is well established. Better integration of these patients into Chronic Disease Management initiatives managed by GPs, and Health Pathways promoted by PHNs has the potential to improve care. The role of PHNs in regional, rural and remote Australia in facilitating access to and strengthening lines of communication amongst the interdisciplinary team managing medicines in the RACF needs to be defined. Health system navigation, complex medication regimes, medication adherence, medication errors, and access to a skilled workforce can be more challenging in rural and remote areas due to lower population, geographic isolation, service isolation, and socio-economic and cultural variations.

The potential for digital and e-health solutions in residential aged care facilities is widely acknowledged, as are the significant improvements required in the interoperability of acute care systems, primary care systems, aged care systems and My Health Record to deliver a seamless connected system with all providers having access to the same patient records.

Best practice management of polypharmacy in RACF will require the recruitment and retention of well-trained staff including registered nurses, enrolled nurses, assistants in nursing and care workers. Clear definitions on the scope of practice are needed for those not regulated by the Australian Health Practitioner Regulatory Agency (AHPRA). Training of care workers in aspects of medication management, such as side effects and adverse events of commonly prescribed medicines used in RACF, with guidance on where and how to escalate issues, should be introduced. This training should be mandated.

The 7th Community Pharmacy Agreement (7th CPA) continues support for pharmacists to deliver [Quality Use of Medicines \(QUM\) services](#) in residential aged care facilities. These aim to improve medicine safety by supporting residential aged care facilities to safely manage medicines, and improve medicine management practices and procedures within Australian Government-funded RACFs. QUM services revolve around three groups of activities:

- Education and training
- Clinical governance
- Resident-level activities.

The solutions available in the Quality Use of Medicines services program need to be embedded in guidance that could be provided around the Aged Care Quality Standards and adhered to by RACFs.

Current process gaps

A significant gap in the current process is prescriber inertia due to fear of negative consequences of changing medicines, particularly amongst prescribers reluctant to make prescribing changes outside of their specialty.⁸¹ A qualitative study found Australian RACF residents and their relatives' willingness to accept medication changes was dependent on the GP, who is a central trusted figure.⁸² Improved training and education, and clarity of expectation to reduce prescriber inertia is needed to ensure prescribers are confident in routinely reviewing and optimising their patient's medicines. This will facilitate patient and their family member/carer involvement in decisions regarding the possibility of harm or benefit of medicines and discussions about when it might be appropriate to discontinue medicines.

An opportunity exists to improve the Quality Use of Medicines in aged care by strengthening the importance of communicating for safety. The principle articulated in the National Safety and Quality Health Service (NSQHS) [Communicating for Safety Standard](#) may provide a model able to be adapted for use in residential aged care. This could include communicating when deterioration occurs, communications with patients and their family members/carers, and between clinicians, and at transitions of care. This could be supported by including national guidelines for the presentation of handover/transfer summaries from and to residential aged care facilities, and guidance on who should receive them, how and when. [The National guidelines for on-screen presentation of discharge summaries](#) published by the Commission in 2017, specify the sequence, layout and format of the core elements of hospital discharge summaries, as displayed in clinical information systems. The guidelines were developed through extensive research, consultation and iterative testing with more than 70 clinicians. These should be the foundation of a national guideline.

The SHPA Standard of Practice for Geriatric Medicine Pharmacy Services⁸³ provides guidance on when and how frequently services necessary to decrease the risk of medication-related harm in older people should be delivered in the acute aged care, subacute aged care, residential aged care and community aged care settings.

Non-pharmacological interventions, where appropriate, should be considered and promoted as an alternative or adjunct to medicines. The importance of this approach is emphasised in older people with chronic conditions, and co-morbidities who are prescribed multiple medicines. For example, physical activity is key in managing pain and improving quality of life for residents.⁸⁴ Physical exercise plays a part in reducing stress and depression and may also promote a normal day-night routine, improve mood and increase social participation.⁸⁵

Feedback from the public consultation identified challenges coordinating medicine management services in residential aged care settings. Residential aged care facilities may, in practice, have contract arrangements in place with as many as four different pharmacy service providers for functions such as:

- Supply of medicines and medicines management systems such as Dose Administration Aids (DAAs) – contracted pharmacy service provider may not be local to the RACF
- Urgent medicine supply such as antimicrobials, opioid analgesics for palliative care, and emergency changes to DAAs – contracted pharmacy service provider usually local to the RACF

- Residential Medication Management Reviews – performed by a pharmacist accredited to conduct RMMR selected by GP
- Quality Use of Medicines support – provided by a registered pharmacist or company selected by residential aged care provider.

These contract arrangements can be an impediment to patient choice for supply of their medicines. They can also be an impediment to individualisation of QUM needs at individual locations. While the responsibility of each pharmacy service provider is clear, there is potential for lack of coordination, fragmentation, lack of consistency, lack of responding to changing facility needs, overlaps and gaps in service delivery. Taken together, these create the potential for inappropriate polypharmacy and an increase in medication-related harm.

Monitoring and compliance activities in relation to programs funded under the 7th Community Pharmacy Agreement, are undertaken by the Pharmacy Programs Administrator (PPA) (Appendix 2). Providers of RMMRs must retain all records for seven years to demonstrate that they have complied with the General Terms and the Program Rules of 7th Community Pharmacy Agreement. Use of a national guideline for the on-screen presentation of RMMR reports (retained in an electronic patient record), would facilitate data capture, analysis, monitoring and auditing. Further, it would add to the evidence base for RMMRs.

It has been suggested that an on-site pharmacist embedded in residential aged care facilities could influence Quality Use of Medicines. One Australian pilot study³⁶ showed a reduction in the proportion of residents who had at least one hospital admission over the six month study. The authors concluded that further research is needed to expand on these findings.

From 2019 to 2021 the Aged Care Quality and Safety Commission has worked with accredited pharmacists to provide tailored education and information in residential aged care services in remote and very remote areas of Australia. The project records input from aged care services, community pharmacists, aged care consumers and prescribers on barriers and challenges to safe medication use in remote and very remote aged care settings. This will inform future work of the Aged Care Quality and Safety Commission in response to identified issues in a very diverse sector.

Monitoring progress

Monitoring progress towards quality and safe use of medicines in residents of aged care facilities taking five or more medicines per day who are in hospital, centres on medication reviews by clinical pharmacists. The medication review prior to discharge should address the number of medicines, changes to medicines and the reasons why, and medication-related issues arising during the hospital admission. Establishing and publicly reporting on national quality indicators for polypharmacy should add focus and responsibility for medication management in patients being discharged from hospital back to residential aged care facilities. Added to the [*National Quality Use of Medicines Indicators for Australian Hospitals*](#) (2014) set, these re-inforce the NSQHS Standards – Medication Safety Standard, Action 4.10 Medication review. In 2020–21 New South Wales Therapeutic Advisory Group has undertaken a review of the National Quality Use of Medicines Indicators for Australian Hospitals. In February 2021 Individual Polypharmacy QUM Indicators and Resources were added.

The Aged Care Quality and Safety Commission commenced the [*National Aged Care Mandatory Quality Indicator Program*](#) on 1 July 2019.

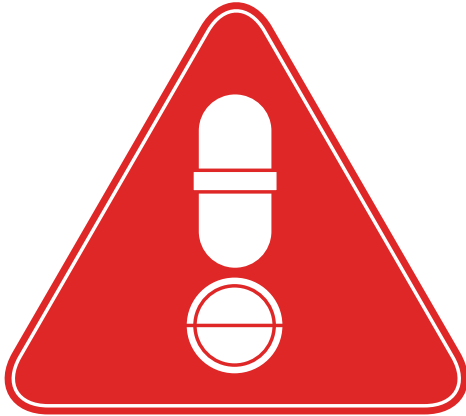
From 1 July 2021 new quality indicators relating to medication management and falls and major injury will be added, as well as updated quality indicators for pressure injuries, physical restraint and unplanned weight loss. For medication management the quality indicators will be:

- Percentage of care recipients who were prescribed nine or more medications
- Percentage of care recipients who received antipsychotic medications.

Opportunities to measure impact of actions designed to reduce inappropriate polypharmacy in RACFs may include:

- Measuring the percentage of older hospital patients taking five or more regular medicines per day that have an annual medication review at the RACF (including an assessment of the risk of medication-related confusion or falls)
- Measuring the number of unnecessary or unwanted medicines that have been ceased in hospital prior to discharge to a RACF
- Requiring the quarterly reporting of the percentage of aged care residents receiving five to eight medicines, and nine or more medicines daily through the National Aged Care Mandatory Quality Indicator Program (QI Program) to inform quality improvement

- Publishing and benchmarking medication management statistics for residential aged care services with clear explanation of their significance and context to help older people and their families make informed choices when selecting their providers of aged care services
- Establishing and measuring use of Drug Burden Index to quantify risks of confusion, falls, and oral health complications in discharge summaries for hospital patients returning to residential aged care facilities
- Measuring prevalence of hospital-based medication review in older patients at high risk of medication-related harm
- Measuring number of residents returning to residential aged care facilities from hospital whose complete clinical handover summary and medication plan is communicated with their consent to the RACF nursing staff, GP and pharmacists within 24, 48 or 72 hours
- Measuring number of residents returning to residential aged care facilities from hospital who receive a RMMR by an accredited pharmacist within 7, 14, 28 days
- Measuring medications that are started in hospital for short-term issues which are continued indefinitely on and post discharge
- Measuring medications which have been started without discussion with or consent of the patient/resident
- Percentage of residential aged care recipients admitted to hospital appropriately assessed for risk of inappropriate polypharmacy
- Percentage of residential aged care recipients admitted to hospital appropriately assessed for risk of medication-related falls
- Percentage of residential aged care recipients admitted to hospital appropriately assessed for medication-related impairment of cognitive and/or physical function.



Topic 2:

Inappropriate use of antipsychotics

In Australia, psychotropic medicines are defined as medicines capable of affecting the mind, emotions and behaviour. The three main classes of psychotropic medicines prescribed are:

- Antidepressants
- Anxiolytic/hypnotics (mostly benzodiazepines to manage anxiety and insomnia)
- Antipsychotics.

Other psychotropic classes include anticonvulsants and stimulants.⁸⁶

Some studies review the use of psychotropic medicines, while others examine the use of antipsychotic medicines. The focus in this Report is antipsychotics.

Australian experience

The Quality of Care Principles 2014 made under section 96-1 of the *Aged Care Act 1997*, state that an approved provider must not use a chemical restraint in relation to a consumer unless a medical practitioner or nurse practitioner has assessed the consumer as requiring restraint, has prescribed the medication involved in the restraint, recorded the decision in the care plan, and the consumer's representative is informed before the restraint is used if it is practicable to do so. These Principles are currently under review.

The Aged Care Quality and Safety Commission commenced the *National Aged Care Mandatory Quality Indicator Program (QI Program)* on 1 July 2019. It became compulsory, requiring all Commonwealth subsidised residential aged care services to report on quality indicators across three clinical areas:

- Pressure injuries
- Physical restraint
- Unplanned weight loss.

The QI program will expand from 1 July 2021 to include updates to existing quality indicators and the following new quality indicators:

- Falls and major injury
- Medication management.

