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Quality Use of Medicines and Medicines Safety (10th National Health Priority)

Discussion paper for public consultation
– Phase 1: Aged care

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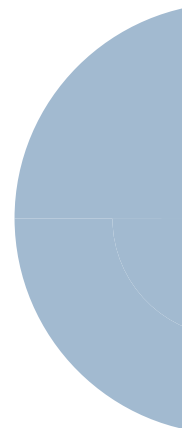
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Supporting Quality Use of Medicines and Medicines Safety

In November 2019 the Council of Australian Governments (COAG) Health Council agreed to Quality Use of Medicines and Medicines Safety becoming a National Health Priority Area (NHPA).

The Australian Commission on Safety and Quality in Health Care (the Commission) has been engaged to develop a national baseline report on Quality Use of Medicines and Medicines Safety.

The work to develop the national baseline report is divided into:

- Phase 1 focussing on aged care including polypharmacy, use of antipsychotic medicines and transitions of care
- Phase 2 investigating the broader issues of Quality Use of Medicines and Medicine Safety, as well issues of medication safety in other vulnerable populations.

The report from Phase 1 of the consultation will inform the development of the National Health Priority Area for quality use of medicines and medicines safety, through targeted, collaborative actions that reduce medication-related harm in aged care.

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.

Medicines include prescription, non-prescription and complementary medicines.

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

- the recognition of the primacy of consumers and their views
- the notion of partnership between key participants
- the 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
- the need to adopt and embrace system-based approaches.

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 exist:³

- 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.

How you can help

The Commission is seeking input from consumers, carers, clinicians, service providers and other stakeholders in the aged care sector to inform the development of Phase 1 of the national baseline report on Quality Use of Medicines and Medicine Safety.

The Commission is consulting with all stakeholders around Australia in August and September 2020.

Responses are due by close-of-business

Friday 2 October 2020.

You will be asked four key questions throughout this document, which focusses on polypharmacy, use of antipsychotic medicines and transitions of care in aged care:

- What is considered best practice in 2020?
 - What works and should be done more?
 - What doesn't work and should be done less?
- What are the system-wide challenges that need to be addressed?
- What are the gaps in current processes that inhibit achieving positive patient outcomes / best practice?
- How should we monitor progress towards quality and safe use of medicines in hospital patients who are residents in aged care facilities?

Introduction

Medicines are the most common intervention in healthcare.

An NPS MedicineWise 2018 survey⁴ 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 2017–18 Pharmaceutical Benefits Scheme subsidised prescription volumes increased by 0.8% to 204.1 million prescriptions, compared to 202.4 million for the 2016–17 financial year.⁵

While medicines can contribute to significant health improvement, 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 why and how to use their medicines.

In addition to medication-related problems such as errors and adverse events, others include:⁶

- 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 Organization Global Patient Safety Challenge – *Medication without harm*, aims to improve each stage of the medication process, including prescribing, dispensing, administering, monitoring and use.⁷

Australia's response to the third World Health Organization Global Patient Safety Challenge 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.⁸

A report⁹ by 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 report¹⁰ by the Pharmaceutical Society of Australia published in 2020, outlines the extent of medication-related problems, inappropriate medicine use, and administration errors in residential aged care facilities.



Phase 1: Aged Care

In the broader aged care sector, older Australians find it complex to navigate through the health care system.¹¹ One of the complexities is the use of medicines. Figure 1 provides a system map of medication management in Australia.

Australia has a large number of older people and many live in aged care facilities or require services at home to assist them with care. This consultation paper will focus predominantly on older people living in residential aged care facilities.

The systems and practices of ordering, prescribing, preparing and dispensing, administering and monitoring medicines for use by older people living in residential aged care facilities involves a range of health professionals, and carers. This adds to the complexity of medication management in residential aged care facilities.

Demographics

The Australian Institute of Health and Welfare report¹² that more than 1.2 million people received aged care services during 2017–18, with 77% receiving support in their home or other community-based settings. Of Australians aged 65 years and older in 2017–18, 7% accessed residential aged care, 22% access some form of support or care at home, and 71% lived at home without accessing government-subsidised aged care services. As at June 2018, 59% of people accessing residential aged care are aged 85 years or older.

