Best Practice Guidance for Medicines Use by Nurses in Aged Care

2025

Australian Nursing & Midwifery Federation

Best Practice Guidance for Medicines Use by Nurses in Aged Care

Author: Australian Nursing and Midwifery Federation (ANMF)

Prepared by Julianne Bryce, Naomi Riley and Jane Douglas, ANMF Professional Officers in consultation with the ANMF Professional Advisory Committee.

Special thanks to ANMF Technical Officer, Kristy Male and ANMF Librarian and Research Officer, Elizabeth Reale for assistance with the design and referencing of the document.

ISBN: 978-0-909599-13-3

© Copyright Australian Nursing and Midwifery Federation, January 2025.

For referencing: Australian Nursing and Midwifery Federation. Best Practice Guidance for Medicines Use by Nurses in Aged Care. Melbourne. ANMF. 2025.

Contents

Foreword 5
Who are these guidelines for? 7
Introduction 7
Characteristics of people receiving aged care and the quality use of medicines 8
Guiding Principles 10
Principle 1: Person-centred care 10
Principle 2: Quality use of medicines 11
Principle 3: Evidence-based practice 12
Principle 4: Safe administration 12
Medicines management by nurses 13
Regulatory requirements 15
Safe staffing 15
Consent 16
Prescribing and de-prescribing 17
Prescribing 17
De-prescribing 17
Dispensing, supply, storage and disposal of medicines 18
Dispensing and supply 18
Supply of medicines 18
Storage of medicines 18
Disposal of medicines 19
Modifying medicines 19
Administration of medicines 19
Self-administration 21
Difference between prompting, assisting with and administering medicines 21
Dose administration aids 22
Compartmentalised medicines box 23
Administering medicines to a person with dysphagia (swallowing difficulties) 23
Use of complementary, alternative and self-selected non-prescription medicines 24
Medicine incidents and reporting 24
Ongoing assessment and medicines efficacy 25
Documentation 25
Initiation of medicines by nurses 26
When required 'p.r.n.' medicines 26
Prescription medicine treatment protocols 26
Non-prescription nurse-initiated medicines 26
Achieving continuity of medicines supply 27
Emergency supply 28
Use of electronic medicines management resources and tools 29
Medicines Governance 31
Nursing home service provider responsibilities 31
Medicines governance group 32
Medicines monitoring and quality improvement 34
Conclusion 35
Glossary 36
References 43

Foreword

As our global population ages, the demand for exceptional care in aged care settings has never been more critical. The role of nurses in these environments is pivotal, not only in delivering compassionate care but also in ensuring the safe and effective use of medicines. In this context, the guidance provided in this document on best practice for medicines use by nurses in aged care is both timely and essential.

This comprehensive guidance is the result of an extensive and detailed review of the ANMF *Nursing Guidelines: Management of Medicines in Aged Care*, reflecting the ANMF's commitment to enhancing the quality of care in aged care settings.

Medicines can profoundly impact the quality of life and overall health outcomes for older people. However, their use in aged care settings presents unique challenges. Nurses, who are on the front line of care, must navigate these complexities with skill, diligence, and an unwavering commitment to safety. This guidance is designed to support them in this crucial role.

The principles outlined are grounded in evidence-based practice and reflect the latest advancements in pharmacology and nursing care. By adhering to best practice, nurses can enhance their ability to manage medicines effectively, reduce the risk of adverse effects, and optimise therapeutic outcomes for the elderly.

This document is not just a set of instructions; it is a tool for empowerment. It provides nurses with the knowledge and confidence needed to make informed decisions about medicines management, to communicate effectively with other health practitioners, and to advocate for the best possible care. While this edition primarily addresses care in nursing homes, its principles are equally applicable to aged care services provided in the community.

I would like to extend my sincere gratitude to the expert practitioners who contributed to the development of this guidance. Your dedication to improving care standards and advancing nursing practice in aged care is commendable.

As we move forward, let us remember that our commitment to excellence in medicines use is a fundamental aspect of our broader endeavour to enhance quality of life for the people for whom we provide care. It is through continuous learning, adherence to best practice, and a shared commitment to excellence that we can truly make a difference in the lives of older people.

It is my hope that this guidance serves as a valuable resource and inspires ongoing improvement in aged care practice. Together, let's strive to enhance the quality of care and support for our ageing population.

Annie Butler
Federal Secretary
Australian Nursing and Midwifery Federation

Who are these guidelines for?

These guidelines support the quality use of medicines in nursing homes by providing clear direction to registered and enrolled nurses. They have been designed to assist registered and enrolled nurses to perform their respective roles in medicines management and administration in accordance with the ***Health Practitioner Regulation National Law Act 2009*** (the National Law)[1] and the Nursing and Midwifery Board of Australia (NMBA) standards for practice.[2,3] The guidelines also offer direction to other **health practitioners, health professionals, care workers** (however titled) and health and nursing home service providers on the role of registered and enrolled nurses in medicines management and administration in nursing homes. **Registered nurses** and **enrolled nurses** are responsible for administering medicines in nursing homes.

Introduction

Medicines (TGA Schedules 2, 3, 4 and 8) are substances used to prevent, treat, monitor or cure disease. This includes, but is not limited to, prescription, complementary and non-prescription medicines. Some are available over the counter and others require a prescription.

While **medicines** make a significant contribution to the treatment of ill health, the prevention of disease, increasing life expectancy and improving health outcomes, they also have the potential to cause harm.[4] To minimise the risk of harm, the quality use of medicines requires systems and processes that cover initial assessment through to post administration monitoring, evaluation and quality improvement strategies.[5]

A key aspect of these systems and processes is having the right health practitioners responsible for medicines management.

The **Aged Care Royal Commission** has identified numerous instances of inappropriate medicines management across the aged care sector.[6] The inappropriate use of medicines exposes people receiving aged care services and living in nursing homes to risk and harm. The skill mix of staff who provide care in nursing homes does not always align with the needs of older people. A trend toward increasing numbers of care workers and decreasing numbers of registered nurses in the workforce, challenges the systems and processes of medicines management that are required to support quality use of medicines for older people. Registered nurses, in consultation with medical practitioners, **nurse practitioners** and pharmacists, have the education, skills and expertise for medicines management. Registered nurses and enrolled nurses, under the direction and supervision of a registered nurse, are the appropriate health practitioners to administer medicines in nursing homes to people unable to self-administer their medicines. Care workers (however titled) have no role in medicines management or administration. It is imperative that all those working in the aged care sector, including nursing home service providers, have a clear understanding of their own, and other health practitioners and health professionals' roles and responsibilities in medicines management, and that each work within those boundaries to ensure the safe and quality use of medicines.

Characteristics of people receiving aged care and the quality use of medicines

Approximately one in every six people living in Australia is aged 65 years and over and is classified as an **older person**.[7] Half of these people are living with a disability and over half of those living with a disability have a moderate, profound or severe limitation[8] with the rate of disability increasing with age. The burden of disease also increases with age.

The majority of older people living in Australia live in the community and are supported by informal and formal carers.[5] Approximately 4-5% of older people living in Australia live in nursing homes.[9]

Of these people:

- Over 80% have medium or high need for assistance with activities of daily living, cognition and behaviour, and complex health care;
- 99.5 % have complex care needs;
- 96.3 % have cognition or behaviour deficits; and,
- 99.6 % have care needs for activities of daily living.[7]

With increasingly complex health needs, older people are more likely to be prescribed multiple medicines. Over 90% of people receiving care in nursing homes are prescribed more than four concurrent medicines, with an average of 9.75 medicines prescribed per person.[10] The use of five or more medicines daily, including **prescription medicines, over the counter (OTC) medicines** and **complementary medicines** is defined by the term **polypharmacy**. Polypharmacy is a significant risk factor for adverse medicines events and poor outcomes in medicines use.[11] Older people are at greater risk of adverse medicines events due to the number of medicines they are likely to be taking.

The risks of polypharmacy can be compounded by the increased prevalence of high-risk medicines used to manage conditions commonly experienced by older people. The Australian Commission on Safety and Quality in Health Care (ACSQHC) has developed the **APINCHS safety improvement list** for identifying medicines with high potential for harm.[12] The likelihood of older adults receiving medicines such as antibiotics, opioids and other sedatives, and anticoagulants increases with age and/or comorbidity.[13]

APINCHS SAFETY IMPROVEMENT LIST

Antimicrobials

Potassium and other electrolytes

Insulin

Narcotics (opioids) and other sedatives

Chemotherapeutic agents

Heparin and other anticoagulants

Systems

Figure 1: ACSQHC APINCHS classification of high-risk medicines[9]

The risk associated with medicines use and medicines related harm for people living in nursing homes is heightened by factors that affect continuity of medicines, for example when a person moves between health services or care providers. During such transitions, delays in administration of medicine/s or omissions may occur. Prevalence of **medicines discrepancies** during **transitions of care** is a global problem. Estimates suggest medicines discrepancies, during or resulting from transitions of care, occur for 27-55% of people living in nursing homes.[14]

Older people in Australia, particularly those living in nursing homes, are characterised by increasing and significant care needs, comorbidities and polypharmacy. These factors along with altered **pharmacokinetic** and **pharmacodynamic** changes associated with ageing, contribute to an increased risk of serious adverse medicines events and harm caused by medicines.[15] These relationships are illustrated in Figure 2. A systematic review of studies published between 2000 and 2015 found medicines errors in nursing homes were common, occurring for 16-27% of the residents of facilities included in the studies.[16] This is compared to fewer than 2% of adverse medicines events for all admissions to hospital services.[17, 18]

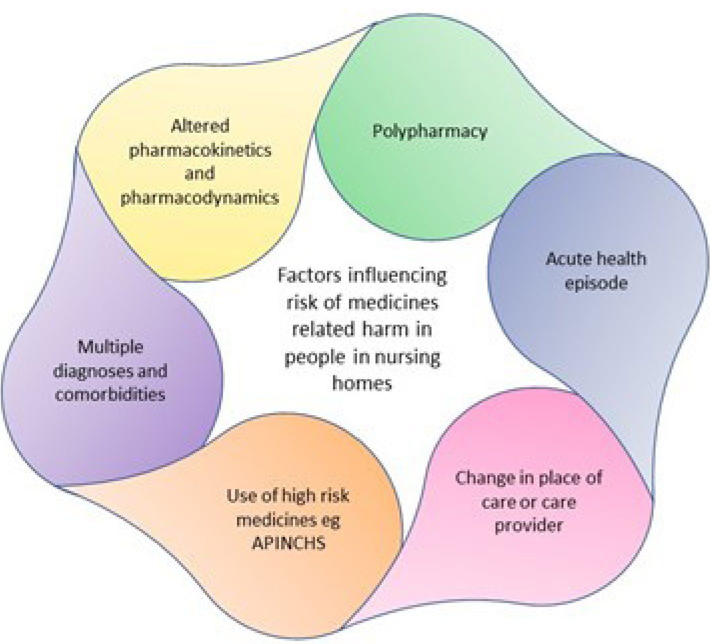

Figure 2: Risk factors for medicines related harm in nursing homes

Quality use of medicines and medicines management for older people involves a multifaceted approach. Outlined in Figure 3, health practitioners, service providers, and people receiving care can contribute to systems and practices that support safe medicines use. As health practitioners with knowledge, expertise and skill in medicines management, registered and enrolled nurses play a critical role in each of these systems.