Reports on the quality indicators are published quarterly on the *GEN Aged Care Data* website by the Australian Institute of Health and Welfare. These can provide consumers with useful information on the delivery of quality aged care.

The Aged Care Quality Standards require that clinical care be best practice and supported by a clinical governance framework that minimises the use of restraint.⁸⁷

The Australian Government 2019–20 budget provided for the establishment of a new unit of clinical pharmacists within the Aged Care Quality and Safety Commission that will work directly with residential aged care providers to educate them around best practice use of medicines to improve medicine safety across the country.⁸⁸ The clinical pharmacy unit has focused on education around appropriate antipsychotic and other sedative use.

The Aged Care Clinical Advisory Committee established in January 2019, recommended options to reduce the inappropriate use of chemical restraint in residential aged care. Options already implemented are:

- From 1 January 2020 an additional Pharmaceutical Benefits Scheme (PBS) authority code for repeat prescriptions of the antipsychotic risperidone after an initial 12-week period was established
- In December 2019, the Chief Medical Officer wrote to 28,500 prescribers who had been identified as prescribing PBS medications to residents of a residential aged care service. The letter and accompanying fact sheet *Six steps for safe prescribing* (Appendix 3) provided information and resources that support the appropriate management of dementia in a residential aged care setting.

The Commission has published extensively on the use of antipsychotic medicines where non-pharmacological approaches have failed to manage behavioural and psychological symptoms of dementia, notably in the *Third Australian Atlas of Healthcare Variation* (2018).⁸⁹ The Comprehensive Care Standard within the National Safety and Quality Health Service Standards includes Action 5.35 – Minimising restrictive practices: restraint.⁹⁰

In 2018 the Commission published Reducing inappropriate use of antipsychotics in people with behavioural and psychological symptoms of dementia (BPSD) infographic (Appendix 4).

Recommendation 17 of the Final Report of the Royal Commission into Aged Care Quality and Safety published on 1 March 2021, recommended strengthening of regulation of restraint in aged care facilities.

Dementia – incidence and treatments

It is estimated that in 2020 there are between 400,000 and 459,000 Australians with dementia.⁹¹ In 2017, dementia was the second leading cause of death. Hospitalisation data for dementia patients show that nine out of 10 dementia hospitalisations involve at least one overnight stay, and that 71% of dementia hospitalisations are of the highest clinical complexity.⁹²

Dementia care generally focuses on alleviating the behavioural and psychological symptoms of the condition through non-pharmacological therapies and support or through various medicines.⁹³

Nonpharmacological interventions targeted at Australians with the behavioural and psychological symptoms of dementia include:

- Exercise
- Massage
- Sensory-based therapy
- Individualised recreation therapy.

Psychological therapies such as validation therapy and reminiscing may help people with dementia feel supported and may build trust. Music therapy may help people with dementia remember old familiar songs than can unlock memories and feelings.⁹⁴

Outside of their use to treat psychoses, in older adults antipsychotic medicines are also used where non-pharmacological approaches have failed to manage behavioural and psychological symptoms of dementia.⁹⁵

The Royal Australian and New Zealand College of Psychiatrists Professional Practice Guideline⁹⁶ supports person-centred, psychosocial, multidisciplinary treatment plans as a first-line approach for the management of behavioural and psychological symptoms of dementia. The Guideline emphasises that it is not up to the clinician to make the final decision on treatment, but rather the clinician should assist the patient and their family members/carers to do so by providing a full explanation of the possibility of harms and the possibility of benefits of the relevant treatment. Indications for the use of antipsychotic medications in patients with dementia⁹⁶ include:

- Severe agitation and aggression associated with the risk of harm
- Delusions and hallucinations
- Comorbid pre-existing mental health conditions.

Choosing Wisely Australia and the Australian and New Zealand Society for Geriatric Medicine make five recommendations for the medical care of older people on use of benzodiazepines, medication regimen reviews, physical restraint, dementia and bacteriuria.⁹⁷ Specifically, three recommendations inform prescribing in older people with dementia or delirium:

- Do not use antipsychotics as the first choice to treat behavioural and psychological symptoms of dementia
- Do not prescribe benzodiazepines or other sedative-hypnotics to older adults as first choice for insomnia, agitation or delirium
- Do not use physical restraints to manage behavioural symptoms of hospitalised older adults with delirium except as a last resort.

Topic 2: Inappropriate use of antipsychotics

A fourth reinforces the need to optimise the prescribing of medicines and improve the quality of life in older adults with polypharmacy:

- Do not prescribe medicines without conducting a medication regimen review.

Only one oral antipsychotic is registered in Australia by the Therapeutic Goods Administration for behavioural and psychological symptoms of dementia and listed on the Pharmaceutical Benefits Scheme – risperidone. There are strict conditions attached to the Pharmaceutical Benefits Scheme prescribing of risperidone:⁹⁸

- It is to be used in people with dementia only of the Alzheimer type
- Who are unresponsive to non-pharmacological methods of treatment
- Treatment duration is limited to twelve weeks.

A number of Australian studies have examined the impact of interventions on the use of antipsychotic medicines to control behavioural and psychological symptoms of dementia.

The RedUse study⁹⁹ assessed the impact of multi-strategic, interdisciplinary intervention on antipsychotic and benzodiazepine prescribing in 150 residential aged care facilities. During the six month intervention, the proportion of 2,195 residents prescribed antipsychotics declined from 21.6% to 18.9%, and the proportion of 2,247 residents regularly prescribed benzodiazepines from 22.2% to 17.6%. For 39% of residents prescribed antipsychotics and benzodiazepines at baseline, these agents had been ceased or their doses reduced by six months. The authors concluded that the RedUse program should be made available to all Australian residential aged care facilities to reduce inappropriate prescribing of psychotropic medicines.

A study published in 2019¹⁰⁰ analysed use of psychotropic medicines in residents from 150 residential aged care residential facilities distributed across Australia. Of the eligible 11,368 residents, nearly two-thirds (61%) were taking psychotropic agents regularly, with over 22% using antipsychotics and 22% using benzodiazepines. Over 11% of antipsychotics and over 30% of benzodiazepines were charted 'as required'. It concluded that effective interventions to reduce the continued reliance on psychotropic management, in conjunction with active promotion on non-pharmacological strategies were urgently required.

The Halting Antipsychotic use in Long-Term care (HALT) deprescribing trial¹⁰¹ was successful at reducing antipsychotic use in 23 aged care facilities in New South Wales. The program included:

- Antipsychotic withdrawal following an individualised, step-wise deprescribing protocol
- Academic detailing of GPs and pharmacists
- A continuing professional development module
- A train-the-trainer model for nurse champions who trained residential care staff, and attended a three-day workshop on person-centred, non-pharmacological management of behavioural and psychological symptoms of dementia.

However, after 12 months, 19% of participants had their antipsychotics recommenced or never reached a dose of zero. The authors concluded that nursing staff are the key drivers of abandoned efforts to deprescribe antipsychotics in people with dementia in long-term care. Perceived increases in agitated or aggressive behaviour were the most common reason for recommencing, but such increases were not corroborated by objective measures.

A study published in 2019¹⁰² examined the duration of antipsychotic use in 5,825 residents with dementia in 68 residential aged care facilities across New South Wales and the ACT in the period spanning 2014 to 2017. The annual prevalence of antipsychotic use ranged from 27.6% to 32.6%. Overall 65% of people who used antipsychotics did so for more than 3 months even without psychiatric co-morbidities. The authors concluded the results were broadly consistent with the few longitudinal studies of duration conducted in Australia, the United States, Finland and Sweden. While acknowledging that medication management in residential aged care facilities is complex, the authors suggested that prescribers, despite restrictions on PBS subsidisation, are not following recommendations for short-term use of antipsychotics for BPSD.

Due to ongoing concerns that antipsychotic medicines are being prescribed inappropriately, the *Third Australian Atlas of Healthcare Variation* (2018) made eight recommendations on this topic.¹⁰³ One of the key recommendations was that prescribers use antipsychotic medicines for people 65 years and over as a form of restrictive practice only as a last resort, and not until alternative strategies have been considered, and conditions of informed consent, dosage frequency and medication review are met. As discussed previously, antipsychotics should only be used when the person is severely agitated or aggressive or at risk of harming themselves or others.

International experience

A review of non-pharmacological management of behavioural and psychological symptoms of dementia¹⁰⁴ was published in 2017 by researchers in Canada. The authors recommended that non-pharmacological interventions should include:

- Consideration of both the physical and the social environment
- Ongoing education/training and support for care providers
- Individualised approaches that promote self-determination and continued opportunities for meaning and purpose for persons with dementia.

A search of systematic and other literature reviews by researchers in the United States published in 2018¹⁰⁵ identified non-pharmacological practices to address behavioural and psychological symptoms of dementia including:

- Sensory practices (aromatherapy, massage, multi-sensory stimulation, bright light therapy)
- Psychosocial practices (validation therapy, reminiscence therapy, music therapy, pet therapy, meaningful activities)
- Structured care protocols (bathing, mouth care).

It concluded most practices are acceptable, have no harmful effects, and require minimal to moderate investment.

A study of medication-related quality of care for Australian aged care residents published in 2019¹⁰⁶ made comparisons with studies published in the United Kingdom, Belgium, the United States and Canada. It concluded activities in this population should be targeted at monitoring and reducing exposure to antipsychotics and benzodiazepines. The authors concluded that the similarity of suboptimal medication-related quality of care between Australia and the other countries presents an opportunity for an internationally collaborative approach to improving care for aged care residents.

Considerations

Changing practice around the use of antipsychotics for the management of behavioural and psychological symptoms of dementia for people living in residential aged care facilities remains challenging. A multi-pronged approach involving regulatory and non-regulatory measures has been implemented by the Australian Government to minimise inappropriate use of restraint.

Limited time and resources, and high staff turnover, are identified consistently by nursing staff and care workers as barriers to implementing non-pharmacological interventions for people with dementia living in residential aged care facilities.

Even programs that are initially successful, such as those in the HALT deprescribing study, encounter barriers to sustainability. This demonstrates the task is:

- Ongoing
- Requires continuous leadership in terms of governance and program champions
- Must be the subject of regular training and continuing professional development
- Must be implemented and integrated into daily practice in residential aged care facilities.

Multidisciplinary collaboration and engagement with family members/carers/representatives is essential to obtain consent and guide potential strategies for deprescribing.

The completion of longer-term studies to examine the sustainability of these programs may be warranted.



Discussion points

Best practice

Best practice is to follow appropriate guidelines managing patients with BPSD at risk of harming themselves and others, including regular review by geriatricians in consultation with family and/or carers to ensure person-centered information and informed consent is obtained. More specifically:

- Find cause of behaviour first
- Try non-pharmacological interventions first and continue to explore and use these measures
- Try simple analgesia (e.g. paracetamol) before going to antipsychotics
- Once decision to prescribe antipsychotics is made, ensure informed consent, warn about adverse drug events, and start low, go slow
- Review within six weeks, and try reducing within 12 weeks or earlier if over sedated
- Be aware that nursing staff and families/ carers will be concerned that behavioural and psychotic symptoms of dementia will re-emerge during deprescribing, despite evidence that they seldom do.