As people get into their late seventies and eighties, they become frailer and less agile. Decline in cognition can also occur. People can develop one of the forms of dementia, or experience some memory loss. Older people who live alone or who lack family support may become withdrawn to the point of disengagement from friends and neighbours. Commonly older people are unwell when they move into permanent residential aged care.¹³

In 2017–18 there were around 270,000 people living in nearly 2,700 residential aged care facilities.¹⁴ In addition, more than half of residents were over 85 years, and half of those entering residential care will be there for two years or less.¹⁵

People increasingly develop illness as they age, which is frequently treated with medicines. 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 usage

The Australian Institute of Health and Welfare report *Australia's health 2018*, reported that in 2016–17 people aged 50 and over received 75% of all Pharmaceutical Benefit Scheme medicines dispensed, and the majority of Pharmaceutical Benefit Scheme prescriptions were dispensed to people aged 65 and over. In 2016–17, more than 280 million prescriptions were dispensed under the Pharmaceutical Benefits Scheme, and a further 9.3 million were dispensed under the Repatriation Pharmaceutical Benefits Scheme.¹⁶ Of the 280 million prescriptions dispensed under the Pharmaceutical Benefits Scheme in 2016–17, the cost of 202.4 million prescriptions were subsidised by the Australian Government.

Medicine complexity

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 older people taking multiple medicines, making them vulnerable to the adverse effects of medicines.

Medicines use in older people is a complex balance between managing disease and avoiding medicines-related problems such as side effects and medicine errors.¹⁷ 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.¹⁸

Complex medication regimens are highly prevalent in residential aged care facilities. A study¹⁹ 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 study,²⁰ 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. However, after four months no significant changes were reported in secondary outcomes or harms such as falls, medication incidents, hospitalisations and mortality. At 12-month follow-up,²¹ a higher incidence of falls was observed in the intervention arm, attributed to a high rate of falls in one residential aged care facility. There were no significant difference in hospitalisations.

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

Medicine adherence

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.²²

In older patients, medication adherence can be a major challenge. Smaje A et al²³ conducted a systematic review of factors associated with medication adherence in older patients, concluding that multi-morbidity, cognitive impairment, complex regimens with multiple prescribing physicians, and problems with medication storage or formulation were negatively associated with adherence, and frequency of medication review and patient knowledge regarding the purpose of the medicine were positively associated with adherence.

Medicine overuse

Aging places individuals at risk of multi-morbidity 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.²⁴

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.²⁵

A systematic review²⁶ 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 multi-disciplinary 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 be causing more harm than benefit. A Canadian study²⁷ 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.²⁸ In a 2016 paper, Roughead et al estimate that between 2% and 3% of all hospital admissions are medication-related in Australia.²⁹

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.

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

Mohanan et al³⁰ examined the extent and nature of 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.

They concluded that medication-related adverse events are a concern for both individuals living with and without dementia.

The 2019 *Medicine Safety: Take Care report*³¹ 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. Higher Drug Burden Index scores have been associated with poorer physical and cognitive function in community-dwelling older people without intellectual disabilities.³² Anticholinergic effects of medicines include dry mouth and related dental problems, blurred vision, tendency toward overheating, and in some cases, dementia-like symptoms.

In 2020, McDerby et al³³ reported on the impact of an on-site pharmacist on indicators of quality use of medicines in a residential aged care facility 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 is feasible and may positively influence quality use of medicines indicators. However further research with larger study populations across multiple sites is required to evaluate the effects of on-site pharmacists in improving the quality use of medicines for residential aged care home residents.

In 2019, the New South Wales Aged Care Roundtable published a report on avoidable hospitalisations from residential aged care facilities.³⁴ The report included a recommendation to improve medication management to address an important and direct cause of avoidable hospital admissions.

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.³⁵

The interim report of the Royal Commission into Aged Care Quality and Safety³⁶ highlighted the capacity, aptitude and capability of the aged care workforce as being extremely important given the complexity of the work involved and the responsibility borne by those involved in providing care and support for older people. The workforce serving the aged care sector comprises nurses, doctors, pharmacists, optometrists, 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.

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

Workforce training and education is required to equip workers with the knowledge and skills to provide quality 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 residential aged care facilities.³⁷

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.

Professional standards and guidelines

Aged care providers in Australia are expected to comply with the Aged Care Quality Standards,³⁹ 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.

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 boards have codes of conduct, guidelines and policies to provide guidance to the profession.

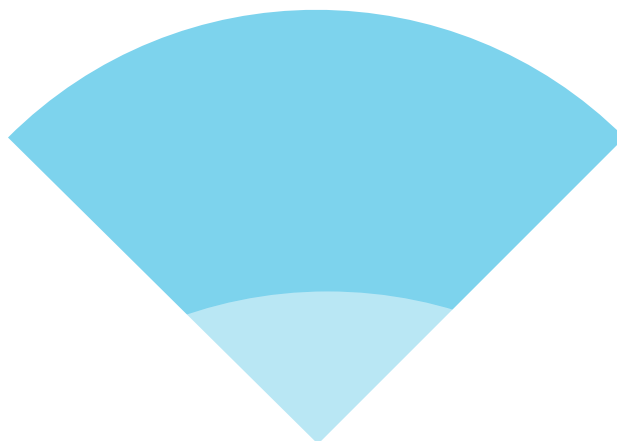
Many professional colleges and societies also have codes of conduct, guidelines and policies to provide guidance to the professions and for specific areas of professional practice, as the following examples illustrate.