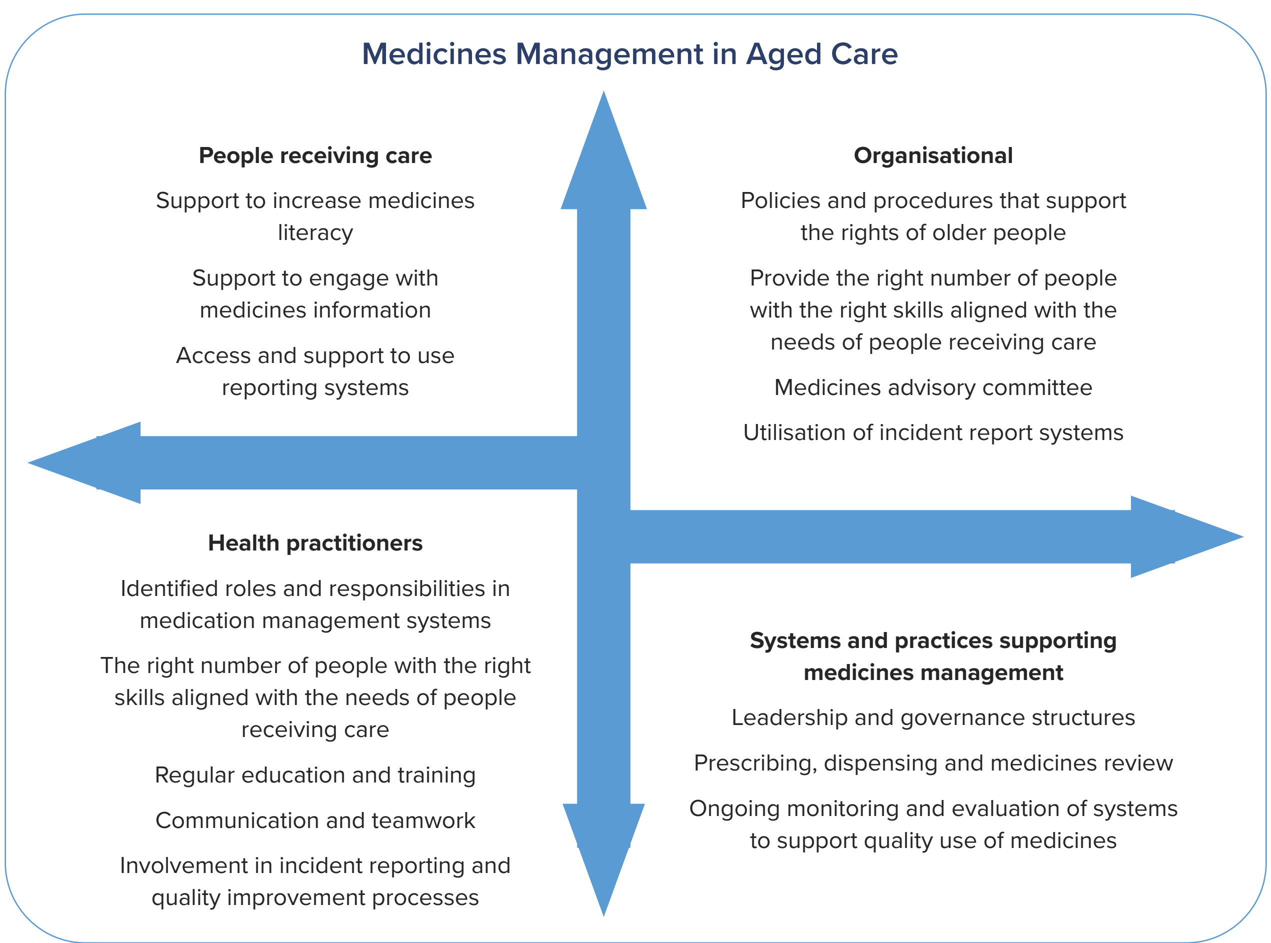

Figure 3: Responsibilities and systems for medicines management in nursing homes

The next section will outline the principles underpinning the approach used in this resource to guide the management of medicines by nurses caring for people living in nursing homes.

Guiding Principles

These guidelines are underpinned by principles, which provide the foundation for safe, high quality medicines management.

Principle 1: Person-centred care
Principle 2: Quality use of medicines
Principle 3: Evidence-based care
Principle 4: Safe administration

Principle 1: Person-centred care

Person-centred care is care that is respectful of, and responsive to, the preferences, needs and values of the individual person receiving care.[19] It recognises the value of the person's experience and expertise regarding their health.

Person-centred care upholds the rights of people living in nursing homes and receiving aged care services. It supports their access to health practitioners who have the education, skills, expertise and time to assess, plan, implement, monitor and evaluate care, specifically designed to address their individual needs. Person-centred care acknowledges the power of partnerships between individuals and health care providers for achieving optimal health outcomes. The provision of person-centred care also means that nurses use **cultural humility** to create environments where Aboriginal and Torres Strait Islander peoples and their families feel culturally safe. Nurses have a professional responsibility to be familiar with and understand the concepts of **cultural safety** and strategies to develop culturally safe environments.[20]

Person-centred care is integral to upholding a person's healthcare rights and the rights of older people receiving care services across diverse populations and contexts. The *Australian Charter of Healthcare Rights*[21] describes what a person, or someone they care for, can expect when receiving health care. More specifically, the *Charter of Aged Care Rights*[22] describes the rights of older people. Figure 4 identifies the link between person-centred care and the rights of older people as they relate to medicines management.

Rights of people living in nursing homes and medicines management

It is the right of older people living in nursing homes to:

- choose their own health care provider;
- make decisions related to treating their medical condition with a medicine, tolerance for medicines adverse effects, use of alternative treatments, use of contemporary medicines;
- consent, or refuse consent, to a medicine;
- manage their own medicines where possible;
- receive regular review of their medicines by appropriately qualified health practitioners*;
- confidentiality in relation to their medicines;
- have a medicine storage system which maintains their privacy as well as security of their medicines;
- receive education, counselling and advocacy in relation to their medicine use;
- receive their medicines in a manner which maintains their dignity and safety;
- receive safe and high quality health care that meets their needs with respect to medicines management and administration;
- know which pharmacist is dispensing their medicines; and
- nominate their preferred pharmacist.

* *Appropriately qualified health practitioners* are those recognised through regulation to have the education and expertise to provide medicines management and administer medicines including registered nurses, enrolled nurses (without notation), nurse practitioners, medical practitioners and pharmacists.

Figure 4: Rights of older people and medicines management

Principle 2: Quality use of medicines

Quality use of medicines (QUM) is one of the core objectives of Australia's *National Medicines Policy*[23]. It relates to using medicines judiciously, safely and only when necessary. Figure 5 illustrates the principles of QUM.

It is essential that the principles underpinning the quality use of medicines inform practice, processes and systems pertaining to medicines use in all health and aged care services. Older people are particularly vulnerable to medicines related harm due to the effects of ageing, prevalence of chronic health conditions, co-morbidities and polypharmacy. Health practitioners have a responsibility to use their knowledge, skills and expertise to assess, analyse and monitor the suitability of commencing, continuing or ceasing medicines as a core component of medicines management and review for older people.

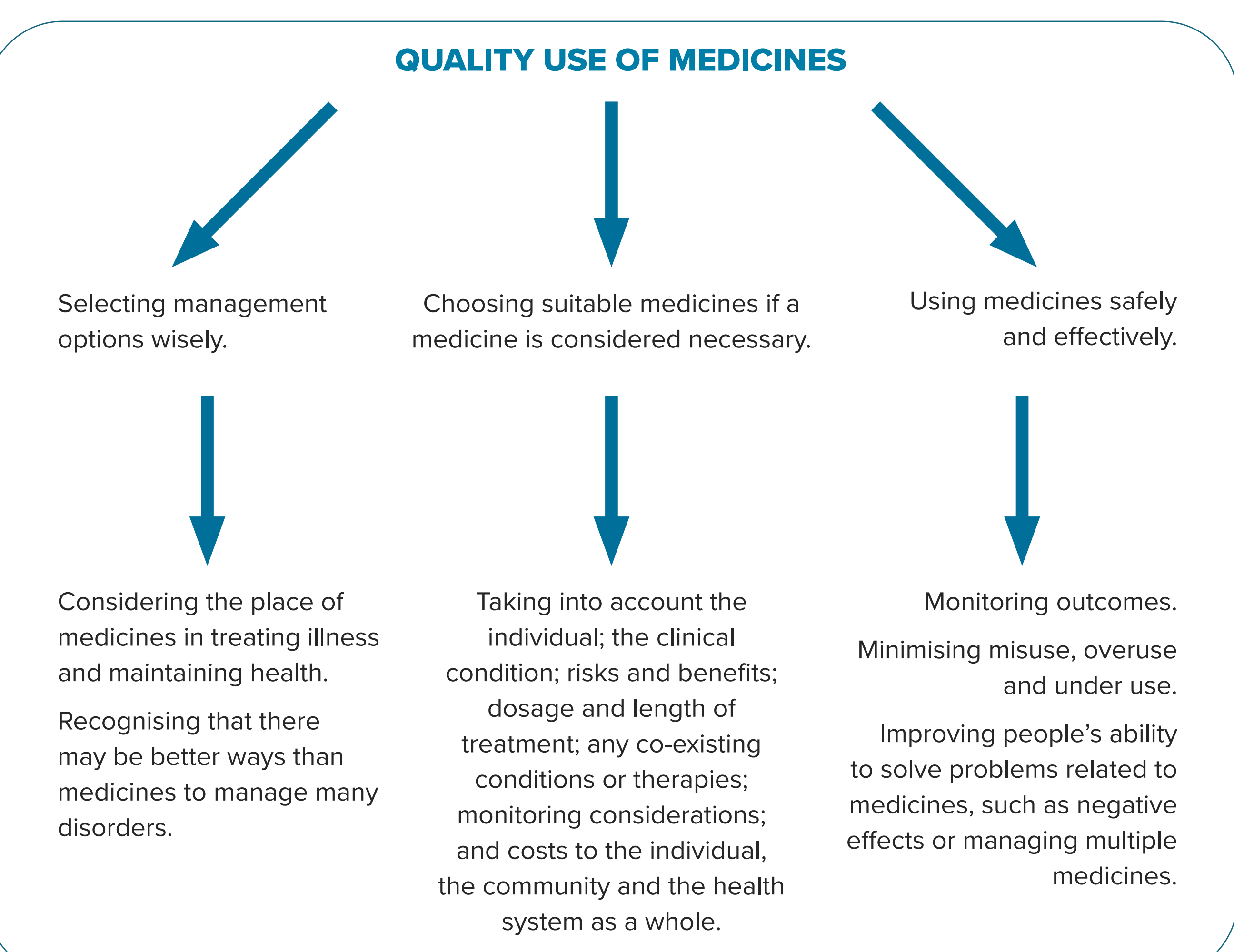

Figure 5: Quality Use of Medicines Framework adapted from Australia's National Medicines Policy[24]

Principle 3: Evidence-based practice

Evidence-based practice is applying and integrating research and other forms of knowledge with clinical decision-making and the values of people receiving care. In doing so, the safety and efficacy of care is optimised.[25] It is essential that evidence-based practice underpins medicines management across all contexts of care including care delivered to people living in nursing homes.

Medicines use has changed over time in response to the emergence of new evidence. For example, antimicrobial resistance is a global problem making it increasingly difficult to treat bacterial infections. Evidence suggests that antibiotics should be used more judiciously to balance benefit against potential harm.