It is suggested that there is significant PBS prescribing of antipsychotics and sedatives to manage RACF residents experiencing behavioural and psychological symptoms of dementia. While the PBS limits risperidone prescribing to 12 weeks, if the prescriber simply re-diagnoses the resident with schizophrenia a streamlined authority code ensures supply. Similarly, other medicines such as quetiapine can also be prescribed as substitute. The use of other sedating medicines, such as benzodiazepines, anticonvulsants, opioid analgesics, antihistamines, and sedating antidepressants, needs to be monitored to ensure inappropriate prescribing of these medicines is not occurring.

The success of program structures involving multiple strategies and interdisciplinary deprescribing interventions in residential aged care facilities indicates potential for national expansion:

- Starting with awareness raising by dissemination of local prescribing data (extracted from supply pharmacy dispense system)
- Reinforced by education and training of residential aged care staff
- Followed by interdisciplinary review.

Formation and effective use of collaborative teams, a reinvigoration of the Medicines Advisory Committee purpose as described earlier, staff education and engagement and empowering of residents/family members/carers is likely to lead to optimal resident outcomes and improve facility-wide medicine safety and Quality Use of Medicine practices.

System-wide challenges

The biggest challenge across the system consistently identified is having the workforce with appropriate training, skills and experience to manage the behavioural and psychological symptoms of dementia by non-pharmacological methods in the first instance. The availability of, and access to, geriatricians and psycho-geriatricians is a system-wide challenge.

There is a need for standardisation of definitions, terminology and language used in the aged care sector around the usage of antipsychotics as a restrictive practice or chemical restraint. Education and training to distinguish between appropriate and inappropriate use of restrictive practices and antipsychotics is required. This has the potential to reduce confusion amongst providers, facilitate better documentation and recording, and provide source data for analysis at the RACF level and aggregation and analysis at the national level.

The development of nationally consistent guidelines for the appropriate use of psychotropic medications in people living with dementia and in residential aged care is required. The results of the work undertaken in guideline development by the Centre for Medicine Use and Safety, Monash University, supported by the Dementia Centre for Research Collaboration, and funded through National Health and Medical Research Council is eagerly awaited.

Stakeholder consultations identified strong support for a common position on the use of antipsychotics. The position could then be adopted by the Aged Care Quality and Safety Commission (ACQSC) in collaboration with the Commission. This is consistent with potential amendments to the Quality of Care Principles 2014 (Cth) concerning the use of restrictive practices in residential aged care in Recommendation 17 of the Final Report of the Royal Commission into Aged Care Quality and Safety.¹⁰⁷ Recommendation 65 of the Final Report supports restricted initial prescribing of antipsychotics in RACFs to psychiatrists and geriatricians.

Current process gaps

There are a number of gaps in current processes that inhibit achievement of positive outcomes for residents who are prescribed antipsychotics. These include access to, and the number of experienced and skilled staff in residential aged care facilities – registered nurses, and enrolled nurses trained in the management of behavioural and psychological symptoms of dementia.

There is limited access to allied health services to assist in the delivery of non-pharmacological interventions to prevent and manage behavioural and psychological symptoms of dementia.

Feedback from the public consultation indicates lifestyle staff, exercise physiologists, physiotherapists, music and creative therapists, psychologists, speech pathologists, audiologists and other allied health professionals play roles in prevention and non-pharmacological interventions.

The need for training for all RACF staff in person-centred care, and the wide application and implementation of dynamic, responsive Individual Resident Care Plans developed collaboratively with the resident and family members/carers that go beyond health issues to address boredom, loneliness and quality of life, were identified in responses from stakeholders.

Exploration of the role PHNs could fulfill in educating GPs in the use of antipsychotics in the management of behavioural and psychological symptoms of dementia is warranted. Other potential areas include:

- Utilising allied health professionals to advise on non-pharmacological strategies to manage behavioural and psychological symptoms of dementia¹⁰⁸
- Providing access to allied health practitioners, nurse practitioners and pharmacists to assist GPs in treatment choices.

For patients discharged from hospital back to RACFs who leave hospital on antipsychotics, medication management plans issued by the discharging hospital must include recommendations for duration of therapy, timing of a review of the ongoing need and side effects, and by whom it must be performed.

Monitoring progress

Implementation of mandatory training for all RACF staff is required, focusing on non-pharmacological interventions. Raising awareness amongst the accredited pharmacists, the nurses and the RACF staff of the potential for deprescribing and cessation of antipsychotics used for longer than 12 weeks in residents with the behavioural and psychological symptoms of dementia, will aid discussions about medication management with the resident's GP.

Opportunities then present to measure impact of initiatives on the prescribing of antipsychotics in residential aged care facilities. These may include:

- Measuring the number of staff receiving training and re-training
- Measuring the number of residents with the behavioural and psychological symptoms of dementia who
 - are taking antipsychotics
 - have commenced tapering antipsychotics
 - have ceased antipsychotics
- Measuring the percentage of patients with dementia admitted to hospital from RACFs who have been dispensed antipsychotics for longer than 12 weeks
- Measuring the number of residents with the behavioural and psychological symptoms of dementia who have current up to date behaviour plans in place
- Measuring the use of other psychotropic agents with sedative properties to ensure that substitution of antipsychotics with other agents does not occur
- Assessing the opportunities for meaningful and pleasurable interactions and activities available to each resident daily which support and enhance their quality of life to reduce behavioural responses.

Regular reporting and publication of these statistics with clear explanation of their significance and context could inform older Australians, their family members/carers making decisions about where older Australians could reside. Recommendation 24 of the Final Report of the Royal Commission into Aged Care Safety and Quality supports the establishment of star ratings of performance information for people seeking residential aged care.



Topic 3: Transitions of care

Transitions of care are associated with risk of medication-related harm.

Transitions of care occur between:

- Care settings (e.g. primary care to acute care, aged care to acute care)
- Health care locations (e.g. hospital ward to rehabilitation facility)
- Providers (e.g. specialist medical practitioner to general practitioner)
- Levels of care (e.g. Emergency department to hospital ward)
- Care needs (e.g. hospital ward to intensive care ward).

Australian experience

The moving from one care setting to another, particularly for patients with complex and chronic care needs, opens the potential for mistakes, oversights and misunderstandings. Too often, a marked absence of vital information that should flow from the hospital to the receiving carer is apparent.¹⁰⁹

In a study published in 2013¹¹⁰, professional and organisational boundaries, communication and information sharing were identified as key challenges at transitions of care.

The 2019 Interim Report of the Royal Commission into Aged Care Quality and Safety¹¹¹ highlighted that the experience of the older person transitioning from hospital, another facility or their home into residential care might be distressing.

The 2019 report by the Pharmaceutical Society of Australia, *Medicine Safety: Take Care*¹⁰ reported that:

- Up to 90% of people may experience a change to their medicines while in hospital
- Up to 42% of people may be prescribed at least one potentially inappropriate medicine at discharge
- Only 12% of people had a clinical handover summary that addressed the issues related to the potentially inappropriate medicine.

The report also stated 17% of unplanned hospital admissions for aged care residents are a result of inappropriate medicine use.

A study published in 2020¹¹² aimed to determine the prevalence of potentially inappropriate medicine use and related hospital admissions in aged care residents with and without dementia. Over 80% of acutely admitted adults aged 75 years or older, took potentially inappropriate medicine at hospital admission and discharge. For more than a quarter of these people the admissions were attributable to potentially inappropriate medicine use. The authors concluded that hospitalisation presents an opportunity for comprehensive medication reviews, and targeted interventions that enhance such a process could reduce potentially inappropriate medicine use and related harm.

In an integrative review¹¹³ by Australian Institute of Health Innovation, Macquarie University revealed residential aged care facilities are susceptible to unfinished care due to consumers' complex needs, workforce composition, and constraints placed on resource availability. The study organised care missed, rationed or assigned a lower priority, under five overarching categories – personal care, mobility, person-centredness, medical and health care, and general care processes. The authors classified 50 factors associated with unfinished care under seven categories:

- Staff member characteristics
- Staff member well-being
- Resident characteristics
- Interactions
- Resources
- The work environment
- Delivery of care activities.

Factors associated with unfinished care were identified including, inadequate handover, and interactions between RACFs and other professionals such as GPs and allied health practitioners. The review found that in terms of resources, the most commonly reported factor associated with unfinished care was insufficient staffing levels. The authors suggest that policymakers and providers could reduce unfinished care by focusing on modifiable factors such as staffing levels, for example improved nurse-resident ratios in RACFs. Recommendation 86 of the Final Report of the Royal Commission into Aged Care Safety and Quality supports minimum staff time standard for residential care.

Transfer from hospital to residential aged care facilities

There are many needs to consider when transferring discharged patients from hospital to residential aged care facilities.

A systematic review published in 2019¹¹⁴ evaluated interventions used to improve continuity of medication management upon transition of care from an acute hospital setting to a RACF. Three studies from Australia, three from the USA, and one from Sweden met the inclusion criteria. Interventions identified as improving continuity of medication management during transitions from hospital to residential aged care facilities included:

- Involving a multidisciplinary approach to discharge facilitation
- Pharmacist-led medication reconciliation
- Provision of accurate medicine-related information.

The authors identified the need to develop a comprehensive intervention that addresses barriers to, and optimises continuity of medication management during this high-risk transition.

A study published in 2020¹¹⁵ evaluated the effectiveness and sustainability of an intervention in which ward-based hospital pharmacists reviewed, contributed and verified medicine-related information in electronic discharge summaries in collaboration with physicians. Following the intervention, the proportion of patients with one or more clinically significant discharge medicines list discrepancies fell from 43% to 15%. Significant improvements were still evident after two years. Pharmacists spent a median of five (range 2–16) minutes per patient contributing to electronic discharge summaries. Logistics, timing and pharmacist workload were barriers to delivering the intervention. It concluded that additional staff resources might be needed to enable pharmacists to deliver this effective intervention consistently.



A study¹¹⁶ published in 2014 evaluated the feasibility and consumer satisfaction with geriatrician-led supported discharge service for older adults living in residential care facilities (RECIPE), and its impact on the uptake of Advance Care Planning. It concluded that it is feasible to provide supported discharge service that includes geriatrician assessment and care planning within a RACF.

Recommendation 66 of the Final Report of the Royal Commission into Aged Care Quality and Safety supports improving the transition between residential aged care and hospital care. Specifically by 1 July 2022 implementation and public reporting on compliance with hospital discharge protocols that ensure discharge to RACFs from hospital should only occur once appropriate clinical handover summary (including a medication list) has been provided to and receipt acknowledged by the RACF, and provided to the person being discharged.

Transfer from residential aged care facilities to hospital

Transferring people from residential aged care facilities to acute care hospitals also has its challenges as demonstrated by the following studies.

A study¹¹⁷ published in 2017 examined the information gap in the transfer of older people from residential aged care facilities to emergency departments (ED) in southern Tasmania. The authors concluded that despite recommendations for timely and efficient transfer of information, RACF residents are at risk of adverse outcomes related to poor communication in unplanned transfers to ED. The study identified factors which are more within control contribute such as lack of agreement on minimum datasets for RACF transfer, use of documents not designed for transfer; reliance on documents operating in distinct silos, and limitations in the structure of transfer narratives.

Better communication from time of departure from RACF is needed to improve care outcomes in ED for residents.

Medication charts capture important medicine-related information and can be utilised by health professionals receiving patients living in residential aged care facilities.