The Royal Australian College of General Practitioners aged care guidelines⁴⁰ 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.⁴¹ 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.⁴² 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 revised its guidelines for pharmacists delivering Medication Management Review and Quality Use of Medicines services programs.⁴³ There is a single guideline focused on medication management reviews (including Home Medicine Reviews and Residential Medication Management Reviews) and a separate guideline on Quality Use of Medicines services. These guidelines aim to support pharmacists to deliver a high standard of professional pharmacist practice.





Topic 1:

Polypharmacy

The definition of polypharmacy definition used in this work is five or more medicines being used at the same time, including prescription, over-the-counter and complementary medicines.⁴⁴

Australian experience

In 2017–18, 204.1 million Pharmaceutical Benefits Scheme subsidised prescriptions were dispensed. Australians are also high consumers of complementary and over-the-counter medicines.⁴⁵

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.⁴⁶

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.⁴⁷

Prescribing in older adults is complicated by multi-morbidity, polypharmacy, age-related physiological changes, which alter medicine pharmacokinetics and pharmacodynamics, and the involvement of multiple healthcare providers.⁴⁸ 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.⁴⁹

A 2014 review of the literature,⁵⁰ 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 seven to 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 nine to 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 2015⁵¹ 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 2019,⁵² estimated the prevalence of polypharmacy amongst Australian aged 70 years and older in the period from 2006 to 2017. It increased from 33.2% in 2006 to 36.2% in 2017 amongst PBS concession cardholders.

The results of a cross-sectional study in long-term care facilities in regional and rural Victoria published in 2017,⁵³ 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.

The INSPIRED study⁵⁴ 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.

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 behavior has been identified as critical to the development of targeted interventions aimed at deprescribing potentially inappropriate medicines and reducing the risk of iatrogenic harm.⁵⁵

In a review published in 2020,⁵⁶ 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 2018.⁵⁷ They also publish a Therapeutic Brief on medicines as a contributor to falls and hip fractures in older people.⁵⁸

Medication management and medication adherence programs continue to be available under the 7th Community Pharmacy Agreement. These are designed to assist consumers and their carers to better manage their medicines.⁵⁹

In March 2020, the Pharmaceutical Society of Australia updated practice guidelines⁶⁰ for pharmacists on conducting medication management reviews and providing Quality Use of Medicines services to residential aged care facilities to incorporate current best practice when providing these services. These include guidance on considerations when recommending and undertaking follow-up after the initial review.

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.

To respond to the serious challenge in health and social care caused by the rise of multi-morbidity, 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 multi-morbidity: delivery, financing and performance (SELFIE) program. This program aimed to improve patient-centred care for patients with multi-morbidity. 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.⁶¹ The SELFIE framework in integrated care for multi-morbidity can be applied to different stakeholders to guide development, implementation, description and evaluation.⁶²

Published in 2019, a systematic review⁶³ 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 review of the clinical management of patients with multi-morbidity and polypharmacy published in 2018 highlighted that the complexity and heterogeneity of patients with multi-morbidity and polypharmacy often renders traditional disease-oriented guidelines inadequate, which complicates clinical decision-making. The authors concluded that medication reviews were at the core of the polypharmacy and multi-morbidity guidelines, and the review itself must take into consideration both patients conditions and treatments. Further, the separate production of guidelines addressing either multi-morbidity or polypharmacy seemed arbitrary and their combination would relieve the burden for developers and users. They argue that an integrated approach to multi-morbidity and polypharmacy should be considered for future guidelines.⁶⁴

In Europe, researchers provided a rationale for the use of the terms appropriate polypharmacy and inappropriate polypharmacy, with less emphasis on the number of medicines a person is taking. Appropriate polypharmacy is defined as optimal prescribing of multiple medicines. Inappropriate polypharmacy is defined as prescribing multiple medicines where potential harms outweigh the benefits. They state however, that polypharmacy does increase the likelihood of adverse drug events, medicine interactions, medication-related hospitalisations, and contributes to non-adherence and higher health care costs.⁶⁵

A study by researchers based in Belgium and Italy⁶⁶ 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 multistep 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.

A Canadian study published in 2018,⁶⁷ discussed the correlation of risk of adverse drug events to:

- very old age
- multiple co-morbidities
- dementia
- frailty
- limited life expectancy.

Polypharmacy was identified as the major contributor. The study points out that current clinical guidelines are based on evidence proven in younger/healthier adult populations using a single disease model. The study concludes that the application of these guidelines to older adults with multi-morbidity, 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.