Principle 4: Safe administration

Safe **administration of medicines** requires sound governance, leadership and commitment.[26] Medicines safety is a complex process and demands health practitioners who are educated to manage and administer them. Safe administration of medicines involves health practitioners regulated under the National Law who have the ability to undertake a complex process of clinical assessment and analysis to:

- Assess a person's capacity to give informed consent or refuse to take a medicine;
- Understand the indications and contraindications for the use of a medicine and act accordingly;
- Perform and document appropriate observations and assessments as required prior to and/or after administration of a medicine;
- Comprehend the interactions and side effects of the medicine being administered;
- Recognise and report incidences involving administration errors and respond correctly;
- Assess for efficacy or side effects of the medicine; and
- Communicate relevant information and assessments to other health practitioners promptly, including those prescribing and supplying the medicine. This is complicated due to the physical separation between prescribers, pharmacists and nurses[27] making effective communication processes essential.

Quality and safety processes in nursing homes, including safe administration of medicines, are the responsibility of those governing, managing and delivering care. This responsibility encompasses:

- Sound governance including developing, implementing, and reviewing policies, processes and guidelines that support safe administration of medicines;
- The provision and monitoring of incident management systems and processes for reporting medicine errors and near misses;
- Forming, convening and maintaining a **medicines governance group**, for example a **Medicines advisory committee (MAC)**, to oversee medicines management and quality improvement in the nursing home;[28] and
- Safe practice by ensuring medicines management and administration is undertaken by a health practitioner who is regulated and educated in the safe use of medicines including administration. This involves supporting health practitioners through education and ongoing professional development.

Medicines management by nurses

Medicines management involves the supply, storage, compounding, manufacture, assessment, prescribing, dispensing, administering, monitoring and safe disposal of medicines.[29]

Registered nurses and enrolled nurses are educated, experienced and skilled in the safe use of medicines for people receiving care in nursing homes. All nurses must have current evidence-based knowledge and be familiar with and adhere to the drugs and poisons legislation for the state or territory in which they work. Medicines management and administration is far more than a task. It involves complex assessment and synthesis of existing knowledge with new information about the person, in order to make evidence-based clinical decisions that are safe and person-centred.

This section describes the scope of practice of registered nurses and enrolled nurses in medicines management and administration, and includes the complex clinical decision-making processes involved from consent for, through to documentation of, administered medicines. The final part of this section addresses initiation of medicines by nurses and other considerations to ensure **continuity of medicine supply**. All processes detailed in this section are underpinned by thorough, holistic assessment by the registered nurse responsible for the management of medicines. The list below illustrates the areas that are addressed.

Registered nurses collaborate with other health practitioners to provide comprehensive medicines management processes. They are educated to assess the benefits and potential hazards in the use of medicines and to administer medicines safely and legally, as well as to monitor their efficacy and identify any adverse effects. Registered nurses have the skills and knowledge to assess the individual and changing needs of the older person; plan and implement care accordingly; understand when to withhold medicines and liaise with the prescriber; evaluate the person's response to medicines; and accurately communicate that information. Registered nurses provide a vital link between the older person and other health practitioners such as nurse practitioners, medical practitioners, pharmacists, enrolled nurses, allied health practitioners and allied health professionals.

Nurse practitioners are registered nurses endorsed as nurse practitioners by the NMBA following successful completion of a Master's degree. They practice at an advanced level, demonstrate leadership, provide education, participate in research, manage systems, meet and comply with the NMBA *Nurse Practitioner Standards for practice*[30], provide direct clinical care and practice within their scope using the protected title 'nurse practitioner' under the National Law. Nurse practitioners' role in medicines management includes and builds on that which is provided by registered nurses. They use advanced, comprehensive assessment techniques and prescribe therapeutic and diagnostic interventions including the prescription of medicines.

Enrolled nurses work under the direction and supervision of registered nurses and practice within legislative and regulatory requirements. They play a key role in medicines administration in nursing homes. According to the NMBA, all enrolled nurses may administer medicines except for those who have a notation on their registration that reads 'Does not hold Board-approved qualification in administration of medicines'.[31] Employers and nursing home staff need to be aware of and comply with the NMBA requirements as the national regulator and their state and territory drugs and poisons legislation relating to enrolled nurses and medicines administration, as well as the professional scope of practice of nurses. Enrolled nurses without a notation work under the direction and supervision of a named and accessible registered nurse who is onsite to administer medicines. At all times, the enrolled nurse retains responsibility for their actions and remains accountable to the registered nurse for all delegated functions. An enrolled nurse cannot delegate administration of medicines to any other worker.

All nurses should be aware that the NMBA would take conduct action against an enrolled nurse who does not have a Board-approved qualification in medicines administration if they administer medicines, as well as action against the registered nurse who allowed them to do so, due to the substantial risk of harm to the older person.

Care workers (however titled) can assist older people with self-administration of their medicines however do not manage or administer medicines. As an integral part of the aged care workforce, care workers provide other aspects of nursing care to support and enable nurses to manage and administer medicines safely and effectively. It is important for care workers, employers and other nursing home staff to understand that specific nursing home policies, processes and in-house education claiming to prepare and authorise care workers to manage or administer medicines do not meet the legal and regulatory requirements for safe medicines management or administration.

Regulatory requirements

The NMBA sets the registration standards, standards for practice and codes of conduct and ethics for nurses. Nurses are responsible and accountable for their practice to the NMBA, whose role is to protect the public. The NMBA regulatory requirements must be met and take priority over all other standards and/or codes.

The NMBA *Code of conduct for nurses* provides nurses with a personal and professional code that must be adhered to as a regulated health practitioner. The Code requires all nurses to practice in accordance with wider standards relating to safety and quality in health care.[32]

The NMBA ***Decision-making framework for nursing and midwifery***[33] provides nurses with guidance on decisions relating to scope of practice, delegation and supervision. It states that:

- Registered nurses, as delegators, play a key role in the coordination and delegation of care. The delegation of care should be made following a risk assessment by the registered nurse identifying the competence of staff (p9);
- Enrolled nurses work under the direction and supervision of registered nurses;
- Organisations where nurses work must ensure there are sufficient resources to enable safe and competent care for people for whom healthcare services are provided (p2);
- The substitution of care workers for nurses must not occur when the knowledge and skills of nurses are needed (p2); and
- *"Nurses must not be directed, pressured or compelled by an employer to engage in any practice that falls short of, or is in breach of, any professional standard, guidelines or codes of conduct for their profession"* (p2).

In nursing homes, only registered and enrolled nurses can administer medicines. Care workers (however titled) can assist older people with self-administration of their medicines however do not manage or administer medicines. Care workers have an important role in providing aspects of nursing care that support and allow nurses to safely and effectively administer medicines. Any registered nurse who delegates the administration of medicines to a care worker will retain legal responsibility and professional accountability for that decision and any outcome.

> Under the National Law, nurses must not be directed, pressured or compelled by an employer to engage in any practice that falls short of, or is in breach of, any professional standard, guidelines or codes of conduct for their profession.

Safe staffing

Although there is no consistent definition of a medicine error, adverse events involving medicines occur frequently in nursing homes.[34,35] While nurses are the appropriate health practitioner to administer medicines to those living in nursing homes it also follows that they must be employed in sufficient numbers to ensure safe care and adequate time to assess and evaluate people to whom they are administering medicines. The International Council of Nurses (ICN) state that *safe nurse staffing is a critical issue for patient safety and the quality of care in hospitals, community and all settings in which care is provided*.[36] Recent evidence has demonstrated links between higher nurse ratios and improved outcomes for the people in their care[37,38] including reducing the incidence of medicine errors.[39,40] Medicines management and administration are significant elements of a nurse's work. It follows then that nursing homes must employ nurses and in adequate numbers to ensure the quality use of medicines.

Consent

The nurse administering the medicine is responsible for gaining informed **consent** from the person receiving care.

> **'Informed consent is the person's decision, given voluntarily, to agree to a healthcare treatment, procedure or other intervention'.**

The person giving consent must have the capacity to understand the reason for the proposed medicine and the available options, including the right to refuse the medicine. They must be aware of the consequences of taking or not taking the medicine and be able to communicate that decision to the person prescribing and the person administering the medicine. The decision should be recorded in the person's medicines chart. Consent can be withdrawn at any time.

The registered nurse provides information and education to the person about their medicines to encourage adherence to the prescribed regime. Where consent is refused or withdrawn, the reasons should be investigated, documented and the **prescriber** informed.

Informed consent should always be given by the person themselves except where they lack capacity. Determining a person's capacity to consent to a particular medicine at the relevant time, and keeping appropriate documentation, is the responsibility of the prescriber and the nurse administering the medicine. Prescribers and nurses administering medicines need to be confident that the person is capable of giving informed consent when it is to be relied on for the administration of the medicine. If there is doubt about a person's capacity to consent, then further consultation should occur between the person receiving the medicine/s, the prescriber and, the nurse administering the medicine/s.

Where the prescriber has determined that the person cannot give informed consent, then consent should be sought from the person's legally defined **substitute decision maker (SDM)**. The title for this role varies according to the jurisdiction. The Aged Care Quality and Safety Commission's *Consent for medication in aged care*[41] provides further information on consent, including jurisdictional information relating to SDMs.

Capacity to consent must be assessed on an individual basis and at different points in time. Considerations regarding capacity and consent to medicines include the following:

- A person may have capacity to consent if the decision is simple but not when the decision is more complex;
- A person may have capacity to consent sometimes but not at others for example if suffering from reversible conditions such as delirium;
- A diagnosis of dementia or cognitive impairment does not automatically mean a person is unable to give consent and assessment should be carried out and reviewed regularly;
- Specialist medical practitioners such as geriatricians should be consulted if the capacity of a person to consent to medicines is in doubt.

Every individual, or their SDM, has the right to give or refuse consent to a medicine. Any refusal of medicines, even medicines that are self-administered, must be documented in the medicines chart and the registered nurse in charge and the prescriber advised so appropriate interventions can be undertaken if required. Where a care worker is assisting an individual to self-administer their medicines and the individual refuses this medicine, the care worker must report to the registered nurse in charge.

Prescribing and de-prescribing

Medicines should not be administered without a legible, signed and dated instruction from the prescriber. This may be a nurse practitioner, a medical practitioner, or a dental practitioner, using the nursing home's designated medicines chart (this includes prescribing by electronic means). The *National Residential Medication Chart* (NRMC)[42] and the *electronic National Residential Medication Chart* (eNRMC)[43] are examples of medicines charts used in nursing homes.

Prescribing

A nurse working in a nursing home administers medicines to a person when it has been prescribed by a prescriber and dispensed by a pharmacist. Medicines should be dispensed into an individual container or pack labelled with the person's full name, the name and strength of the medicine, the dosage and frequency, route of administration and date of commencement, duration and/or cessation, where applicable. The exceptions are for **nurse-initiated medicines** (see initiation of medicines by nurses) and emergency medicines (see achieving continuity of medicines supply), given in a nursing home in accordance with legislation, regulation and organisational policy. The Australian Commission on Safety and Quality in Health Care's (ACSQHC) *National Standard for Labelling Dispensed Medicines*[44] provides evidence-based recommendations for clear, consistent labelling of prescribed medicines and their safe use.

Where the correct information is not included or is illegible, the nurse responsible for administering the medicine should contact the prescriber urgently and request completion of a new prescription and cancellation of the incomplete or illegible version.