Since its introduction in Australia from 2013, the National Residential Medication Chart (NRMC) provides a standard form for the prescription, dispensing and administration of medicines in residential aged care facilities. Evaluation of the NRMC testing phase demonstrated significant reductions in staff medication administration error, and incorrect packaging of resident medicines following the NRMC's introduction. The NRMC works to improve medication safety for residents, and to minimise the administrative burden of prescribers, aged care staff and pharmacists when ordering, administering or supplying medicines.¹¹⁸

[A special arrangement in the National Health legislative instrument \(PB49 of 2018\)](#) provides for a trial of an electronic National Residential Medication Chart. Approval to trial electronic forms of the National Residential Medication Chart (an eNRMC) at specific residential care facilities and community pharmacies has been issued to software vendors. The trial is underway.

A 2017 study¹¹⁹ reviewed medication charts in residential aged care facilities in Australia. It concluded some of the inefficiencies and risks associated with the ordering and supply of medicines in residential aged care facilities arise from the external location of doctors and pharmacists. These might be resolved by the capacity to work from a single data source in the form of the NRMC.

There are programs designed to identify discharged older patients at risk of hospital readmission.

The Complex Needs Coordination Team (CoNeCT), at Sir Charles Gairdner Hospital in Western Australia developed a tool to identify complex consumers.¹²⁰ The tool focuses on those who are at risk of hospital readmission, and targets them for an early post-discharge hospital outreach pharmacy service. In this model if a hospitalised consumer meets the high-risk criteria, then the CoNeCT clinical pharmacist coordinates a medication review once the patient returns home. The tool criteria are:

- Polypharmacy (> 5 regular medicines daily)
- High-risk medicine
- Lives alone
- Rural/remote
- Mental health diagnosis or cognitive impairment
- Age > 65 years or > 45 years if Aboriginal or Torres Strait Islander
- Chronic co-morbidities
- Indigenous or interpreter required
- Extended length of hospital stay (>/+ 5 days).

To access the service the patient must have either polypharmacy, or be taking a high-risk medicine. In the context of this report, this tool is also able to screen for inappropriate polypharmacy, and inappropriate use of antipsychotics (high-risk medicine).

In Victoria, the Hospital Admission Risk Program (HARP)¹²¹ targets people with chronic and complex care needs that use the hospital system often. By enabling better management of conditions in the community, the program aims to prevent avoidable hospital presentations.

The Commonwealth Department of Veterans' Affairs Coordinated Veterans' Care (CVC) Program¹²² is a team-based program designed to increase support for veterans who are at risk of unplanned hospitalisation. The program promotes health literacy, self-management and emphasises best practice coordination of care through a person-centred approach.

Recommendation 66 of the Final Report of the Royal Commission into Aged Care Quality and Safety supports improving the transition between residential aged care and hospital care. Specifically by 1 December 2021 RACF staff will be required, when calling an ambulance for a resident, to provide the paramedics on arrival with an up-to-date summary of the resident's health status, including medications and advance care directives.



Medication reviews

Collaborative medicine reviews aimed at reducing the likelihood of medication errors and adverse drug events in the primary care setting, may extend the period between hospitalisations.¹²³

Medication Management Programs available under the 7th Community Pharmacy Agreement support quality use of medicines services that are designed to reduce adverse medicine events and associated hospital admissions or medical presentations.¹²⁴ Appendix 2 provides details about medication reviews.

A comprehensive RMMR assessment is undertaken to identify, resolve and prevent medication-related problems and is provided to the resident's general practitioner.

One RMMR service can be conducted every 24 months, or when the referrer deems a subsequent review is clinically necessary, such as when there has been significant change to the patient's condition or medication regimen. For example, if a patient is discharged from hospital back to their RACF with changes to their medicines included in the handover summary, this may warrant an RMMR. As previously mentioned, Recommendation 64 of the Final report of the Royal Commission into Aged Care Quality and Safety supports increased access to medication management reviews. An Australian study¹²⁵ published in 2021 identified that the high burden of medication use at time of entry to RACFs suggests that most residents could benefit from RMMRs. However over the three year study period to 31 December 2015, MBS claims for RMMRs were lodged for fewer than one in five residents within three months of RACF entry, and fewer than one in two within two years.

Under the 7th Community Pharmacy Agreement program there are also [Program Rules covering the Quality Use of Medicines](#) service able to be provided by a registered or accredited pharmacist, which focuses on improving practices and procedures as they relate to the quality use of medicines in a residential care facility. Specifically, the objectives of the Quality Use of Medicines (QUM) Program are to:

- Advise members of the RACF's healthcare team on a range of medication management issues in order to meet the healthcare needs of residents
- Provide medication information and education to residents, family members/carers and other healthcare providers involved in a resident's care
- Assist the RACF to undertake continuous improvement activities, including ensuring medication management accreditation standards are met and maintained.

Digital health supporting transitions of care

With the evolution of digital health technologies there may be an enhanced role for the use of My Health Record in the aged care sector, and more specifically in residential aged care facilities.

Two projects from the Australian Digital Health Agency's Digital health Test Beds program¹²⁶ will utilise information from a consenting patient's My Health Record to improve the delivery of their healthcare.

In the first project, Sydney North PHN will work with Northern Sydney Local Health District and Macquarie University to accelerate an already-progressing effort in the Sydney North region to use Secure Messaging and My Health Record to connect Residential Aged Care Facilities with General Practice, Pharmacy and Acute Care Hospital Avoidance (HAPOP) providers.

In the second project, South Australia and the Northern Territory, GP Partners Australia with others including FollowMyHealth and Flinders Digital Health Research Centre will enhance patient and family member/ carer engagement, and self-management through a patient portal connected to end-of-life information, healthcare providers and My Health Record. This aims to reduce avoidable hospital transfers and admissions by improving engagement with residential aged care facilities, after hours GPs, and extended-care paramedics.

The benefits to residents of aged care facilities from using the NRMC, which provides a record of medicine use, were outlined earlier in this section. Migration from the hard copy chart to an electronic version in the future has the potential to capture medicines information, facilitate sharing of the information with the resident's consent, reduce medication errors and medication-related harm.

Communication of information at transitions of care is a common source of error, as the following example describes.

A case study published in Pharmacy GRIT (Autumn 2020) highlighted how important medicines information can be lost or misplaced during transitions of care. At the Emergency Department (ED) presentation two of three pages of medicines information was identified by the ED pharmacist as missing. After this GPs, directors of nursing at the RACF, and pharmacists (supply and medicine review) implemented improved process of collaboration to ensure complete medicines information was available. The collaborative process aims to avoid unnecessary Emergency Department presentations, and to address governance issues around medication safety feedback.¹²⁷

As previously mentioned in Topic 1, in 2017, the Commission published National Guidelines for On-Screen Presentation of Discharge Summaries.¹²⁸ While this template was developed for electronic clinical information systems used in health service organisations, it has potential to be applied as a hard copy handover summary in environments dependent on paper records, including parts of the residential aged care sector.

Providing a framework for digital integration in RACFs, including governance, will be important as more facilities transition from paper based systems to digital platforms.

International experience

In a study¹²⁹ from the United Kingdom, patients described the gaps in their experience in the transitions across the boundaries of care, as falling through the gaps, being forgotten about, or having to explain yourself to every professional or service you encounter.

An international systematic review¹³⁰ of the prevalence of medication errors resulting in hospitalisations and death of nursing home residents was published in 2017. Medication errors were common, involving 16–27% of residents in studies examining all types of medication errors and 13–31% of residents in studies examining transfer-related medication errors, and 75% of residents were prescribed at least one potentially inappropriate medicine. Serious effects of medication errors were surprisingly low and were reported in only a small proportion of errors (0–1% of medication errors), with death being rare. The authors conclude that it remains to be elucidated whether medication errors resulting in serious outcomes are truly infrequent, or are under-reported because of the difficulty in ascertaining them. Clarification will assist in designing safer systems.

A study¹³¹ in the United States of long-term care residents transitioning from hospital back to nursing homes across 32 facilities located in six New England states, examined adverse events within 45 days of discharge. There were 379 adverse events among 762 discharges. Adverse drug events accounted for 16.9% (64) of all adverse events. Of the adverse drug events, 60.9% (39) were deemed preventable. The authors concluded standardised reporting of events and better coordination and information transfer across settings are potential ways to prevent adverse events in returning long-term care residents.

An observational, multicentre, prospective cohort study¹³² recruited 1,280 older adults (median age 82 years) from five teaching hospitals in Southern England. Overall, 413 participants (37%) experienced medication-related harm (556 events per 1,000 discharges), of which 336 (81%) cases were serious and 214 (52%) potentially preventable. Four participants experienced fatal medication-related harm. The classes of medicines associated with the highest risk of medication-related harm were opiates, antibiotics and benzodiazepines.

Internationally, there are efforts to develop tools to predict the risk of an older adult experiencing medication-related harm following hospital discharge.

In the United Kingdom, a prediction tool¹³³ is in development with eight variables measured at hospital discharge:

- Age
- Gender
- Antiplatelet medicine
- Sodium level
- Antidiabetic medicine
- Past adverse drug reaction
- Number of medicines
- Living alone.

Known as the PRIME tool, it was internally validated. The authors concluded the PRIME tool could be used to identify patients at high risk of medication-related harm requiring healthcare use following hospital discharge.

Hospitalisations are very common among residents of aged care facilities, many of which are deemed to be preventable. Addressing causes of potentially preventable hospitalisations of residents of aged care facilities may minimise transitions of care from aged care facilities to acute care hospitals.

A study¹³⁴ in the United States examined the relationship between quality indicators and potentially preventable hospitalisations among Medicaid beneficiaries aged 65 years and older receiving care

at nursing homes in Minnesota. The results showed about 44% of hospitalisations were potentially preventable hospitalisations. Among the 23 quality indicators reviewed, only five were related significantly to hospitalisations:

- Antipsychotics without a diagnosis of psychosis
- Unexplained weight loss
- Incidence of pressure sores
- Incidence of improving or maintained bladder continence
- Incidence of worsening or serious activities of daily living dependence.

Only four quality indicators were related to potentially preventable hospitalisations:

- Antipsychotics without a diagnosis of psychosis
- Unexplained weight loss
- Activities of daily living dependence
- Urinary tract infections.

Reducing use of antipsychotics without a valid diagnosis of psychosis in residents of aged care facilities may reduce potentially preventable hospitalisations and associated transitions of care.

Considerations

Effective and reliable communication of patient information at clinical handovers of those arriving from, or returning to residential aged care facilities is confounded by the delivery of services in residential aged care facilities by a disparate group of unconnected health professionals. This may be compounded by the low penetration of electronic medication management and electronic health records systems in the aged care sector.

Coordination of the multidisciplinary team of health professionals treating those living in residential aged care facilities and sharing information, requires highly developed organisational skills. This includes marshalling general practitioners, supply pharmacists, accredited pharmacists, directors of nursing, residents and their family/carers.

More work identifying best practice coordination processes, especially those for medication reconciliation and review, that are repeatable, scalable and able to be applied across the diversity of residential aged care facilities in Australia is required. As previously mentioned Recommendation 66 of the Final Report of the Royal Commission into Aged Care Quality and Safety supports improving the transition between residential aged care and hospital care.