In the United Kingdom, a number of approaches for medicines management in care homes have been suggested:⁶⁸

- A lead general practitioner (GP) for each care home
- Appropriate monitoring of patients taking high-risk medicines and all patient's 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.

In 2018, the Pharmaceutical Journal in the United Kingdom⁶⁹ announced that 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.

A study⁷⁰ published in 2019 conducted in Switzerland explored attitudes, beliefs, and concerns towards deprescribing among older, multimorbid 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 multimorbid 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.⁷¹

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 2019.⁷²

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.⁷³

A study from Finland published in 2019,⁷⁴ 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 study⁷⁵ 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.⁷⁶ 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.

For those living in residential aged care facilities regular assessment of their medicines via a Residential Medication Management Review provides the opportunity to assess and address medicine usage, appropriateness, adherence, and adverse events. The details of medication management reviews are outlined in Topic 3: Transitions of care.

In 2007–08 there were 39,036 services claimed for Item 903 – residential medication management reviews. By 2012–13, this had risen to 72,639 services, an increase of 86%. However, over the period since the number of services fell before stabilising at 71,785 services in 2018–19.

Discussion points for feedback

With the aim to reduce inappropriate polypharmacy in residential aged care facilities:

DISCUSSION POINT

What is considered best practice in 2020?

- What works and should be done more?
- What doesn't work and should be done less?

DISCUSSION POINT

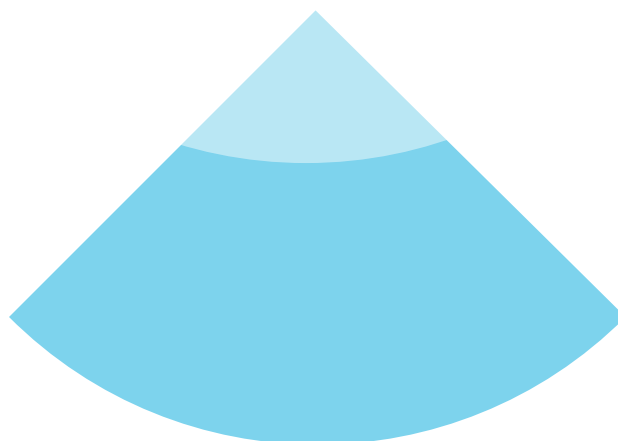
What are the system-wide challenges that need to be addressed?

DISCUSSION POINT

What are the gaps in current processes that inhibit achieving positive patient outcomes / best practice?

DISCUSSION POINT

How should we monitor progress towards quality and safe use of medicines in hospital patients taking five or more medicines per day, who are residents in aged care facilities?





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.⁷⁷

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

The interim report of the Royal Commission into Aged Care Quality and Safety identified significant over-reliance on chemical restraint in aged care facilities.⁷⁸

From 1 July 2019, residential aged care providers have specific responsibilities in relation to the use of physical and chemical restraint. Explicitly restraint must be a last resort. From 1 July 2019, the collection of three quality indicators were mandated for all Commonwealth subsidised residential aged care providers:

- Pressure injuries
- Physical restraint
- Unplanned weight loss.

The Australian Government Department of Health has engaged PriceWaterhouseCoopers to develop two new quality indicators:

- Falls and fractures
- Medication management.

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.⁷⁹

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 will improve medicine safety across the country.⁸⁰

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* (see Appendix A) provided information and resources that support the appropriate management of dementia in a residential aged care setting.

The Australian Commission on Safety and Quality in Health Care 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).⁸¹ The Comprehensive Care Standard within the National Safety and Quality Health Service Standards includes Action 5.35 – Minimising restrictive practices: restraint.⁸²

In 2018, the Australian Commission on Safety and Quality in Health Care published *Reducing inappropriate use of antipsychotics in people with behavioural and psychological symptoms of dementia* (BPSD) infographic (see Appendix B).

Australian experience

Around 305,000 Australians live with dementia in the community.⁸³ More than 50% of residents in Australian residential aged care facilities have dementia.⁸⁴ 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.⁸⁵

The Royal Australian and New Zealand College of Psychiatrists Professional Practice Guideline⁸⁶ supports first-line approach to management of behavioural and psychological symptoms of dementia with a person-centred, psychosocial, multidisciplinary treatment plan, as recommended by expert consensus guidelines.

Nonpharmacological interventions targeted at individuals included:

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

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/carer to do so by providing a full explanation of potential risks and benefits of the relevant treatment.

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.⁸⁷

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.⁸⁸ 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.

A fourth re-enforces 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 by the TGA 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:⁸⁹

- 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 symptoms of behavioural and psychological symptoms of dementia.

The RedUse study⁹⁰ 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 2019⁹¹ analysed use of psychotropic medicines in residents from 150 residential aged care residential facilities distributed nationally. 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 are urgently required.