De-prescribing

Polypharmacy and inappropriate medicine prescribing is common for people who are older and is associated with harmful outcomes, including adverse drug interactions, hospitalisations, falls and mortality[45] and may require a process of de-prescribing. **De-prescribing** is a person-centred *'process of medication withdrawal intended to achieve improved health outcomes through discontinuation of one or more medications that are either potentially harmful or no longer required'*.[46]

De-prescribing should occur when medicines:

- Have no clear benefit;
- May cause harm;
- Are prescribed for a condition that is no longer an issue; or
- Are incongruent with the person's goals of care.[47]

The ACSQHC recommends prescribers aim to reduce the inappropriate use of antipsychotics and commit to antimicrobial stewardship to reduce the inappropriate use, and overuse of antimicrobials.[48, 49] This requires medicines review and, where appropriate, de-prescribing.

Review of medicines should be undertaken regularly or in response to adverse outcomes or in the presence of polypharmacy.[50, 51] Whilst the responsibility of the prescriber, nurses must also assess and monitor people for adverse effects of medicines and be alert to polypharmacy. Adverse findings should be documented in the person's health record and the assessment reported to the prescriber.

Dispensing, supply, storage and disposal of medicines

Dispensing and supply

Each nursing home should have access to a community pharmacist who can provide a medicines service, which includes:

- The dispensing and supply of medicines;
- Monitoring for polypharmacy;
- The provision of information and advice including medicine reviews;
- Involvement in medicines education for the older person and health practitioners;
- Involvement in medicines governance (for example, a medicines advisory committee); and
- Involvement in relevant quality improvement activities.

Supply of medicines

To protect the safety of individuals and the community, the prescription and supply of medicines is regulated. Approved nursing home service providers, nursing home managers and staff must comply with state and territory legislation pertaining to the prescription and supply of medicines. Nurses must also comply with the NMBA standards, codes and guidelines relating to medicines management underpinning their practice.

Storage of medicines

The aged care service provider is responsible for ensuring there is provision for all medicines to be securely stored in a manner that meets legislative and manufacturer's requirements, which protects the individual's safety and privacy, and promotes the safety of staff. This may be in a cupboard or other designated area, which should be locked and secure when not in use. The provision of an alarm system should be considered.

Some medicines will need to be refrigerated. These should be stored in a secure refrigerator, only used for medicines. The refrigerator should be kept at the correct temperature and monitored regularly.

A registered nurse, ideally the registered nurse in charge, should be in possession of the keys to the medicines cupboard or other designated medicines area, at all times while on duty. Where there are codes or biometric locks in use for medicines security, these should only be accessed by registered nurses or enrolled nurses able to administer medicines.

The nursing home should have up to date, evidence-based policies, procedures and guidelines that support practice and the relevant state and territory legislative requirements for safe and secure storage of medicines.

The ACSQHC provides guidance for the safe selection and storage of medicines, particularly those that look alike and sound alike (LASA). Incidents with LASA medicines are some of the most common medicines errors.[52, 53] To reduce this risk, the ACSQHC recommends organisation-wide risk reduction strategies for the storage and selection of medicines. The ACSQHC *Principles for the safe selection and storage of medicines: Guidance on the principles and survey tool*[54] describes the principles for safe storage and offers strategies to increase safe storage.

Disposal of medicines

There must be a mechanism in place for the disposal of returned, expired and unwanted medicines. This mechanism should be supported by policy and education, and overseen by a medicines governance group, for example a medicines advisory committee.

Medicines belonging to a person who is deceased, or any medicines that are out of date or discontinued, should be returned to the pharmacist, or collected by the pharmacist for disposal. The national return and disposal of unwanted medicines through pharmacy is called *Return Unwanted Medicines* (or The RUM Project). Schedule 8 medicines must be disposed of according to legislative requirements in each state or territory.

Modifying medicines

Modifying medicines by crushing tablets or opening capsules can lead to detrimental outcomes including increased risk of toxicity or decreased efficacy.[55] Where a person is having difficulty swallowing the medicine or requesting that a medicine be modified through crushing or breaking open a capsule, the registered nurse must assess the person to determine the reason for the request, liaise with the prescriber and pharmacist, and consult evidence-based resources such as *Don't Rush to Crush*.[56] There may be other forms of the medicine that can be administered via alternate routes that retain the integrity and dosage of the medicine. Medicine modification should be a last resort and must be ordered by the prescriber. See also, *administering medicines to a person with dysphagia (swallowing difficulties).*

Administration of medicines

The registered nurse is the appropriate person to manage medicines for people living in nursing homes and is key to the quality use of medicines. Registered nurses are educated and competent to understand the therapeutic action of medicines, including the reasons for, and effects of, their use and to recognise adverse reactions and respond appropriately.

When administering medicines, registered nurses assess for, and are alert to, emerging issues, for example polypharmacy and swallowing difficulties. If issues are identified or suspected, the registered nurse must contact the prescriber and pharmacist to request a medicines review as soon as possible.[57]

Registered nurses use clinical judgement, the decision-making framework and a holistic approach to assess whether medicines should be administered or withheld with regard to the person's health history, diagnosis, co-morbidities and current health status.

When administering medicines, registered and enrolled nurses must comply with relevant state and territory legislative requirements, NMBA policies, standards, codes and guidelines and be guided by organisational policies and protocols.

Enrolled nurses work under the direction and supervision of registered nurses to administer medicines unless they are not allowed to administer medicines, in which case there will be a notation on their registration indicating this. At all times, the enrolled nurse retains responsibility for their actions and remains accountable to the registered nurse for all delegated functions. Registered nurses and enrolled nurses must not delegate the administration of medicines to care workers. Care workers can assist older people with self-administration of their medicines however do not manage or administer medicines. Nurses can delegate other aspects of nursing care to care workers that support and allow nurses to safely and effectively administer medicines. The *Decision-making framework for nursing and midwifery*[58] developed by the NMBA provides guidance to nurses about making decisions, including delegating to enrolled nurses and care workers.

In order to meet their duty of care and ensure safe and competent practice, registered nurses and enrolled nurses must be provided with the resources and environment to fulfil their responsibilities according to these best practice medicines use guidelines.

The role of the registered nurse and enrolled nurse includes:

- Consideration of non-pharmacological interventions;
- Obtaining consent;
- Administration of medicines;
- Supervision of individuals who are self-administering medicines;
- Documenting any medicines administered, withheld or refused;
- Compliance with legislative and regulatory requirements and organisational policies and protocols, in particular, medicines incident and error recording and reporting requirements;
- Participation in medicines quality improvement activities;
- Maintenance of competence, contemporary knowledge and skills in relation to pharmacology and health assessment;
- Knowledge of pharmacokinetics and pharmacodynamics, as well as polypharmacy issues for older persons; and
- Understanding of physiological changes that impact medicines use in the older person.

In addition, the registered nurse's role in the quality use of medicines includes:

- Assessment of the health status of the older person;
- Using decision making skills and professional judgement in relation to medicines use, including knowing why to administer, how to administer, when to administer, when not to administer, and when to report or refer to the prescriber or a pharmacist;
- Coordination, implementation, supervision, ongoing monitoring and evaluation of safe medicines administration practices;
- Monitoring and evaluation of medicines use, including reporting and recording of reactions to medicines and the initiation of required interventions in consultation with the prescriber and pharmacists;
- Monitoring and encouragement of adherence to medicines use;
- Consideration of utilisation of nursing interventions which do not involve medicines use, particularly in relation to medicines ordered 'when required', or in the situation where consent to medicine use has not been given or withdrawn by the person;
- Provision of information and education to people living in nursing homes in relation to medicines use;
- Provision of education to carers, other healthcare workers and students in relation to aspects of medicines use;
- Advocacy on behalf of people living in nursing homes in relation to all aspects of their use of medicines; and
- Delegation of medicines administration to enrolled nurses.

Self-administration

Self-administration of medicines is when a person has the capacity to manage and take their own medicines.[59] Self-administration of medicines by those residing in a nursing home should be supported with policy and guidelines. Self-administration must consider the cognitive and physical ability of the person and their understanding of the safe use and storage of medicines as well as their literacy, physical and sensory abilities including dexterity, visual acuity and ability to swallow. This is a part of the assessment carried out by the health practitioner who is prescribing or administering the medicine.

A person residing in a nursing home can self-administer their medicines where they are assessed to have the capacity and ability to do so. Capacity to self-administer medicines should be reviewed regularly. Where a change in physical ability or cognition occurs, assessment of capacity to self-administer medicines is undertaken by the prescriber. The outcome of a capacity assessment and subsequent reviews must be documented in the person's health record.[60]

Self-administered medicines must be ordered by a prescriber, dispensed by a pharmacist and labelled with the person's name, the name and strength of the medicine, the dosage, frequency and route of administration, and stored securely.

People assessed to have the capacity to self-administer their medicines should be provided with the information, tools and resources to help them do this. For example, visual and other sensory aids may include larger or a specific type of text, memory aids such as alarms and physical assistance aids. An occupational therapist can assess and advise people on appropriate self-administration aids to help them maintain independence.

All medicines administration should be documented according to the nursing home's policies and guidelines, including self-administered medicines. Secure storage of medicines for self-administration must be provided. This is the responsibility of the aged care service provider.

In some instances, where assessed as appropriate by the registered nurse, a care worker may prompt or assist a person to self-administer their own medicines. The information below clarifies the difference between prompting the person, assisting the person to take their medicine and administering medicines.

Difference between prompting, assisting with and administering medicines

A major cause of confusion in medicines management is the difference between 'prompting', 'assisting' and 'administering' medicines. These terms have very different meanings when used in the context of medicines management.

Prompting – the person is assessed by the prescriber as being able to self-administer and is in control of their medicines. To be independent with self-administration they require some verbal support.

Prompting of medicines is reminding a person their medicines are due and asking if they have or are going to take their medicines. The person is still in control of their medicines and may decide not to take them or to take them later. Prompting is used when a person knows what medicines to take and how to take them but may be unaware of the time.[61]

Assisting - the person is assessed by the prescriber as being able to self-administer and is in control of their medicines. To be independent with self-administration they require some physical support.

A person may be able to retain control of their medicines but need assistance with simple mechanical tasks. Assisting with medicines can include: bringing packs of medicines to a person at their request so that the person can take the medicines; opening bottles or packaging, including pre-packaged dosage systems (blister packs) at the request and direction of the person who is going to take the medicine; reading labels and checking the time at the request of the person who is going to take the medicine; ensuring the person has a drink to take with their medicines.[62]

Administration - the person requires a nurse or other suitably qualified registered health practitioner to assess, administer, document and review their medicines as prescribed.

Administering medicines requires extensive education, complex clinical and assessment skills and knowledge of pharmacodynamics and pharmacology. Administration requires assessment, review and evaluation of the person receiving the medicine for efficacy and side effects or adverse reactions. The person administering the medicine must assess the person's capacity to consent. When administering medicines, registered and enrolled nurses must comply with relevant state and territory legislative requirements, NMBA policies, standards, codes and guidelines and be guided by organisational policies and protocols.

Care workers can prompt or assist the older person with self-administration of their medicines when directed and supervised by a registered nurse, however they do not manage or administer medicines. Care workers support and enable nurses to manage and administer medicines safely by assisting them with other aspects of nursing care.

Dose administration aids

A **Dose Administration Aid (DAA)** may consist of a blister pack, bubble pack or sachet system. These aim to make it easier for people to self-administer their medicines by arranging the medicines into individual doses according to the prescribed dose schedule. A person using a DAA must still be assessed as having capacity to self-administer their medicines but benefit from a form of packaging that allows easy recognition of the medicine and its form, when to take it, and ease of access to it. Some people may lose the dexterity to open the packaging and require assistance.