Discussion points

Best practice

Best practice is identified as effective communication, collaboration, and sharing of medicines information between hospital pharmacists, community pharmacists, medical practitioners, residential aged care nursing staff, allied health professionals, patients and their family members/carers. Submissions received through stakeholder consultations specifically cited the following examples of best practice:

- Medication review on arrival of RACF resident at hospital
- Timely medication review within 24, 48, or 72 hours of arrival of patient in the RACF involving the GP, pharmacists, nursing staff and patient/resident and their family members/carers, ensuring what matters to the resident continues to be captured
- Timely communication of accurate and comprehensive clinical handover summary (prepared with clinical pharmacist involvement) from hospital to RACF, the GP, pharmacists and nursing staff
- Use of an Interim Medication Administration Chart (IMAC).

The MedGap study examined the provision of an IMAC to ensure appropriately qualified and credentialed aged care staff can administer medicines safely and without undue delay in the immediate post-discharge period (first 72 hours) while waiting for a GP or nurse practitioner to prepare or adjust the NRMC. The IMAC is populated with the patient's details, allergies and adverse drug event information, discharge medicines list and the date and time of the last doses administered in hospital. There is space for aged care staff responsible for medicines administration to sign off when medicines are administered for up to seven days. First commenced in the 2009 MedGap study, a 10-year follow-up concluded that IMAC was associated with sustained low rates of missed and delayed doses, and locum doctor call-outs.¹³⁵

The IMAC seeks to provide guidance to the RACF nursing staff that can be immediately used in the returning resident's care. However further work is needed to ensure the IMAC is communicated to the returning resident's GP and pharmacists and includes reasons for any changes to the medication plan.

An electronic IMAC uploaded to My Health Record at discharge, would allow access and visibility by the resident's GP, pharmacists, and the RACF nursing staff.

Consultations with stakeholders elicited strong support for investment in robust, interoperable electronic information management systems, especially for greater use of My Health Record, including broader adoption and use of the Pharmacist Shared Medicine List.

Standardised clinical handover summary documentation preferably in electronic information management systems is recommended.

Within the Australian Digital Health Agency's Connecting Care Program, the Aged care Connection and Use project aims to introduce a new My Health Record clinical document which is an electronic version of the transfer summary form.

System-wide challenges

Significant issues in communication between hospitals and general practice on discharge were identified as a case of less than optimal patient outcomes.

A contributing factor is the lack of understanding by hospital clinicians about the way in which prescribing is managed for residents in residential aged care facilities, between the GPs, community pharmacies, review pharmacists and the RACF nursing staff. Hospital clinicians need to consider that the discharged patient is going to a home (a RACF) and not another health facility. As a result case conferencing initiated by the hospital clinician team with the GP/pharmacists/RACF registered nurse would optimise handover, provide context as to why medicines were started or stopped, and allow discussion of the medication management plan.

Transitions of care were identified by stakeholders as having high risk of medication misadventure because they may cross over separate unconnected systems. This creates a barrier which prevents any one health professional leading or taking responsibility for and owning the transition of care process. Ensuring that there is acknowledgement that medication safety is every healthcare provider's business, without assigning clear responsibility across sectors is challenging.

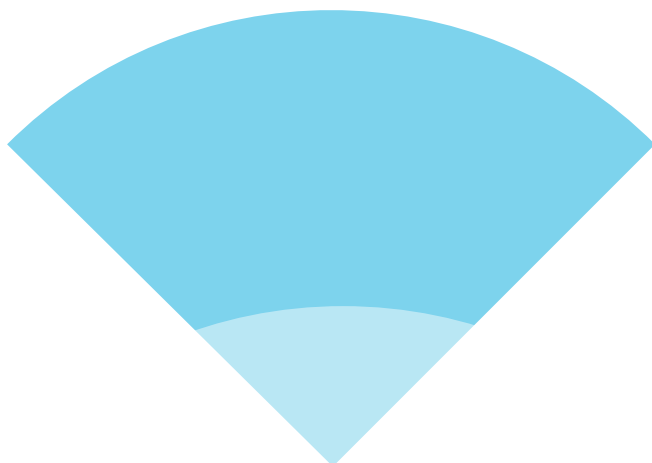
The establishment of a supported discharge liaison service to help vulnerable older people navigate transitions of care was identified. The Queensland Health funded Residential Aged Care Facility Support Services aims to link residents of aged care facilities with acute health care needs, to the most appropriate service, which could be community based or hospital based. The resident's GP accesses the clinical advice via telephone with clinical nurse consultants.

Hospital-led outreach medicine review services are provided by some major public hospital in Victoria to clearly identified populations at high risk of medication misadventure. The previously mentioned CoNeCT program in Western Australia is perhaps the most advanced of these hospital-led outreach programs. Recommendation 58 of the Final Report of the Royal Commission into Aged Care Quality and Safety supports access to specialists and other health practitioners through multidisciplinary outreach services. The recommendation suggests key features of the model should include multidisciplinary teams, including nurse practitioners, allied health practitioners and pharmacists along with access to a core group of relevant specialists, including geriatricians, psychogeriatricians, and palliative care specialists.

Recognising that 36% of all Australians who die do so in residential aged care facilities, the area of palliative care also demands quality and safe use of medicines. Palliative care in residential aged care facilities is often confined to the last days of life and not systematically integrated into core business in residential aged care facilities. Those living in residential aged care with palliative care needs often have multiple comorbidities, and the clinical course includes intercurrent clinical problems and change in clinical status as the person deteriorates. They often undergo transitions of care to and from hospital and specialist care. Providing access to palliative care and palliative care specialists ensures that aged care recipients have their medications regularly monitored, reducing the use of inappropriate medicines, optimising symptom management without toxicity, and having the required conversations with the resident and their family decision-makers about the goals of the medication therapy. Older Australians receiving palliative care within residential aged care facilities must be able to access symptom assessment, medication review by professionals with palliative care expertise and the necessary medicines for their management.

Current process gaps

Responses from stakeholders indicated that a process gap can occur when a patient is first admitted to a RACF from hospital, or from the community. The patient's connection with their GP can be lost, either due to geographical challenges, or through the GP not servicing patients in residential aged care facilities. Continuity of care is compromised. Nurse practitioners attached to RACFs or registered nurses employed by RACFs may be able to maintain the link with the patient's GP via telehealth, to improve continuity of care including medication management during the transition to the RACF, until the patient's/resident's decision/consent on future GP care can be obtained.



An obvious gap in current process is that many hospital pharmacy departments may supply the patient's discharge medicines in original packaging. Hospital pharmacy departments do not have the capacity to prepare Dose Administration Aids (DAAs) that fit the different formats and platforms used in residential aged care facilities provided by the supply pharmacy or medicine supply contractor. Many residential aged care facilities will not administer medicines to residents from original packaging, potentially delaying continuity of medication management. The previously mentioned IMAC should assist with continuity of medication management. Work processes by which the DAAs provided by the supply pharmacy or medicine supply contractor are changed in line with the IMAC may be barriers that need to be addressed to close this gap in continuity of medicines.

Feedback received from the public consultation identified that key clinical information is not provided about residents of aged care facilities who have an unplanned admission to hospital. The paper-based Yellow Envelope transfer summary was conceived and implemented to improve the type and quality of information provided for the receiving hospital. For these patients, there remains concern about the increased risk of accidental medication-related harm in hospital when information is not included or inadvertently omitted in their transfer summary. Mandatory recording of this will better inform health professional involved in care management and guide decision-making of the patient's medication management plan. This should have benefits for patient outcomes, and potentially transitions of care information across the health system.

Exploration of solutions to enable the interoperability of technology across sectors is needed. This potentially assists in addressing the sharing of safe and accurate medicines information for older people in residential aged care facilities, who will transition between multiple points of care in their later years of life. As an example, 'Single point of truth' medicine lists curated by pharmacists supplying residential aged care facilities should be uploaded to a patient's My Health Record as the Patient Shared Medicines List.

In 2020 Palliative Care Australia launched an eight-point plan for palliative care in aged care to highlight the current key issues in the aged care sector and propose constructive solutions. Amongst the eight points, Palliative Care Australia advocates for improved collection of data about palliative care service delivery in aged care to identify unmet and emerging needs of people receiving palliative care in RACFs who often undergo transitions of care to and from hospital and specialist care.

Monitoring progress

There is general agreement that the development of a set of transition of care indicators consistently applied across the health and aged care systems is warranted.

To standardise the content and improve the quality and delivery of discharge summaries, more effort is required to ensure acute care health service organisations comply with Indicators 5.3, 5.5, and 5.8 within the [National Indicators of Quality Use of Medicines \(QUM\) in Australian Hospitals 2014](#).

A theme emerging from stakeholder consultations suggests indicators and benchmarking would facilitate monitoring of medicines information exchange at transitions of care, and provide information of progress towards reducing medication-related harm.

Medication reconciliation and review by the RACF nursing staff, and the resident's GP and pharmacists should be mandated to be completed with the resident within the 72 hours after discharge, or sooner if practical.

Opportunities to measure impact of initiatives to improve transitions of care for residents of aged care facilities may include:

- Measuring the percentage of patients discharged from hospital to a RACF with a clinical handover summary and a medication management plan
- Measuring the number of post-discharge medication reviews conducted for patients identified as high risk of medication-related harm, who have not had a hospital-based medication review
- Measuring the number of missed doses of medicines in the first 7 days post discharge or percentage of missed doses from total prescribed doses
- Measuring the number of, and capturing reasons for, changes made to the medication plan by the GP post-discharge, when compared to the medicines prescribed at discharge
- Measuring the number of re-hospitalisations within 30/60/90 days of discharge that are medication-related
- Measuring patient reported outcomes or experiences on satisfaction with their involvement in decisions about their medicines and any changes made to their medicines (dose, frequency, and duration – overall regimen)
- Utilising a national minimum data set for measuring the number of transitions of care for residents receiving palliative care would allow for collection of uniform data, reporting, establish benchmarks, and inform quality improvements.

Conclusion

An overarching priority action is proposed to embed the quality use of medicines activities available in the Quality Use of Medicines Program in guidance that could be provided around Aged Care Quality Standards to be adhered to by RACFs.

Ten priority actions are proposed as part of the road map to improve Quality Use of Medicines and Medicines Safety reducing the potential for medication-related harm for residents:

- 1 Implementation of evidenced-based screening tools to minimise medication-related harm post hospital discharge
- 2 Revision of access to Residential Medication Management Review at entry to RACFs
- 3 Undertake consultation with key stakeholders to develop a national guideline for medication review reporting templates for Residential Medication Management Review to improve quality of reports and achieve reporting consistency
- 4 Introduction of a revised national guideline for governance, composition and operation of Medication Advisory Committees within RACFs and strengthen medication management standards in RACFs
- 5 Introduction of standardised requirements for training of staff in residential aged care facilities on quality use of medicines relevant to their practice
- 6 Broad implementation of an evidence-based program of patient monitoring and interventions to reduce antipsychotic and benzodiazepine use in RACFs/development of nationally consistent guidelines for the appropriate use of psychotropic medications in people living with dementia and in residential aged care
- 7 Introduction and implementation of publicly reported quality and safety indicators for inappropriate polypharmacy and inappropriate use of antipsychotics in RACFs in line with the National Aged Care Mandatory Quality Indicator Program
- 8 Broad implementation of interim medication administration charts as part of the clinical handover at transition of care between hospital and residential aged care facilities consistent with Action 4.12 of the NSQHS Standards
- 9 Implementation of publicly reported quality and safety indicators for Quality Use of Medicines in RACFs
- 10 Further research:
 - a. Into the development and introduction of an evidence-based assessment tool which reviews exposure to types and doses of medicines that can cause adverse outcomes potentially placing people with dementia at risk of developing behavioural and psychological symptoms of dementia
 - b. Trialling the role and impact of pharmacists embedded in residential aged care facilities make on Quality Use of Medicines, medicines safety and resident outcomes.