The Halting Antipsychotic use in Long-Term care (HALT) deprescribing trial 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.⁹²

A study published in 2019⁹³ 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 suggest 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) makes eight recommendations on this topic.⁹⁴ The key recommendation is 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.

The Quality of Care Principles enacted under the *Aged Care Act* on 22 November 2019 regulate the use of restraint as a last resort.

International experience

A review of non-pharmacological management of behavioural and psychological symptoms of dementia⁹⁵ 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 2018⁹⁶ 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 2019⁹⁷ described 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 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.

Multi-disciplinary collaboration and engagement with family representatives is essential.

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

Discussion points for feedback

With the aim to reduce potentially, inappropriate prescribing of antipsychotics in residential aged care facilities:

DISCUSSION POINT

What is considered best practice in 2020?

- What works and should be done more?
- What doesn't work and should be done less?

DISCUSSION POINT

What are the system-wide challenges that need to be addressed?

DISCUSSION POINT

What are the gaps in current processes that inhibit achieving positive patient outcomes / best practice?

DISCUSSION POINT

How should we monitor progress towards the exchange of quality use of medicines in older people with behavioural and psychological symptoms of dementia?





Topic 3:

Transitions of care

Transitions of care between health care facilities 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 passing 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.⁹⁸

The Interim Report of the Royal Commission into Aged Care Quality and Safety released on 31 October 2019 highlighted that the experience of the older person transitioning from hospital, another facility or their home into residential care might be distressing.⁹⁹ Professional and organisational boundaries, communication and information sharing remain key challenges at transitions of care.¹⁰⁰

The 2019 paper by the Pharmaceutical Society of Australia, *Medicine Safety: Take Care*, 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 separation summary that addressed the issues related to the potentially inappropriate medicine.⁹

A study published in 2020¹⁰¹ aimed to determine the prevalence of potentially inappropriate medicine use at hospital admission and discharge, and the contribution to hospital admission among residential aged care residents aged 75 years or older, who were taking five or more medicines prior to hospital admission, with and without dementia. Ninety-one (50.3%) of the study participants had a diagnosis of dementia. Participants with dementia had less potentially inappropriate medicines. Potentially inappropriate medicine use was causal or contributory to the admission in 28.1% of study participants (n=45) who were taking at least one potentially inappropriate medicine at admission. The authors concluded over 80% of acutely admitted older adults took potentially inappropriate medicines at hospital admission and discharge and for over a quarter of these people, the admissions were attributable to potentially inappropriate medicine use.

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 review 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 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.

The study suggests that policymakers and providers could reduce unfinished care by focusing on modifiable factors such as staffing levels.¹⁰²

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

A study published in 2019,¹⁰³ evaluated interventions used to improve continuity of medication management upon transition of care from an acute hospital setting to a residential aged care facility. Three studies from Australia, three from the USA, and one from Sweden met the inclusion criteria. Of the seven studies, all interventions involved a multidisciplinary approach to discharge facilitation including the provision of medicine-related information at discharge. Six studies included pharmacist-led medication reconciliation. Two studies used a medication chart specific to the residential aged care facility. Interventions identified as improving continuity of medication management during transitions from hospital to residential aged care facilities include:

- Involving a multidisciplinary team
- Pharmacist-led medication reconciliation
- Provision of accurate discharge information.

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

A study published in 2020¹⁰⁴ 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. Pharmacist spent a median of five (range 2 to 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.

In recent years geriatric evaluation and management has become standard care for community dwelling older adults following an acute admission to hospital. A study¹⁰⁵ 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 Advanced Care Planning. It concluded that it is feasible to provide supported discharge service that includes geriatrician assessment and care planning within a residential aged care facility.

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

A study¹⁰⁶ published in 2017 examined the information gap in the transfer of older people from residential aged care facilities to emergency departments in southern Tasmania. It concluded transfer documentation from residential aged care nurses, paramedics and emergency department triage nurses do not contain comprehensive information of older persons' complex conditions. Better communication between non-affiliated organisations was identified as needed to improve timely appropriate care for residential aged care facility 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 minimize the administrative burden of prescribers, aged care staff and pharmacists when ordering, administering or supplying medicines.¹⁰⁷

A 2017 study¹⁰⁸ 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 National Residential Medication Chart.

In 2020, the Pharmaceutical Society of Australia published *Medicine Safety: Aged Care*. It stated 20% of unplanned hospital admissions for aged care residents are a result of inappropriate medicine use.¹⁰

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.¹⁰⁹ 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 (five or more regular medicines daily)
- High-risk medicine
- Lives alone
- Rural/remote
- Mental health diagnosis or cognitive impairment
- Age older than 65 years or older than 45 years if Aboriginal or Torres Strait Islander
- Chronic co-morbidities
- Indigenous or interpreter required
- Extended length of hospital stay (five or more days).