> Dose Administration Aids are not appropriate for people in nursing homes who lack the capacity to self-administer their medicines.

Assessment of a person who is likely to benefit from the use of a DAA should be undertaken by the prescriber in collaboration with other members of the medicines team who may include a nurse practitioner, registered nurse, medical practitioner, and pharmacist.

Confirmation that a person is competent to self-administer their medicines using a DAA should be documented in the person's health record and/or their medicines record, by the prescriber.

Prescriber review of medicines may result in changes to medicines. If the prescriber alters the medicine instruction for a person and the medicines are being dispensed in a DAA, the DAA must be returned to the pharmacist for reconciliation and repackaging at the time of the medicines change.

DAAs utilised by a nursing home are required to meet professional standards[63] and guidelines.[64] The DAA should be packaged and fully labelled by a pharmacist. DAA packaging should ensure that:

- There is clear and complete labelling and instructions for when medicines should be taken;
- It identifies the person for whom the DAA is prepared;
- Individual medicines can be readily identified;
- Information is of a size and layout that permits people with poor eyesight to read;
- The quality and integrity of the medicines and packaging for each time slot is preserved;
- Medicines cannot become mixed with those not yet due; and
- Any tampering with the medicines is evident.

All medicines administered to an individual by a registered nurse or enrolled nurse should ideally be from the original dispensed container. If registered nurses and enrolled nurses are administering medicines from a DAA, the DAA should be packaged and fully labelled by a pharmacist. The nurse administering from the DAA takes responsibility for identifying each individual medicine prior to administration.

Registered nurses and enrolled nurses must not administer from DAA's where:

- Individual medicines cannot be clearly identified;
- There is evidence of tampering with the packaging; or
- There are signs of deterioration of the medicine (such as changes in colour or disintegration of the medicine/s).

Where any of these occur, nurses must consult the pharmacist and return the DAA to them for repackaging. In addition, where one of the medicines is contraindicated based on evidence and the nurses clinical assessment of the person prior to administration, the nurse should withhold the medicine, alert the registered nurse in charge and liaise with the prescriber to inform them of the person's condition, the action taken and any follow up medicine orders.

Compartmentalised medicines box

In special circumstances where a registered nurse is asked to organise medicines in a **compartmentalised medicines box**, for a person to self-administer, the registered nurse should only fill the box where:

- This is permitted by state or territory law;
- The person requiring the medicine is competent to self-administer
- The medicines are from the person's dispensed medicines; and
- The box is labelled with the full name of the person; name and strength of the medicine; dose, route and frequency of the medicine; and, date of commencement and the duration where applicable.

*It is recommended that no more than a seven-day supply be provided in this way at any one time.

The purpose of filling the compartmentalised medicines box for a person is for the person to self-administer their own medicines. A registered nurse must not fill a compartmentalised medicines box with the intent of either themselves or another health practitioner administering the medicines to the person.

Administering medicines to a person with dysphagia (swallowing difficulties)

Nurses must be aware of conditions and treatments that can result in dysphagia and regularly assess and monitor the swallowing ability of people living in nursing homes, to ensure they are able to safely swallow their oral medicines. As many as 50-60% of older people in hospitals and nursing homes experience dysphagia, increasing their risk of choking and aspiration when swallowing liquid or solid oral medicines.[65]

Dysphagia becomes more prevalent as people get older as a result of frailty, weakness and loss of muscle mass[66], dentition changes and comorbidities such as stroke, Parkinson's disease, malignancy and inflammatory disorders. Treatments such as radiation therapy can lead to inflammation and affect the throat and medicines that add to anticholinergic burden can result in xerostomia that leads to swallowing difficulties.[67] Where swallowing is difficult, ideally the person should be assessed by a speech pathologist and strategies developed in consultation with the pharmacist, prescriber and registered nurse.

Dysphagia can result in people avoiding their medicines and risking the consequences of those omissions. Modifying medicines, for example crushing them or opening a capsule to assist in swallowing the medicine, also poses a risk. Modification to medicines places the person at risk of dose reductions due to loss of the medicine during the crushing and transferring process. Crushing and adding medicines to different foods can impair and vary bioavailability and release and delay absorption.[68]

For people with dysphagia who are living in nursing homes, other modes of delivery can be considered for example, transdermal, nasal or pulmonary modes. Medicines should only be modified as a last resort and only after consultation with the prescriber and pharmacist.

Prescribed modifications to medicines must be added to the medicines chart, including the details of the prescribed modification and the food substance to which it can be added safely. Processes for modification of medicines should be supported by best evidence, nursing home policies, and overseen by the medicines governance group such as the medicines advisory committee in each nursing home. Resources such as the Society of Hospital Pharmacist's *Don't Rush to Crush* 4th edition[69] provides evidence-based practical advice on medicines administration for people with dysphagia.

Use of complementary, alternative and self-selected non-prescription medicines

An individual with capacity has the right to request a non-prescription substance, including herbal, homeopathic, non-Australian manufactured and 'over the counter' S2, S3, and unscheduled substances. For safety, people living in nursing homes and their families/carers have a responsibility to inform health practitioners of all medicines being taken, including complementary, alternative or self-prescribed medicines. These should be added to the medicines chart by the prescriber. The registered nurse or enrolled nurse should identify these medicines on the person's medicines chart before administering them.

It is important that the ingredients contained in the non-prescription substance are assessed by the prescriber and the pharmacist to determine potential risks of the medicine related to existing health conditions and compatibility with other medicines being taken by the person. The prescriber must document endorsement of the use of such substances in writing on the medicines chart.

The registered nurse or enrolled nurse should:

- Not initiate, supply or administer non-prescription substances unless they have been approved in writing by the prescriber, or included in the list of nurse-initiated medicines by the medicines advisory committee; and
- Document the administration of any such substances.

Medicine incidents and reporting

Where a medicines error or near miss medicines incident occurs, nurses have a professional responsibility to disclose the incident in a timely manner; take steps to prevent further harm to the person experiencing, or at risk of, medicines related harm; and, comply with local policy regarding serious incident reporting.[70]

Medicine errors are less likely to occur when medicines administration is integrated into medicines management processes and holistic, person-centred clinical decision-making rather than viewed as a standalone task.[71] Nurses are well positioned to detect potential prescribing and dispensing errors before a medicine is administered. This important element of medicine administration highlights the need for medicines administration to be the remit of those who have extensive knowledge of medicines and are educated to assess the need for, and administer medicines and evaluate their efficacy. Where an older person who is self-administering their medicines, prompted or assisted by a care worker, has questions regarding possible prescribing and dispensing errors relating to those medicines, the care worker must report these concerns to the registered nurse. Where nurses detect errors in prescribing and dispensing, they have a responsibility to follow local policy to report the near miss for quality improvement review. An environment that employs quality approaches to medicines management and encourages nurses to report medicine errors and near misses has been shown to reduce medicines errors.[72]

When a medicine-related serious incident or near miss is detected at the point of administration, the nurse must:

- Take immediate corrective action to rectify the problem if possible and intervene where necessary to protect the person's safety;
- Escalate the incident according to organisational policy including informing the immediate nursing supervisor, and the prescriber; and
- Follow open disclosure processes as outlined in the NMBA *Code of Conduct for nurses*[73] (p8); the ACSQHC, and local policy.

The nursing home should have a medicines governance framework for avoiding and addressing errors using overarching processes and systems that support safe medicines use and reporting mechanisms (see Medicines Governance section for further information) including review and follow up by the medicines governance group (however titled).

Ongoing assessment and medicines efficacy

Registered nurses and enrolled nurses should monitor each person receiving any medicine/s, and exercise professional and clinical judgement based on holistic assessment to:

- Evaluate all medicines use for appropriateness, unwanted side effects, allergies, toxicity, medicines intolerance, medicines interactions and adverse reactions, and document and report them; and,
- Ensure that medicines charts are regularly reviewed for each individual, in conjunction with the aged care service provider, the prescriber and the pharmacist.

Documentation

All medicines administration must be documented in the nursing homes medicines record or chart (paper based or electronic). Documentation should occur simultaneously with administration, be legible, accurate and meet legislative and organisational requirements, as well as any specific policy requirements of the nursing home. The policy for documenting medicines for the nursing home should be referred to and followed.

The medicines chart should contain, at a minimum, the complete name and date of birth of the person, and, where possible, a current photograph for identification purposes. Older people with similar or the same names must have alerts written or activated (in the case of electronic charts) on their medicines chart.

The medicines chart should have a separate section for **p.r.n. medicines**; nurse-initiated medicines; once only doses of medicines; medicines which are self-administered by the individual; any complementary, alternative or self-prescribed medicines being taken; and emergency telephone/facsimile/email instructions. The medicines chart should also indicate any allergies or previous adverse drug reactions; and identify when medicines review is required.

If alternative methods of administering medicines are appropriate, for example, crushing or dispersing tablets, this should be indicated on the medicines chart. Nurses should be aware of the medicines that can or cannot be reconstituted for administration and should consult with the prescriber and pharmacist and refer to appropriate resources, for example *Don't Rush to Crush*.[74]

The National Residential Medication Chart (NRMC)[75] or the electronic National Residential Medication Chart (eNRMC)[76] may be used where permissible in the state or territory. The nurse must be supported by the nursing home governance in their use of medicines charts through the provision of appropriate and current policies, guidelines and procedures, orientation and continuing professional education.

The transcription of medicines orders increases the margin for error and should only be carried out where it is supported by legislation and organisational policies and protocols.

Initiation of medicines by nurses

When required 'p.r.n.' medicines

'When required' or p.r.n. medicines are those which are ordered by a prescriber for a specific person and purpose and recorded on that person's medicines chart to be taken only as needed. The registered nurse, using clinical judgement based on assessment findings, initiates, or delegates to an enrolled nurse, administration of the medicine/s, when necessary. The administration of p.r.n. medicines must be recorded on the person's medicines chart.

Prescription medicine treatment protocols

Prescription medicine treatment protocols are permitted in some Australian States and Territories and cover Schedule 4 (S4) and Schedule 8 (S8) medicines and other restricted substances. The treatment protocol may be written by a prescriber for the administration of a medicine to an individual in the case that a particular circumstance arises, usually only for urgent or emergency care. Currently all medicines in nursing homes (with the exception of nurse-initiated medicines detailed previously) are dispensed for individuals on the written instructions of the prescriber.

Prescription medicine treatment protocols can only be issued by a medical practitioner, under the governance of the medicines governance group for example the medicines advisory committee, and must:

- Meet the state or territory legislative requirements, and permissions;
- Be for the administration of a specific medicine(s);
- Be administered by a registered nurse; and
- Be time limited.[77]

In the absence of general stocks of S4, S8, or other restricted substances and/or appropriate storage, treatment protocols for the administration of these medicines in nursing homes may not be appropriate. Prescription medicine treatment protocols must be developed in accordance with state and territory drugs and poisons legislation.

Non-prescription nurse-initiated medicines

Registered nurses may use clinical assessment and their judgement to initiate, or delegate to an enrolled nurse to administer, Schedule 2 (S2) medicines, in accordance with their state or territory legislation and organisational guidelines. When deciding to initiate a medicine for a person, the nurse should consider the context of the person's total daily medicines regime, any known allergies, medical conditions, previous adverse medicines events or adverse drug reactions experienced by that person.