Adoption of the priority actions is an investment in positive patient outcomes for residents of aged care facilities. Each of the priority actions can contribute to reductions in severe, avoidable medication errors, adverse drug events and medication-related hospital admissions, contributing to an improved quality of life for older people resident in aged care facilities.

Glossary

Term	Definition
acute care	A short and relatively severe course of a clinical service provided to a hospital-admitted patient during an episode of care.
accredited pharmacist	A pharmacist who has been credentialed to conduct medication management reviews by either the Australian Association of Consultant Pharmacy or the Society of Hospital Pharmacists of Australia.
advance care directive	A type of written advance care plan recognised by common law or specific legislation that is completed and signed by a competent adult. It can record the person's preferences for future care, and appoint a substitute decision-maker to make decisions about health care and personal life management. In some states, these are known as advance health directives. <i>See also advance care plan.</i>
advance care plan	Stated preferences about health and personal care, and preferred health outcomes. An advance care plan is usually the result of a process of planning for future health and personal care, whereby the person's values and preferences are made known so that they can guide decision-making at a future time when the person cannot make or communicate their decisions. <i>See also advance care directive.</i>
Aged Care Quality Standards	Organisations providing Commonwealth subsidised aged care services are required to comply with the Aged Care Quality Standards . Organisations will be assessed and must be able to provide evidence of their compliance with and performance against the Quality Standards from 1 July 2019. The Quality Standards focus on outcomes for consumers and reflect the level of care and services the community can expect from organisations that provide Commonwealth subsidised aged care services.
allied health professionals	Trained professionals who are not doctors, dentists or nurses. Allied health professionals use evidence-based practices to prevent, diagnose and treat various conditions and illnesses; they often work in multidisciplinary health teams to provide specialised support to suit an individual's needs.
assisted living facility	A term used in the United States to describe facilities providing accommodation for adults with access to many services. These include up to three meals a day; help with some activities of daily living, such as bathing, dressing, and walking; help with medications, housekeeping, and laundry; 24-hour supervision, security, and on-site staff; and social and recreational activities.
best practice	When the diagnosis, treatment or care provided is based on the best available evidence, which is used to achieve the best possible outcomes for patients.
care home	A term used in the United Kingdom to describe facilities which provide accommodation and personal care for people who need extra support in their daily lives. Personal care might include help with eating, washing, dressing, going to the toilet or taking medication.

Term	Definition
carer	A person who provides personal care, support and assistance to another individual who needs it because they have a disability, medical condition (including a terminal or chronic illness) or mental illness, or they are frail or aged. An individual is not a carer merely because they are a spouse, de facto partner, parent, child, other relative or guardian of an individual, or live with an individual who requires care. A person is not considered a carer if they are paid, a volunteer for an organisation, or caring as part of a training or education program.
clinical decision support tools	Tools that can help clinicians to draw on available evidence when making clinical decisions. These may include decision aids, risk calculators, evidence summaries, question prompt lists.
clinical governance	<p>The set of relationships and responsibilities established by a healthcare service between regulators and funders, owners and managers and governing bodies (where relevant), healthcare providers, the workforce, patients, consumers and other stakeholders to ensure optimal clinical outcomes. It ensures that:</p> <ul style="list-style-type: none"> ■ The community can be confident there are systems in place to deliver safe and high-quality health care ■ There is a commitment to continuously improve services ■ Everyone is accountable to patients and the community for ensuring the delivery of safe, effective and high-quality care. This includes healthcare providers, other members of the workforce and managers, owners and governing bodies (where they exist). <p>Depending on the size of the healthcare service, multiple roles may be carried out by the same individual.</p>
clinical handover	The transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis.
clinical pharmacy services	A range of activities usually provided in the hospital setting including medication reconciliation, assessment of current medication management, clinical review, therapeutic drug monitoring and adverse drug reaction management, contributing to the medication management plan, providing medicines information, facilitating the continuity of medication management on discharge or transfer, and participating in interdisciplinary ward rounds and meetings.
clinical pharmacist	Specialised pharmacist who actively optimises appropriate use of medicine, decrease serious adverse effects and improve patient care. Where the focus is analgesics, the role may provide clinical care in related services such as acute pain services, or pain clinics depending upon service capacity.
clinician	A healthcare provider trained as a health professional, including registered and non-registered practitioners. May provide care within a health service organisation as an employee, a contractor or a credentialed healthcare provider. Includes nurses, midwives, medical practitioners, allied health professionals, technicians, scientists and others who provide health care.
consumer	A person who has used, or may potentially use, health services, or is a carer for a patient using health services.
cultural safety	Cultural safety is the experience of the recipient of care. The culture of the care recipient is integrated in such a way that it allows the person to feel safe in health care interactions and be involved in changes to their health services.

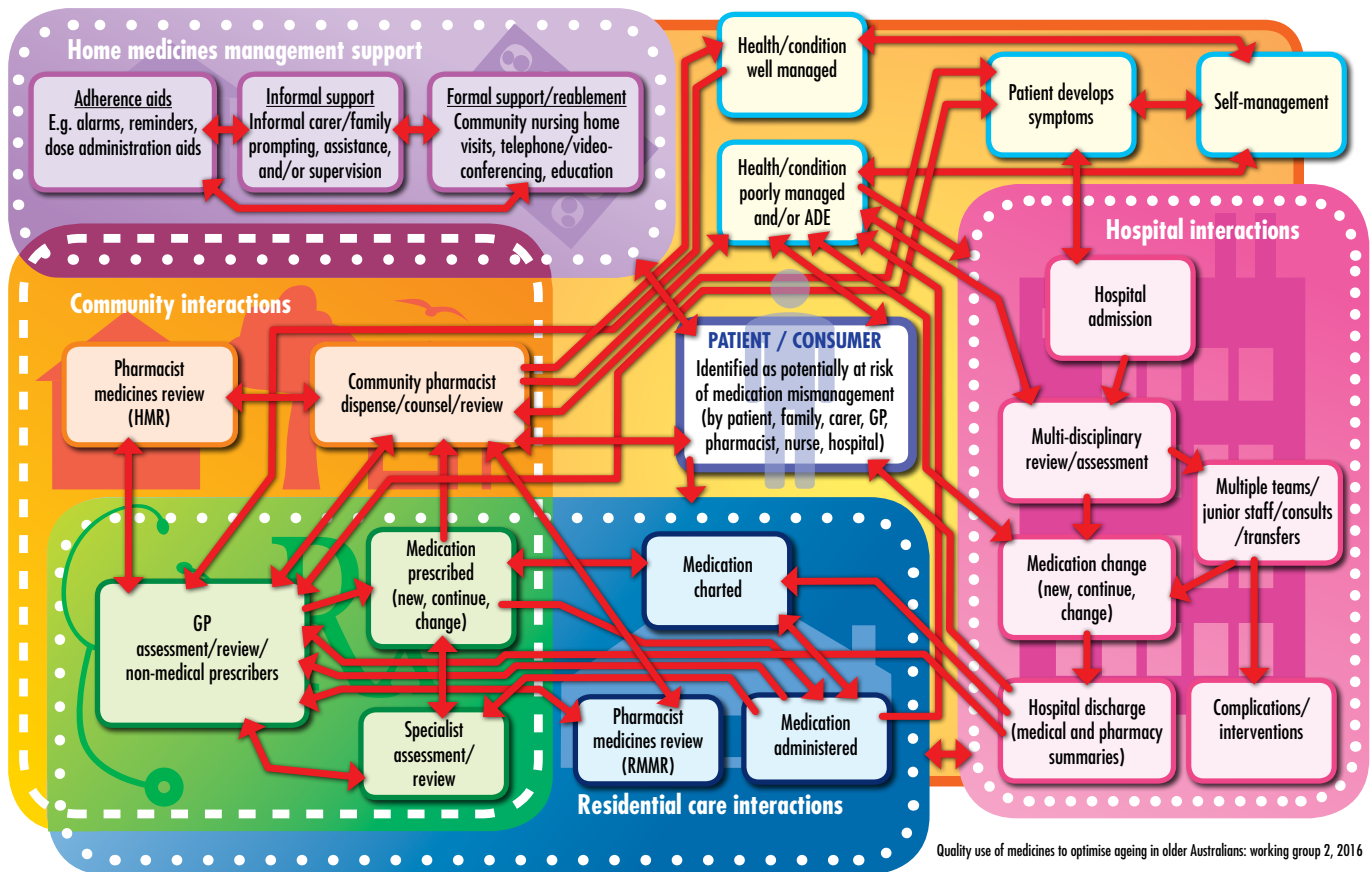
Term	Definition
deprescribing	The process of tapering leading to the cessation of medicines. This aims to discontinue potentially inappropriate medicines and improve patient outcomes. In this consultation the terms weaning, tapering and de-escalation are taken to have the same meaning.
discharge summary	A collection of information about events during care of a patient by a provider or organisation. The document is produced during a patient's stay in hospital as either an admitted or non-admitted patient, and issued when or after the patient leaves the care of the hospital. <i>See also clinical handover.</i>
electronic medication management (EMM)	Can refer to prescribing systems, such as GP desktop systems or hospital clinical information systems that have electronic ordering, decision support systems such as evidence-based order sets, dispensing systems, ordering and supply solutions or electronic medical records including medication charts in the acute and primary care sectors
e-prescribing	Prescriptions that are issued and dispensed in an electronic system, without the use of a paper-based document at any point.
governance	The set of relationships and responsibilities established by a healthcare service between its management, workforce and stakeholders (including patients and consumers). Effective governance provides a clear statement of individual accountabilities within the organisation to help align the roles, interests and actions of different participants in the organisation to achieve the organisation's objectives. Governance structures will be tailored to the size and complexity of an organisation.
guidelines	Clinical practice guidelines are systematically developed statements to assist clinician and consumer decisions about appropriate health care for specific circumstances.
health literacy	The Australian Commission on Safety and Quality in Health Care separates health literacy into two components: <ol style="list-style-type: none"> 1. Individual health literacy is the skills, knowledge, motivation and capacity of a person to access, understand, appraise and apply information to make effective decisions about health and health care and take appropriate action 2. The health literacy environment is the infrastructure, policies, processes, materials, people and relationships that make up the health system and have an impact on the way that people access, understand, appraise and apply health-related information and services.
health service organisation	A separately constituted health service that is responsible for implementing clinical governance, administration and financial management of a service unit providing health care at the direction of the governing body. A service unit involves a group of clinicians and others working in a systematic way to deliver healthcare to patients. It can be in any location or setting, including pharmacies, clinics, outpatient facilities, hospitals, patients' homes, community settings, practices and clinicians' rooms.
home care	Services and support provided to older Australians living in their home independently. Includes assistance with things such as personal care, transport, food, shopping, housework, physiotherapy, social activities and modifications to homes.