To access the service the patient must have either polypharmacy, or be taking a high-risk medicine.

In Victoria, the Hospital Admission Risk Program (HARP)¹¹⁰ 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) Program¹¹¹ 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.

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.¹¹²

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.¹¹³ From 1 March 2020, accredited pharmacists are able to provide up to 30 Home Medicine Reviews per month, an increase of the 20 Home Medicine Reviews per month cap, which has existed since February 2014.

The complementary 7th Community Pharmacy Agreement program is the Residential Medication Management Review, 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 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.

The general practitioner is remunerated for participating in a Home Medicine Review under Medicare Benefits Schedule Item 900,¹¹⁴ and for participating in a Residential Medication Management Review under Medicare Benefits Schedule Item 903.¹¹⁵

Under the 7th Community Pharmacy Agreement program there is also the separate Quality Use of Medicines service 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. The 7th Community Pharmacy Agreement commenced on 1 July 2020.

With the evolution of digital health technologies there may be an enhanced role for the use of % 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 program¹¹⁶ 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 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 National Residential Medication Chart (NRMCC) were outlined earlier in this section. The NRMCC can provide a record of medicine use, communication of information at transitions of care is a common source of error.

Pharmacy GRIT (Autumn 2020) highlighted such a case, where it was identified that two out of three pages of medicine-related information had somehow been lost at points during transitions to a residential aged care facility. At the Emergency Department presentation, the error was identified by the Emergency Department pharmacist. Improved collaboration between GPs, directors of nursing at the residential aged care facility, and pharmacists (supply and medicine review) has been implemented. These aim to avoid unnecessary Emergency Department presentations, and to address governance issues around medication safety feedback.¹¹⁷

In 2017, the Australian Commission on Safety and Quality in Health Care published National Guidelines for On-Screen Presentation of Discharge Summaries.¹¹⁸ The guidelines were developed through extensive research, consultation and iterative testing with more than 70 clinicians. The guidelines specify the sequence, layout and format of the core elements of hospital discharge summaries, as displayed in clinical information systems. Appendix A of the guidelines provides a sample discharge summary. While this template was developed for electronic clinical information systems used in health service organisations, it has potential to be applied as a handover summary in hard copy in environments dependent on paper records like parts of the aged care sector.

International experience

In a study from the United Kingdom, patients report 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.¹¹⁹

A systematic review of the prevalence of medication errors resulting in hospitalisation and death of nursing home residents was published in 2017.¹²⁰ Medication errors were common, involving 16% to 27% of residents in studies examining all types of medication errors and 13% to 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% to 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 study¹²¹ 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 study 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.¹²²

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 tool is in development¹²³ 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.

A study¹²⁴ 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, five were related significantly to hospitalisation:

- Pressure sores
- Bladder continence
- Antipsychotics without a diagnosis of psychosis
- Unexplained weight loss
- Activities of daily living.

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.

This study highlights the link between the use of antipsychotics in residential aged care facilities and potentially preventable hospitalisation.

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 multi-disciplinary 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, medication review pharmacists, directors of nursing, carers and family members.

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.

Discussion points for feedback

With the aim of improving quality and safe use of medicines through transitions of care to and from residential aged care facilities:

DISCUSSION POINT

What is considered best practice in 2020?

- What works and should be done more?
- What doesn't work and should be done less?

DISCUSSION POINT

What are the system-wide challenges that need to be addressed?

DISCUSSION POINT

What are the gaps in current processes that inhibit achieving positive patient outcomes / best practice?

DISCUSSION POINT

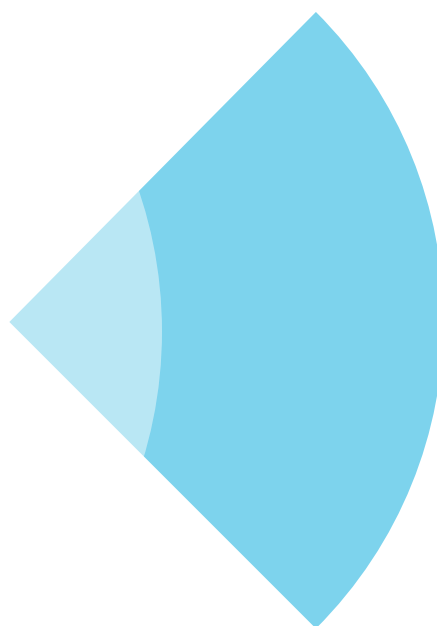
How should we monitor progress towards the exchange of quality use of medicines and medication safety information at transitions of care?