All adverse medicines events or adverse drug reactions should be reported in accordance with the nursing home's policy. The policy should specify that any doses of nurse-initiated medicine administered to a person should be recorded in a document that is accessible to other health practitioners. This documentation should include comment on the outcome of the medicine. A record of any nurse-initiated medicines should also be included on the person's medicines chart.

Achieving continuity of medicines supply

For people living in a nursing home, continuity of medicines supply and management is essential to ongoing health and quality of life. The nursing home service provider is responsible for ensuring medicine supply is maintained for each person living in the nursing home.

Interruption to the continuity of medicine supply may occur for a number of reasons, including but not restricted to, transitions of care, problems obtaining a medicine, or health changes that impact the person's ability to take a medicine, for example dysphagia, change in their level of consciousness or dental procedures.

During transitions of care, a person is at increased risk for an interruption to the continuity of their medicines supply and regime, which can adversely affect their health. People living in nursing homes are particularly vulnerable when transferring from their home to a nursing home, when their medicines are changed or unavailable, and when visiting a new health practitioner. This is exacerbated when communication between health practitioners and systems is uncoordinated and/or does not occur. The risk of hospitalisation or re-hospitalisation due to medicines errors increases for those experiencing transitions of care and who are prescribed high risk medicines such as anticoagulants, antipsychotics, hypoglycaemic agents or are taking many medicines.[78]

The nurse must plan for transitions of care and work with the health care team, using comprehensive communication skills prior, during and after transition to help mitigate against the associated risks. People may also experience changes to their health status and no longer be able to take the prescribed medicines for example due to dysphagia.

Solutions to ensure medicines safety during transitions of care require access to appropriate policies and guidelines, effective communication and liaison between health practitioners within and across health services. Both discharge and forward planning is essential to ensure medicines are available.[79] Health practitioners are required to have excellent assessment knowledge and skill to ensure medicines are available for those experiencing transitions of care. Strategies include:

- **Medication reconciliation** at each care transition. Medication reconciliation is an essential part of transitioning from one environment to another and reduces the risk of medicines errors and polypharmacy.[80] It is the formal process of obtaining and verifying an accurate list of a person's medicines, including prescribed, over the counter and alternative and complementary medicines;[81]
- Review of existing medicines and a comprehensive assessment and obtaining the best possible medication history;[82]
- Regular, planned review of medicines by health practitioners. The **residential medication management review (RMMR)**[83] conducted by prescribers and pharmacists;
- The use of communication strategies during transition that engage the person and are supported by organisational policies, procedures and guidelines. This includes documentation of medicines lists, detailed and accurate discharge/transfer summaries, inclusion of relevant documents and result summaries and healthcare records, liaison between health practitioners and assessment of the person;[84]
- Organisational reporting processes and policies to inform quality and safety improvements;
- Assessing each person's needs including level of knowledge, understanding of medicines and capacity to consent.

The nurse is responsible for reporting issues that could affect continuity of medicines for people in nursing homes. The nurse works with other health practitioners, the medicines governance group and the nursing home governance committee to develop risk mitigation strategies, taking into consideration state and territory legislation and organisational policies.

Emergency supply

Medicines held and managed as emergency stock and the supply of medicines in nursing homes are subject to state and territory legislation. In some states and territories, nursing homes can maintain a small supply of medicines as 'imprest' stock for urgent treatment and to avoid adverse outcomes for the person receiving care in the nursing home. These medicines are kept for emergency use to be administered by a registered nurse on the written or verbal order of a prescriber when normal supply arrangements are not available.[85]

In an emergency, a medicine instruction may be given by a prescriber by telephone, facsimile, e-prescription or email, depending on state or territory legislation. Emergency medicines instructions are only for emergency use. These instructions are not an acceptable substitute for a comprehensive medicines policy for the regular and routine management of medicines that is responsive to predictable changes in medicines requirements.

The registered nurse taking an emergency medicine instruction by telephone should verify the prescriber, write the instruction in permanent ink directly onto the person's medicines chart, confirm the instruction with the prescriber, and sign and date the chart. Best practice requires a second nurse be present to check the instruction with the prescriber.

Any emergency telephone medicines instruction must be confirmed in writing by the prescriber. It is the responsibility of the prescriber issuing an emergency telephone medicines instruction to notify the pharmacist, and to confirm the emergency medicines instruction in writing within 24 hours, or according to the requirements of state or territory legislation.

The registered nurse taking an emergency medicine instruction by facsimile, e-prescription or email should write the instruction directly onto the person's medicines chart in permanent ink, and sign and date the chart. The facsimile, e-prescription or email should be placed in the person's medicines chart.

Use of electronic medicines management resources and tools

Electronic health records and medicines management systems are used increasingly in Australia. These systems aim to improve continuity of care and medicines safety at all points, including during transitions of care.[86]

Medicines management systems involve prescribing, medicines supply, Pharmaceutical Benefits Scheme (PBS) claiming, and medicines administration.

Electronic Medicines Management (EMM) aims to improve medicines safety by:

- increasing the legibility of prescriptions;
- providing decision support;
- the recording of, and access to, administration records;
- improving transitions of care across health care settings; and
- enhancing the audit pathway to allow for quality improvement measures.[87]

One of three medicines management systems may be in use in nursing homes. These include:

- Paper based medicines management systems where all processes are paper based; or
- Hybrid systems involving a combination of paper based and electronic resources; or
- EMM systems.

Nursing homes who use an EMM system (or any other medicine management system) have a responsibility to keep people safe by ensuring that relevant and evidence-based policies, procedures, education and safety features are in place and easily accessible. This includes but is not limited to:

- Safety features inherent within the paper National Residential Medication Chart – for example, photo identification of the person to whom the medicine is being prescribed and administered;
- Clinical decision support for all health practitioners including access to evidence-based resources;
- Review of medicine orders to support ongoing supply and appropriate use;
- Support for pharmacists to apply electronic instructions for the safe administration, handling and storage of medicines, for example modification instructions;
- Electronic records of administration, including access to clinical monitoring information, for example, blood glucose levels before administering insulin;
- A reporting capability, supporting medicines safety audits and quality use of medicines activities; and,
- The ability to audit all information recorded or altered within the system.

Nurse practitioners and medical practitioners who are prescribing and nurses who are administering medicines should undergo orientation to the medicines management system used in the nursing home where they work.

The nurse should ensure they have knowledge of, remain current with, and follow the policies and procedures associated with the medicine management system used by the nursing home where they are employed.

The ACSQHC has published *National Guidelines for On-Screen Display of Medicines Information*[88] that advises providers how to display:

- Names of medicines;
- Text, abbreviations and symbols;
- Numbers and units of measure; and
- Medicines related information.

Nurses must exercise their expert clinical decision-making and assessment skills to manage medicines when using an electronic medicines management system just as they would with any medicines management system.[89]

All health practitioners using electronic medicines management systems require their own unique password or identifier to log into electronic management systems to protect their access to the system/s and the safety and privacy of the people for whom they provide care. The nurse must be responsible for protecting their password or identifier and access to the system. This means not sharing their password or identifier or granting access to the electronic medicines management system to others under their login. Employers must not ask nurses to share their password/identifier to access or sign for medicines they are not administering themselves.

The electronic National Residential Medication Chart[90] (eNRMC) is an example of a medicines management system that can be used to manage medicines electronically in nursing homes, eliminating the need for paper prescriptions. It provides guidance for safe implementation of EMM into nursing homes.

Medicines Governance

Nursing home service provider responsibilities

Under the *Aged Care Quality Standards*[91], an organisation must do all they can to manage risks for those receiving clinical care.

Providing evidence-based, person-centred care delivered by a mix of skilled and educated health practitioners and allied health professionals that meet the needs of those requiring care alongside strong medicines governance is key to meeting these Standards (see figure 6).

Evidence-based policies and procedures that support best practice

Staffing number and skills mix that meets the needs of the people receiving care

Nursing Home Service Provider Responsibilities

An environment that upholds the rights of older people

Medicines Advisory Committee

Documented continuous quality improvement

Figure 6: Key Nursing home service provider responsibilities for quality use of medicines in nursing homes

Nursing home service provider responsibilities can be categorised into two areas:

1. Actions required to support quality use of medicines by nurses at direct care points; and
2. Those activities required as components of broader governance by the organisation.

To support quality use of medicines at direct care points, nursing home service providers have a responsibility to:

- Employ registered nurses to safely undertake the management, administration and (where appropriate) review of medicines;
- Employ enrolled nurses to safely administer medicines under the supervision and delegation of a registered nurse;
- Provide resources that enable the medicines and the medicines chart to be available at the time and place of administration of the medicines. This may include use of the NRMC[92] or eNMRC;
- Provide current medicines resources to enable nurses to access information about the medicines they are administering (for example, subscription to on-line medicines information and resources);
- Provide nurses with current information and education on relevant drugs and poisons legislation and regulation;
- Provide registered nurses and enrolled nurses with regular education regarding current trends in the use of medicines for older people and in specific age-related health conditions;
- Provide adequate supplies of personal protective equipment (PPE) and stock required for administration of medicines including but not limited to syringes, medicine cups, blood glucose meters;
- Provide a system for reporting all medicines administration incidents to allow errors and near misses to be reported, assessed, and remedial action taken in a timely manner;

- Provide a system of safe storage for all medicines, including those being self-administered. This must include provision for all medicines to be securely stored in a manner that complies with legislative and manufacturer's requirements, which protects the individual's safety and privacy, and promotes the safety of all people; and
- Provide policies, equipment and processes for the disposal of returned, expired and unwanted medicines according to legislative requirements.

Nursing home service providers have a responsibility to provide governance of medicines to ensure the safety of people in the nursing home. Written policies reflecting relevant legislative and regulatory requirements and based upon best practice should be developed and reviewed regularly by the nursing home's medicines governance group. Policies should be easily accessible to nurses and include:

- the specific responsibilities of each health practitioner involved in medicines management, including the provision of information, prescribing, dispensing, administration, storage, disposal, and evaluation;
- an acknowledgment of the arrangement of medicines into schedules, by clearly stating the nursing home's policy, consistent with relevant legislation for each applicable division of the schedule, with particular and separate requirements for drugs of addiction and other restricted substances;
- the specific requirements for the different routes of medicines administration;
- the mechanism by which each older person can be correctly identified (for example, names or photographs); and
- the mechanism by which continuity of medicines can be assured, including:
    - Discharge from acute care facilities;
    - When receiving care in a community setting;
    - If transferred to another facility, including a hospital; or
    - When absent from the nursing home for any reason.[93, 94]

Medicines governance group

Each nursing home should have a medicines governance group. This may be referred to as a Medicines Advisory Committee (MAC) or similar title. The MAC plays a key role in medicines governance and the terms of reference (ToR) should clearly state the objectives of the group, which include development, promotion, monitoring and evaluation of activities to support quality use of medicines. The ToR should show formal links to the nursing homes governance and quality processes and structures.

Nursing home service providers have a responsibility to provide medicines charts that contain:

a. the older person's identifying information;
b. a record of allergies or medicines sensitivities;
c. the consent of the older person or their representatives to their medicines regimen (where possible);
d. the name, strength, dose, route and frequency of the medicine/s;
e. the date of commencement of a medicine/s and duration where applicable;
f. an identified space for the signature of the prescriber (unless using the eNRMC where this is permissible in the state or territory); and
g. the date of the medicines review.