Term	Definition
Home Medicines Review (HMR)	An HMR is when an accredited pharmacist checks the medicines a person is taking at home. It is a review requested by the eligible Patient's Referring Medical Practitioner, in which the Referring Medical Practitioner, General Practitioner (if this is not the Referring Medical Practitioner), other members of the Patient's healthcare team (including the Patient's usual Community Pharmacy if they have one), Accredited Pharmacist, Patient, and where appropriate, a carer participate to support the quality use of medicines, minimise adverse medicine events, and help people better understand and manage their medicines.
hospital admission	The administrative process of becoming a patient in a hospital.
inappropriate prescribing	The use of a medicine where there is an equal or more effective and lower risk alternative available, including prescribing non-pharmacological strategies.
interim medication chart	A chart generated on discharge by a discharging hospital, based on the discharge prescription and reconciled with the patient's inpatient medication chart prior to discharge, for patients discharged to RACFs. Also referred to as an Interim Medication Administration Chart .
Medication Advisory Committee (MAC)	A group of advisors to the RACF who assist in the development, promotion, monitoring, review and evaluation of medication management policies and procedures that will have a positive impact on health and quality of life for residents.
medication reconciliation	The process where the medicines the patient should be prescribed match those that are prescribed.
medication review	This can include assessment of current (existing and newly prescribed) medicines, and should be responsive to patients' needs, preferences and medicine-taking behaviour. Also referred to as a medicines use review.
medicine	A chemical substance given with the intention of preventing, diagnosing, curing, controlling or alleviating disease or otherwise improving physical or mental wellbeing.
medicines list	A current and accurate list of medicines, including reasons for change. Given from discharging clinician to receiving clinician when a patient's care is transferred.
My Health Record	The secure online summary of a consumer's health information, managed by the System Operator of the national My Health Record system (the Australian Digital Health Agency). Healthcare providers are able to share health clinical documents to a consumer's My Health Record, according to the consumer's access controls. These may include information on medical history and treatments, diagnoses, medicines and allergies.
multidisciplinary team	A team consisting of clinicians from a number of different healthcare disciplines who work together to deliver comprehensive care.
National Safety and Quality Health Service (NSQHS) Standards	Developed by the Australian Commission on Safety and Quality in Health Care in collaboration with the Australian Government, states and territories, private sector providers, clinical experts, patients and family members/carers to protect the public from harm and to improve the quality of health service provision. There are eight NSQHS Standards provide a nationally consistent statement about the level of care consumers can expect from health services.
nurse practitioner	A Registered Nurse (RN) experienced in their clinical specialty, educated at Masters Level, and who is endorsed by the Nurses and Midwives Board of Australia (NMBA) to provide patient care in an advanced and extended clinical role, including prescribing of medications.

Term	Definition
nursing home	These services typically include nursing care, 24-hour supervision, three meals a day, and assistance with everyday activities. Rehabilitation services, such as physical, occupational, and speech therapy, are also available. Their services focus on medical care more than most assisted living facilities.
patient	A person who is receiving care in a health service organisation.
person-centred care	An approach to the planning, delivery and evaluation of health care that is founded on mutually beneficial partnerships among healthcare providers and patients. Person-centred care is respectful of, and responsive to, the preferences, needs and values of patients and consumers. Key dimensions of person-centred care include respect, emotional support, physical comfort, information and communication, continuity and transition, care coordination, involvement of family members/carers, and access to care. Also referred to as patient-centred care or consumer-centred care.
pharmacist shared medicines list	A list of medicines prepared by a pharmacist that may include those medicines prescribed by your doctor, non-prescription medicines including over-the-counter or complementary medicines (such as vitamins or herbal medicines) a person is taking at the time the list was created. The list is able to be uploaded to My Health Record.
registrar	A doctor with at least three years' experience in a public hospital, who supervises more junior doctors and is training to become a specialist.
Residential Aged Care Facility (RACF)	A special-purpose facility for senior Australians who can no longer live in their own home. It provides accommodation and personal care 24 hours a day, as well as access to nursing and general health care services.
Residential Medication Management Review (RMMR)	This is a service provided to an eligible person residing in an eligible Australian Government-funded Residential Care Facility with the intended purpose of identifying, resolving, and preventing medication-related problems. It is requested by the eligible Patient's general practitioner (GP) in which the GP, Accredited Pharmacist, the person, and where appropriate, a family member/carer or other member of the eligible resident's health care team participate in a comprehensive review of a person's medications.
screening	A process of identifying people who are at risk or already have a disease or injury. Screening requires sufficient knowledge to make a clinical judgement.
standard	Agreed attributes and processes designed to ensure that a product, service or method will perform consistently at a designated level.
transitions of care	Situations where all or part of a patient's care is transferred between healthcare locations, clinicians, or levels of care within the same location, as the patient's condition and care needs change.

Figures

Figure 1: System map of medication management in Australia



Reproduced with permission of the Quality Use of Medicines to optimise ageing in older Australian working group 2 (2016).

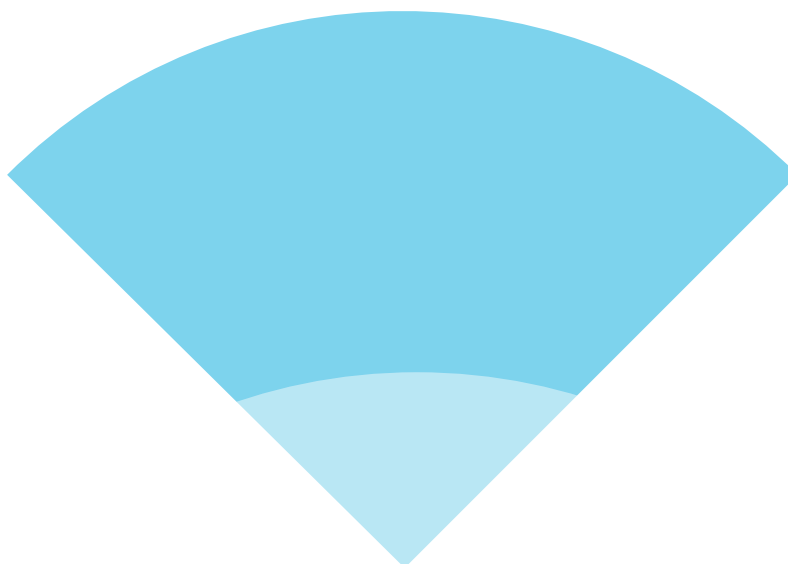
Appendices

Appendix 1: Final Report – List of recommendations

Released on 1 March 2021, the Final Report of the Royal Commission into Aged Care Quality and Safety made 148 recommendations, a number of which have the potential to affect Quality Use of Medicine in the aged care sector, including review of:

- Governance expertise of aged care providers (Recommendation 19); governing bodies ensure that their leaders and managers have professional qualifications, or high-level experience in management roles (Recommendation 89); have members of the governing body who possess between them the mix of skills, experience and knowledge of governance responsibilities, including care governance, required to provide governance over the structures, systems and processes for ensuring the safety and high quality of the care delivered by the provider (Recommendation 90)
- Standards requiring best practice medication management, and standards for people living with dementia, and capacity to provide high-quality palliative care (Recommendation 19)
- Appropriate requirements relating to the professional development and training of staff, including reference to and delineation between staff practice roles and responsibilities (Recommendations 14, 21, 69, 77, 78 and 79)
- Amending regulation regarding the use of restraint (Recommendation 17)
- Detailed residential aged care quality and safety indicators for assessment and continuous quality improvement and a publicly available five-star rating system for consumers (Recommendations 23 and 24)
- Improving access to specialists and other health practitioners through Multidisciplinary Outreach Services (Recommendation 58)
- Improving access to medical and allied health services through short-term changes to the Medicare Benefits Schedule (Recommendation 61)
- RMMR provision in ensuring annual medication review instead of two yearly (Recommendation 64)
- Access to antipsychotics in RACFs (Recommendation 65)
- Improving the transition between residential aged care and hospital care (Recommendation 66).

The full list of recommendations is available from agedcare.royalcommission.gov.au/publications/final-report-list-recommendations [Accessed 16 June 2021]



Appendix 2: Medication reviews

Medication reviews include assessment of current (existing and newly prescribed) medicines, and should be responsive to patients' needs, preferences and medicine-taking behaviour. The main purpose of a comprehensive medication management review is to improve the appropriateness of medicines, reduce harm and improve health outcomes, while incorporating the patient's preferences, beliefs, attitudes and priorities.

Medication reviews provide opportunities for a comprehensive assessment to identify, resolve and prevent medication-related problems. These problems could be due to multiple chronic conditions, comorbidities, age, social circumstances, characteristics of their medicine, complexity of their medication regimen, change in patient goals, priorities and wishes or limited knowledge and skills to use their medicines effectively and safely.¹³⁶

Introduced in 2001 into the Medicare Benefits Schedule (MBS) as item 900 and Item 902, Domiciliary Medication Management Review (Home Medicines Review or HMR) and Residential Medication Management Review (RMMR) are preventative care programs that aid safe and quality use of medicines and aim to prevent medication-related harm. HMRs and RMMRs are ordered and coordinated by general practitioners (GPs). The GP is remunerated for participating in a Home Medicines Review under Medicare Benefits Schedule Item 900¹³⁷, and for participating in a RMMR under Medicare Benefits Schedule Item 903.¹³⁸

The [Medicare Benefits Schedule for Item 903](#) sets out the patient eligibility, regulatory requirements, claiming process and other guidance for GPs providing the Residential Medication Management Review (RMMR) service. In 2007–08 there were 39,036 services claimed for Medicare Item 903 – residential medication management reviews.¹³⁹ By 2012–13, this had risen to 72,639 services, an increase of 86%. However, over the period between 2013–14 and 2018–19 the average number of services was 65,948 per year, due to the capping of RMMRs to once every two years in 2014. In 2019–20 the number of services was 71,885, the highest since 2012–13.

In 2017 the Medical Services Advisory Committee (MSAC) reported on 6th Community Pharmacy Agreement (6th CPA) Pharmacy Programs for Medication Management Reviews.¹⁴⁰ The MSAC advised that there was insufficient evidence to determine the clinical and cost-effectiveness of the continuing 6th CPA Medication Management Review programs. The MSAC considered that the design of the programs could be improved by including a formal collaboration with General Practitioners (GPs), by being targeted to appropriate patient populations, and by a reduction in the unit cost of providing each pharmacy service coupled with an incentive to increase this cost if adequate evidence can be furnished to justify it.

During the 6th CPA an evaluation of the Quality Use of Medicines program was undertaken for the Australian Government Department of Health.¹⁴¹ A key finding of the evaluation published in 2018 was that while opportunities were identified to strengthen the program, and improve accountability for service delivery, pharmacists and RACFs participating in the review largely reported that the program was effective and positively impacting on medication management practices within RACFs. However the authors noted the absence of program performance indicators and data, which prevented quantification of the extent to which program leads to improvement.