Conclusion

This public consultation document asks respondents to consider the issues raised in Phase 1 focussing on quality use of medicines and medicines safety in residential aged care facilities on the three topic areas:

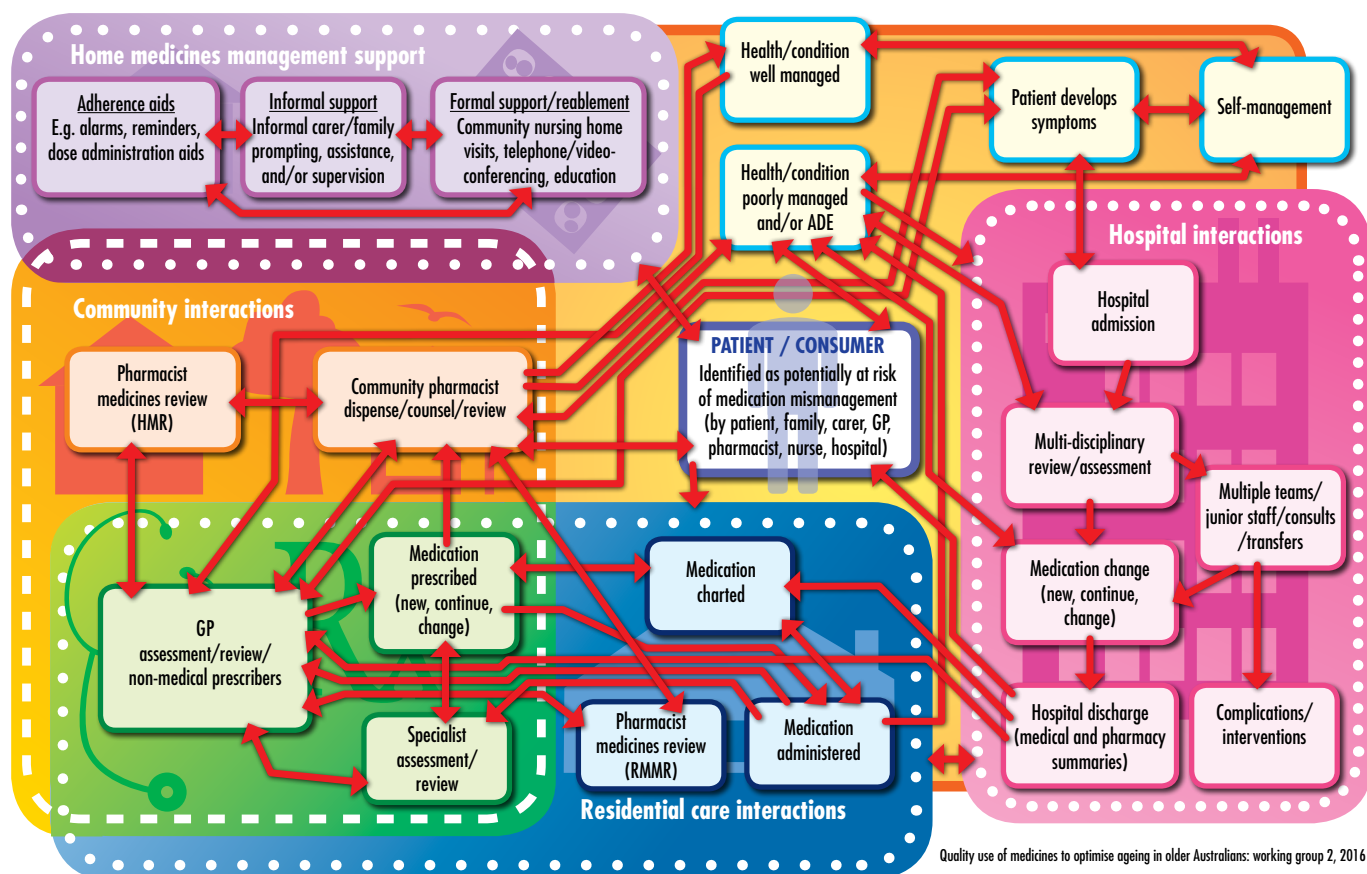
- Polypharmacy
- Use of antipsychotic medicines
- Transitions of care.

The responses from this Phase 1 consultation will inform the development of the National Health Priority Area for quality use of medicines and medicines safety.