A medicines governance group, for example a MAC, consists of members of the multidisciplinary team including:

- A Nurse practitioner (where available);
- Registered nurses - more than one position whenever possible (for example, Director of Nursing, Clinical Nurse Consultant, registered nurse) due to the extensive role they play in medicines administration. The committee should include registered nurses who are involved in the direct care of people in the nursing home;
- A medical practitioner;
- A pharmacist;
- A representative of the nursing home service provider;
- A care worker responsible for prompting or assisting with self-administration;
- A care recipient or advocate;
- Secretariat to support the medicines governance group.

The responsibilities of the medicines governance group, for example a MAC, include:

- Promotion and support of intra and interdisciplinary communication, collaboration and co-operation;
- Development and review of
  - Medicines policies;
  - The list of medicines, including unscheduled substances, able to be initiated by registered nurses;
- Maintenance of a register of incidents or errors related to medicines to enable audit and analysis of trends and improvement activities;
- Monitoring of compliance to
  - Medicines policies and protocols;
  - The review of older person's medicines regimes;
- The review of medicines usage generally within the nursing home;
- Provision of advice on the implementation of national policies and relevant legislation and regulation;
- Implementation and oversight of
  - Education programs related to quality use of medicines and their evaluation; and
  - Quality improvement activities regarding QUM.

All activities of the committee must comply with requirements of the *Privacy Act 2001* and the privacy principles outlined in the Act.

The Department of Health and Aged Care *Guiding principles for medicines management in residential aged care facilities* and *User Guide: Role of a medication advisory committee* provide additional guidance on the requirements for a medicines governance group.[95,96]

Medicines monitoring and quality improvement

In line with the *Aged Care Quality Standards*, the nursing home's organisational structure has overall responsibility for ensuring there are systems in place that allow monitoring and quality improvement activities. The medicines governance group oversees the quality improvement system to ensure the quality use of medicines. The quality improvement system includes monitoring medicines use, care outcomes and medicines-related problems including errors and near misses involving medicines and has responsibility for developing risk minimisation strategies that ensure high quality care for people living in nursing homes through minimising **medicine-related harm**. Processes to support medicines review and reconciliation should be in place with oversight by the medicines governance group. Quality improvement should include monitoring and reporting on performance and identifying and addressing situations associated with risk, for example during transitions of care. Nurses, members of the multidisciplinary team and people living in a nursing home or their SDM should be involved in quality improvement planning and processes.

Formal quality improvement programs established by nursing home service providers:

- Evaluate the degree to which best practice standards are addressed and met;
- Evaluate the satisfaction level of those involved in the delivery of medicines (individual, nursing home service provider, nurse practitioner, medical practitioner, registered nurse and enrolled nurse);
- Make recommendations for better practice;
- Implement and review policies, procedures and guidelines based on close monitoring of medicine management and best available evidence; and,
- Meet the legislation and regulatory standards for the state or territory.

Nurses at all levels within the nursing home should be involved in quality improvement activities. This may be evidenced by:

- Participation in education from the nursing home service provider on quality improvement measures and local reporting systems;
- Inclusion in case review forums; and,
- Development, implementation, monitoring and evaluation of improvement measures.

Conclusion

Medicines make a significant contribution to improving the health outcomes of older people, but they also have the potential to cause harm. Safe management of medicines requires developed systems and processes that encompass initial assessment of the person through to post administration, evaluation and the implementation and monitoring of quality improvement strategies and structures.

As health practitioners, registered nurses and enrolled nurses are educated and skilled in the administration of medicines. They have highly developed assessment skills and draw on evidence-based practice to make clinically responsible decisions. This equips them with the qualifications, knowledge and know how to administer medicines to older people living in nursing homes. Care workers support and enable nurses to administer and manage medicines safely by assisting with other aspects of nursing care.

This resource supports the quality use of medicines in nursing homes by providing clear direction for registered and enrolled nurses to perform their respective roles in medicines management and administration in accordance with the National Law and the NMBA standards for practice.

This resource also offers direction to other health practitioners, health professionals, care workers (however titled) and health and nursing home service providers regarding the role of registered and enrolled nurses in medicines management and administration in nursing homes.

Glossary

Term	Definition
Administration of medicines	Occurs when the person requires a nurse or other suitably qualified registered health practitioner to assess, administer, document and review their medicines as prescribed. Administering medicines requires extensive education, complex clinical and assessment skills and knowledge of pharmacodynamics and pharmacology. Administration requires assessment, review and evaluation of the person receiving the medicine for efficacy and side effects or adverse reactions. The person administering the medicine must assess the person's capacity to consent. When administering medicines, registered and enrolled nurses must comply with relevant state and territory legislative requirements, NMBA policies, standards, codes and guidelines and be guided by organisational policies and protocols. Only registered nurses, enrolled nurses (under the direct supervision of a registered nurse), or other qualified registered health practitioners (such as, a medical practitioner or a dentist) can administer medicines. To ensure understanding by providers and workers in aged care, it must be clearly stated that care workers cannot administer medicines. Care workers can only prompt or assist people to self-administer their medicines when directed and supervised by a registered nurse.
Aged Care Royal Commission	Established on the 8 October 2018, the Royal Commission into Quality and Safety investigated the quality of aged care services provided to Australians including mistreatment and all forms of abuse as well as the causes and systemic failures and advised on actions to be taken in response to the findings. The Commission sought to advise on how best to deliver aged care services across contexts; the future challenges and opportunities for delivering accessible, affordable and high quality care; how the aged care system can be strengthened and; how to ensure aged care services are person-centred and sustainable (Source: https://www.royalcommission.gov.au/aged-care)
APINCHS Safety improvement list	Acronym defining medicines known to be associated with high potential for medicine-related harm. APINCHS - Antimicrobials, Potassium and other electrolytes, Insulin, Narcotics and other sedatives, Chemotherapeutic agents, Heparin and other anticoagulants, Systems. (Source: https://www.safetyandquality.gov.au/our-work/medication-safety/high-risk-medicines/apinchs-classification-high-risk-medicines)
Assisting with medicines	Assisting – occurs when the person is assessed by the prescriber as being able to self-administer and is in control of their medicines. To be independent with self-administration they require some physical support. A person may be able to retain control of their medicines but need assistance with simple mechanical tasks. Assisting with medicines can include: bringing packs of medicines to a person at their request so that the person can take the medicines; opening bottles or packaging, including pre-packaged dosage systems (blister packs) at the request and direction of the person who is going to take the medicine; reading labels and checking the time at the request of the person who is going to take the medicine; ensuring the person has a drink to take with their medicines.

Capacity to consent (to taking a medicine)	The person with capacity to give consent as it relates to medicines understands the reason for the proposed medicine, the outcomes associated with taking the medicine and the available options, including the right to refuse the medicine and the consequences of such omission. Prescribers and nurses administering medicines need to be confident that the person is capable of giving informed consent when it is to be relied on for the administration of a medicine. If there is doubt about a person's capacity to consent, then further consultation should occur between the person receiving the medicine/s, the prescriber and, the nurse administering the medicine/s.[97]
Care workers	Care workers (however titled) may, depending on the jurisdiction, be titled care workers, assistants in nursing, personal care assistants or personal care workers. Care workers assist people living in nursing homes with personal care or aspects of nursing care as directed and supervised by the registered or enrolled nurse. Care workers may, under the direction and supervision of the nurse, prompt or assist an older person to self-administer their medicines (see definitions) They should not be expected or directed by employers, supervisors, nurses, other health practitioners or health professionals to administer medicines. Additional education and training in medicines management (however titled) does not adequately equip care workers with the knowledge, skill and expertise needed to assess, monitor, administer and evaluate medicines safely. Specific organisational policies and processes claiming to authorise care workers to administer medicines do not meet the legal and regulatory requirements for safe medicines administration.
Compartmentalised medicines box (CMB)	A compartmentalised medicines box (CMB) is a reusable device that is usually filled by the user or an unpaid carer (family member); sometimes filled by qualified health practitioners. A nurse should not fill the CMB for more than 7 days. There are many varieties of CMB with one, two or four compartments for each day of the week. Some devices have the days and times labelled in brail for people with vision impairment. Some contain a built in alarm that can be set to remind the user when it is time to take their medicines. Unlike other types of device, these are usually not tamper-evident.
Complementary Medicines	Complementary medicines are available from health food shops, supermarkets and pharmacies. To be sold in Australia, most must be included on the Australian Register of Therapeutic Goods (ARTG). There are three types of complementary medicines: listed, assessed and registered: • Listed complementary medicines are lower risk, so are not assessed for efficacy before going on sale. They are labelled AUST L. • Assessed listed complementary medicines make slightly riskier health claims than other listed medicines and undergo an assessment for efficacy. They are labelled AUST L (A). • Registered complementary medicines may include ingredients with higher risk or make health claims about more serious conditions. These medicines are fully evaluated for efficacy by the TGA before they can be sold. They are also monitored once on sale and are labelled AUST R.[98] Source: TGA https://www.tga.gov.au/topics/complementary-medicines

Consent	*'Informed consent is the person's decision, given voluntarily, to agree to a healthcare treatment, procedure or other intervention'.*[99] The person giving consent must have the capacity to understand the reason for the proposed medicine and the available options, including the right to refuse the medicine. They must be aware of the consequences of taking or not taking the medicine and be able to communicate that decision to the person prescribing and the person administering the medicine. The decision should be recorded in the person's medicines chart. Consent can be withdrawn at any time. See the Aged Care Quality and Safety Commission's *Consent for medication in aged care* for additional information.
Continuity of medicine supply	Ensuring that correct medicines are available for the person living in a nursing home to allow the continuance of therapy so as to avoid medicines omissions and their consequences.
Cultural humility	Cultural humility is a life-long process of reflection to understand individual and systemic biases and to develop and maintain respectful processes and relationships based on mutual trust.[100]
Cultural safety	Cultural safety is the responsibility of nursing home service providers and employees. It requires ongoing reflective practice, identification of implicit bias and the development of strategies to mitigate against such bias. The nursing home service provider must support employees through policy, resources and education to create culturally safe environments that are free from assault, challenge or denial of identity and experience for those living in a nursing home (Source: https://www.health.vic.gov.au/health-strategies/aboriginal-and-torres-strait-islander-cultural-safety). Providing culturally safe environments is the responsibility of nursing home service providers and those working in the nursing home. The sense of cultural safety can only be judged by the person interacting with and/or experiencing care, not by the providers of care.[101]
Decision-making framework for nursing and midwifery	The NMBA *Decision-making framework for nursing and midwifery* (the DMF) is an evidence-based document used in conjunction with standards for practice, policies, regulations and legislation related to nursing or midwifery. The DMF aims to promote decision-making regarding scope of practice and delegation that is safe, consistent, person-centred and evidence-based. (Source: https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Frameworks.aspx)
De-prescribing	De-prescribing is the systematic process of identifying and discontinuing potentially inappropriate medicines with the aim of minimising polypharmacy and improving health outcomes. It is a positive, person-centred intervention that reassesses the role of all medicines with a view to ceasing those that: • Have no clear benefit; • May cause harm; • Are being used for an indication that is no longer an issue; • No longer fit with the current goals of care (e.g. if the person has entered a terminal phase of illness, become frail or developed dementia).[102]
Dose Administration Aid (DAA)	A Dose Administration Aid may consist of a blister pack, bubble pack or sachet system and aim to make it easier for people to self-administer their medicines by arranging the medicines into individual doses according to the prescribed dose schedule. They are packed and supplied by a pharmacist according to medicines that have been prescribed for the person.