Medication management and medication adherence programs continue to be available under the 7th Community Pharmacy Agreement which commenced on 1 July 2020. These programs are designed to assist consumers and their carers to better manage their medicines. There are General Terms, [Program Rules for HMRs](#) and [Program Rules for RMMR services](#). These define who can provide HMRs and RMMRs:¹⁴²

- An owner of an approved Section 90 community pharmacy
- A business entity with an Australian Business Number (ABN) with a relationship with an accredited pharmacist (including sole traders).

The [Program Rules of 7th Community Pharmacy Agreement](#) for RMMRs require that a service agreement is in place between the residential aged care service provider and the RMMR service provider before any services are provided. Further, providers of RMMRs must retain all records for seven years to demonstrate that they have complied with the General Terms and the Program Rules of 7th Community Pharmacy Agreement.

GPs refer patients directly to an accredited pharmacist for an HMR or an RMMR. In April 2020 a revision to the Program Rules allow the following hospital-based doctors to refer patients directly to a community-based accredited pharmacist for a HMR or RMMR: specialist physicians; palliative care physicians; specialist pain physicians; and specialist psychiatrists. The Society of Hospital Pharmacists of Australia (SHPA) published a practice update [Hospital-initiated medication reviews](#) in November 2020.

The SHPA and the Australian Association of Consultant Pharmacists (AACP) accredit pharmacists to provide medication management reviews and Quality Use of Medicines services. A Quality Use of Medicines service is designed to improve procedures and practices related to Quality Use of Medicines within Australian Government-funded RACFs, and may be provided by a registered or accredited pharmacist. In 2021 there are approximately 2,500 pharmacists in Australia accredited to perform HMRs and RMMRs.

The 7th Community Pharmacy Agreement provides for the Residential Medication Management Review (RMMR), a service provided to a permanent resident of an Australian Government funded aged care facility. It is conducted by an accredited pharmacist, when requested by a resident's general practitioner and consented by the patient or their nominated representative, and undertaken in collaboration with the resident's general practitioner and appropriate members of the resident's healthcare team. A comprehensive assessment is undertaken to identify, resolve and prevent medication-related problems and is provided to the resident's general practitioner.

One RMMR service can be conducted every 24 months, or when the referrer deems a subsequent review is clinically necessary, such as when there has been significant change to the patient's condition or medication regimen. For example, if a patient is discharged from hospital back to their RACF with changes to their medicines included in the handover summary, this may warrant an RMMR.

From 1 March 2020, the maximum number of Home Medicines Reviews (HMR) able to be provided by accredited pharmacists each month was increased from 20 to 30.

Monitoring and compliance activities in relation to programs funded under the 7th Community Pharmacy Agreement, are undertaken by the Pharmacy Programs Administrator (PPA). The purpose of the PPA monitoring, compliance and audit activities is to ensure that service providers in receipt of 7th Community Pharmacy Agreement Program funds:

- Register, claim and deliver services in relation to each Program in accordance with the Program Rules
- Comply with the PPA General Terms and Conditions.

Appendix 3: Six Steps for Safe Prescribing antipsychotics and benzodiazepines in residential aged care

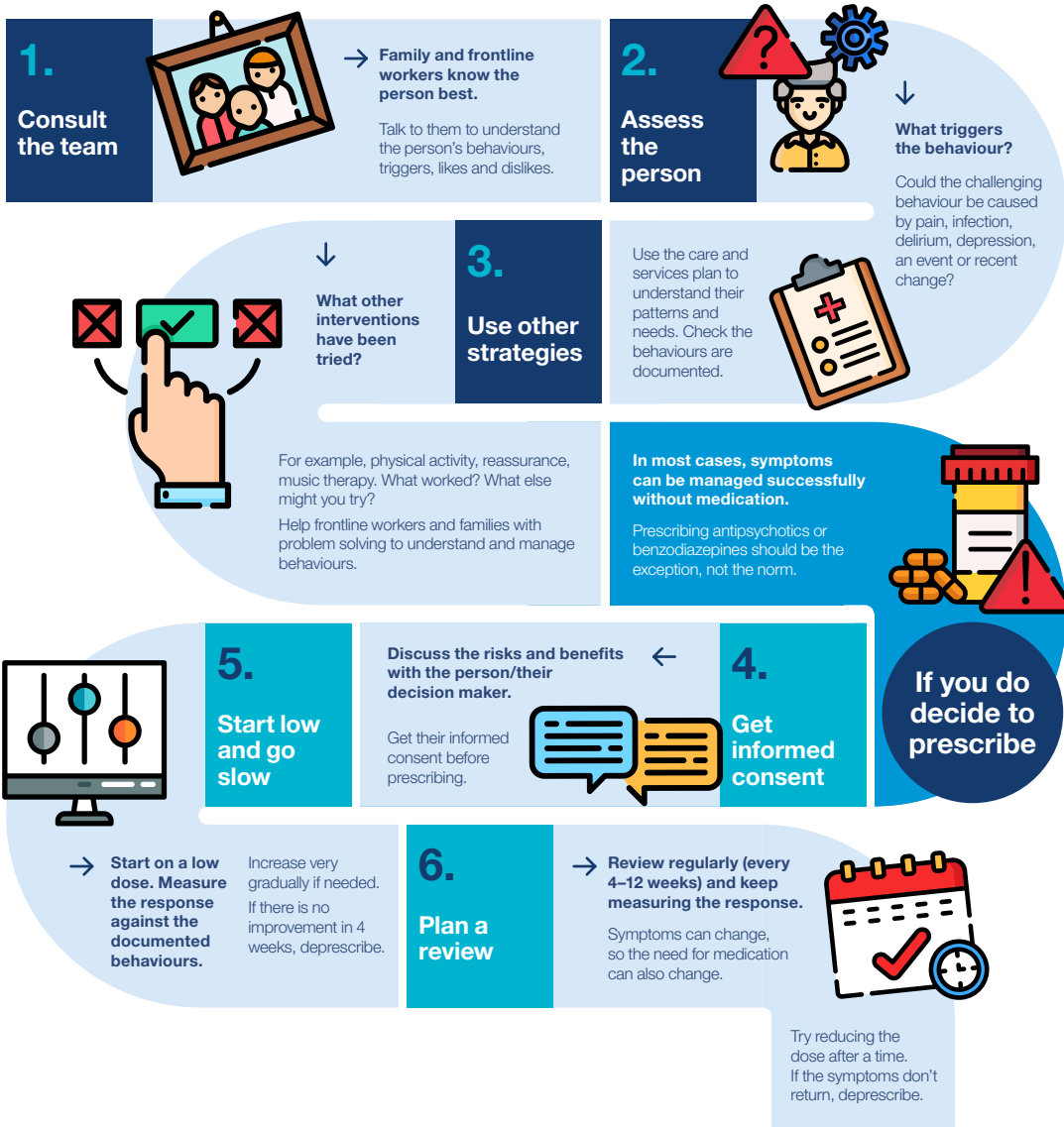
6 STEPS FOR SAFE PRESCRIBING

antipsychotics and benzodiazepines in residential aged care

Best practice for managing the behaviours and psychological symptoms of dementia uses a person-centred approach.

Antipsychotics and benzodiazepines have a very limited role in this area. They only work for a small percentage of people with specific indications. They also increase the risk of patient harm.

If you're thinking of prescribing these medicines to manage the behaviours and psychological symptoms of dementia, follow these 6 steps.



Appendix 4: Reducing inappropriate use of antipsychotics in people with behavioural and psychological symptoms of dementia (BPSD)

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE



REDUCING INAPPROPRIATE USE OF ANTIPSYCHOTICS in people with behavioural and psychological symptoms of dementia (BPSD)



Antipsychotics are medicines that can reduce symptoms of psychosis but have limited benefit for BPSD

Antipsychotics are overused for BPSD



Use of antipsychotics in Australia is **high** for BPSD in all settings



Around **1 in 5** residents in Australian aged care homes are prescribed at least one antipsychotic medicine



Guidelines recommend that antipsychotics **should not be used** as first-line treatment for BPSD

Inappropriate use of antipsychotics is a problem



For every **five** people with dementia given an antipsychotic, **only one will benefit**



Antipsychotics can cause harm and **increase the risk** of stroke, pneumonia and fractures



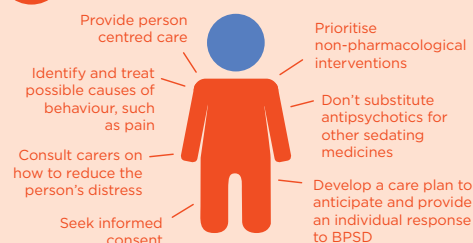
They are often used for **too long**, and without proper consent or monitoring



Only one antipsychotic (risperidone) is approved for BPSD on the PBS, and only to be used:

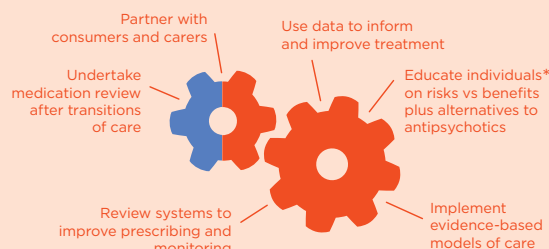
- on authority script for 12 weeks
- for dementia of Alzheimer's type with psychosis and aggression, and
- after non-pharmacological interventions have failed.

We can reduce inappropriate use



For individuals

*Prescribers, healthcare managers and workforce, consumers and carers



At organisational and systems level

www.safetyandquality.gov.au and cognitivecare.gov.au #BetterWayToCare

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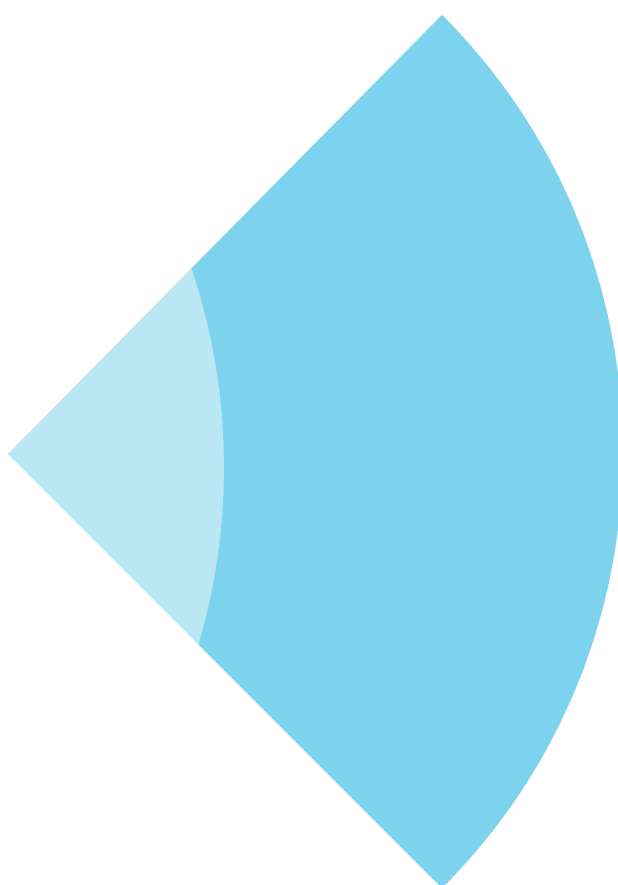
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