Figures

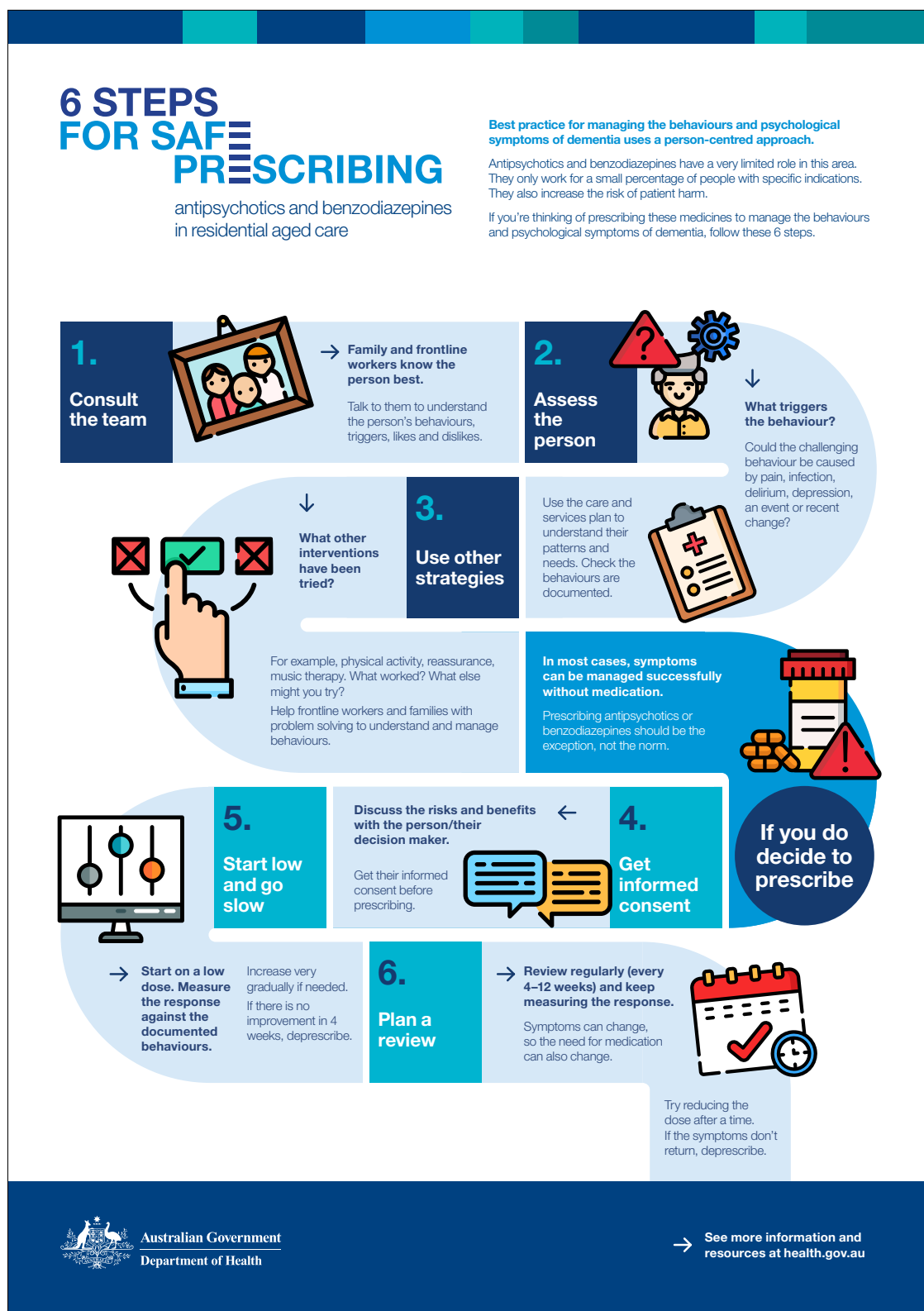
Figure 1: System map of medication management in Australia



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

Appendices

Appendix A: 6 Steps for Safe Prescribing antipsychotics and benzodiazepines in residential aged care



Appendix B: 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



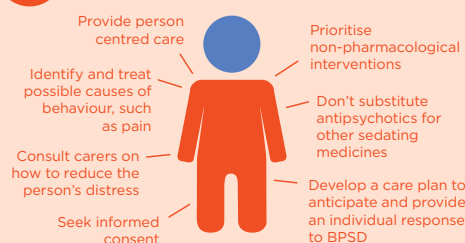
They are often
used for **too long**,
and without proper
consent or monitoring



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

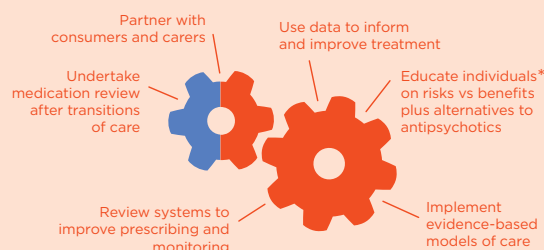
- on authority script for 12 weeks
- for dementia of Alzheimer's type with psychosis and aggression, and
- after non-pharmacological interventions have failed.

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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