Enrolled nurse (EN)	Enrolled nurses have undertaken an 18 month (or equivalent) NMBA approved education program through the VET sector at AQF5. They work under the direction and supervision of registered nurses and practice within legislative and regulatory requirements. According to the NMBA, all ENs may administer medicines except for those who have a notation on their registration, which reads 'Does not hold Board-approved qualification in administration of medicines'. Nursing home employers and nursing staff need to be aware of the NMBA requirements as the national regulator and their state and territory drugs and poisons legislation relating to enrolled nurses and medicines administration, as well as the professional scopes of practice of nurses.
Evidence-based practice	Evidence-based practice is applying and integrating high quality research and other forms of knowledge with clinical decision-making and the values of people receiving care. In doing so, the safety and efficacy of care is optimised.
Health practitioner	A health practitioner is an individual who: (a) Is registered under Health Practitioner Regulation National Law (National Law) to practise a health profession, other than as a student; or (b) Holds non-practising registration under this Law in a health profession. Under Definitions in the National Law at https://www.legislation.qld.gov.au/view/whole/html/inforce/current/act-2009-045
***Health Practitioner Regulation National Law* (National Law)**	*The Health Practitioner Regulation National Law* (the National Law) was enacted in each state and territory of Australia in 2009 and 2010. It is the legislation for the national registration and accreditation scheme for registered health practitioners (NRAS) https://www.nhpo.gov.au/legislation.
Health professional	A health professional works in a specific health discipline, has completed a program of study at university to at least Bachelors level (AQF 7) but is not regulated under the Australian National Registration and Accreditation Scheme. Examples include a dietician or social worker.
Medicines	Medicines are substances used to prevent, treat monitor or cure disease. This includes, but is not limited to, prescription, complementary and non-prescription medicines. Some are available over the counter and others require a prescription.
Medicines discrepancies	Medicines discrepancies refer to any difference between the medicines use and the medicine order. Discrepancies may be intentional, undocumented intentional, or unintentional.
Medication reconciliation	Medication reconciliation is the formal process by which health practitioner's partner with the person to ensure accurate and complete medication information transfer at interfaces of care.[103]
Medicine-related harm	Medicine-related harm refers to harm caused by medicines. It includes preventable adverse drug events (e.g. due to a medicine error or accidental or intentional misuse) and non-preventable adverse drug events (e.g. an adverse drug reaction).
Medicines governance group	A medicines governance group is multidisciplinary and formed to oversee the governance of medication management across a nursing home. This includes policy development and review, education, risk assessment and management and quality improvement activities related to the quality use of medicines. Medicines governance groups may be called a medicines advisory committee (MAC).

Medicines advisory committee (MAC)	The MAC is a medicines governance group and plays a key role in medicines governance. The Terms of Reference (ToR) should clearly state the objectives of the group that include development, promotion, monitoring and evaluation of activities to support quality use of medicines. The ToR should show formal links to the nursing homes governance and quality processes and structures. See also medicines governance group.[104]
Nurse-initiated medicines	Registered nurses may use their clinical assessment and judgement to initiate, or delegate to an enrolled nurse in certain circumstances to administer Schedule 2 (S2) medicines in accordance with their state or territory legislation and nursing home guidelines. When a registered nurse initiates a medicine they must conduct an assessment, taking into account the person's health and medicines history. The registered nurse must document in the person's notes the rationale for administering the medicine. This rationale is supported by the nursing assessment. The registered nurse should also evaluate the efficacy of the intervention and document in the persons notes the findings and any subsequent action. Administration of nurse-initiated medicines must be recorded appropriately on the medicine chart.
Nurse practitioner (NP)	Nurse practitioners are registered nurses endorsed as NPs by the NMBA following successful completion of qualifications to at least Master's level (AQF9). They practice at an advanced level, demonstrate leadership, provide education, participate in research, manage systems, meet and comply with the NMBA *Nurse Practitioner Standards for practice*, provide direct clinical care and practice within their scope using the protected title 'nurse practitioner' under the National Law. NPs role in medicines management includes and builds on that which is provided by registered nurses. They use advanced, comprehensive assessment techniques and prescribe therapeutic and diagnostic interventions including the prescription of medicines.
Older person	'There is no widely accepted name for, and definition of, an older person. The terminology used to describe older people is also variable (for example aged, elderly, frail elderly). Although chronological age on its own may not be an appropriate way to categorise people, in general those over 65 years (over 50 for Aboriginal and Torres Strait Islander peoples) are often described as aged, older or elderly. Those older people with substantial coexisting medical problems are sometimes referred to as frail elderly. A high proportion of people living in nursing homes can be classified as frail elderly and/or are over 85.'[105]
Over the counter (OTC) medicines	Over the counter (OTC) medicines are used for mild health problems and have tighter controls than complementary medicine, but do not require a prescription. They must be included in the Australian Register of Therapeutic Goods (ARTG) before being sold in Australia. OTC medicines may be classified as: • *Listed*, where the medicine is available for purchase at a person's discretion, or • *Registered* where the medicine is available with a prescription or following consultation with a pharmacist.

Person-centred care	Person-centred care is care that is respectful of, and responsive to, the preferences, needs and values of the individual person receiving care. It recognises the value of the person's experience and expertise regarding their own health. Person-centred care acknowledges the power of partnerships between individuals and health care providers for achieving optimal health. Person-centred care is integral to upholding a person's healthcare rights and the rights of older people receiving aged care services.
Pharmacodynamics	The study of drugs and their actions on living organisms.[106]
Pharmacokinetics	The metabolism and action of drugs with particular emphasis on the time required for absorption, duration of action, distribution in the body, and method of excretion.[107]
Polypharmacy	The concurrent use of five or more medicines. The higher prevalence of disease in older people means that they often take several medicines. This increases the risk of adverse drug effects and interactions. Regular medicine reviews help to identify medicines that are no longer appropriate and reduce the risk of harm associated with polypharmacy.[108]
Prescriber	A health practitioner with endorsement to prescribe medicines in Australia.
Prescription medicines	Prescription medicines are medicines that can only be made available to a person on the written instruction (prescription) of an authorised health practitioner, for example a nurse practitioner or medical practitioner, before they can be obtained from a registered pharmacist.[109] Schedule 4 (S4) medicines and Schedule 8 (S8) controlled medicines, require a prescription.[110]
Prescription medicine treatment protocols	Prescription medicine treatment protocols are generic legal written instructions for the administration of a particular named medicine (at a specified dose and frequency) to a person under certain conditions by an authorised health practitioner. The authorised health practitioner must have a valid and current written instruction for the specific use of the prescription medicine treatment protocol. Prescription medicine treatment protocols are permitted in some Australian States and Territories and cover Schedule 4 (S4), Schedule 8 (S8) medicines and other restricted substances. Prescription medicine treatment protocols can only be issued by a prescriber under the governance of the medicines advisory committee and must: - Meet the state or territory legislative requirements, and permissions; - Be for the administration of a specific medicine(s); - Be administered by a registered nurse; and - Be time limited.[111] Where there is no medicine imprest, prescription medicine treatment protocols may not be appropriate.
p.r.n. medicines	*Pro re nata* (p.r.n.) is a Latin phrase meaning *as the circumstance arises or as needed*. 'When required' or p.r.n. medicines are those which are ordered by a prescriber for a specific person and purpose and recorded on that person's medicines chart to be taken only as needed.
Quality use of medicines (QUM)	Quality use of medicines (QUM) is one of the core objectives of Australia's National Medicines Policy. It relates to using medicines judiciously, safely and only when necessary.

Prompting	Occurs when the person is assessed as being able to self-administer their medicines and is in control of their medicines. Their independence requires verbal support. Prompting of medicines is reminding a person of the time and asking if they have or are going to take their medicines. The person is still in control of their medicines and may decide not to take them or to take them later. Prompting can be useful when a person knows what medicines to take and how to take them but may simply forget the time.[112]
Residential medication management review (RMMR)	RMMR's are medication reviews ordered by a medical practitioner and conducted by an accredited pharmacist in a nursing home. The intent of the RMMR Program is to support the quality use of medicines and minimise adverse medicine events for people living in approved Australian Government-funded nursing homes.[113]
Self-administration of medicines	Self-administration of medicines is when a person has the capacity to manage and take their own medicines. A person residing in a nursing home can self-administer their medicines where they are assessed to have the capacity and ability to do so. Capacity to self-administer medicines should be reviewed regularly. Self-administered medicines must be ordered by a prescriber, dispensed by a pharmacist and labelled with the person's name, the name and strength of the medicine, the dosage, frequency and route of administration and stored securely.
Substitute decision maker (SDM)	A person appointed to make health care or medical treatment decisions for a person who has reduced or lost decision-making capacity. Different terms are used in different jurisdictions. The Aged Care Quality and Safety Commission's *Consent for medication in aged care* provides further information on consent including jurisdictional information relating to SDMs.
Registered nurse (RN)	Registered nurses have undertaken an NMBA approved entry to practice program of study through a university (to at least AQF7). This may be a Bachelor's or Master's (entry to practice) level qualification. RNs are responsible for medicines management. They are educated to assess the benefits and potential hazards in the use of medicines and to administer medicines safely and legally, as well as to monitor their efficacy and identify and respond to adverse effects. RNs have the skills and knowledge to assess the changing needs of the older person; plan and implement care accordingly; evaluate the person's response to medicines; and accurately communicate that information to other health practitioners including the prescriber. RNs provide a vital link between the older person and other health practitioners such as medical practitioners, pharmacists, enrolled nurses and allied health professionals.
Transitions of care	Transitions of care are the points where a person moves to, or returns from, a particular physical location or makes contact with a health practitioner or health professional for the purposes of receiving healthcare. This includes transitions between home, hospital, nursing homes and consultations with different healthcare providers in out-patient facilities.[114]

References

1. *Health Practitioner Regulation National Law Act 2009*. Retrieved 20 April 2022. https://www.legislation.qld.gov.au/view/html/inforce/current/act-2009-045
2. Nursing and Midwifery Board of Australia. *Registered Nurse Standards for Practice*. Melbourne: NMBA, 2016.
3. Nursing and Midwifery Board of Australia. *Enrolled Nurse Standards for Practice*. Melbourne: NMBA, 2016.
4. Commonwealth of Australia, Department of Health and Aged Care. *Medication Management in Residential Aged Care Facilities. Guiding Principles*. Canberra: Commonwealth of Australia, Department of Health and Aged Care, 2022. https://www.health.gov.au/resources/publications/guiding-principles-for-medication-management-in-residential-aged-care-facilities?language=en
5. Department of Health and Ageing. 1999. *National Medicines Policy*. Canberra: Commonwealth of Australia. Accessed 21 March 2022. https://www1.health.gov.au/internet/main/publishing.nsf/Content/national-medicines-policy
6. Royal Commission into Aged Care Quality and Safety. 2021. *Final Report – Executive Summary*. Canberra: Commonwealth of Australia. Retrieved 27 April 2022. https://www.royalcommission.gov.au/system/files/2021-03/final-report-executive-summary.pdf
7. Australian Institute of Health and Welfare. 2021. *Older Australians*. Canberra: AIHW. Retrieved 24 January 2022. https://www.aihw.gov.au/reports/older-people/older-australians/contents/about
8. Australian Bureau of Statistics. 2019. ***Disability, Ageing and Carers, Australia: Summary of Findings***. Canberra: ABS. Retrieved 24 January 2022. https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release
9. Australian Institute of Health and Welfare. 2021. *People using Aged Care*. Canberra: AIHW. Retrieved March 2022. https://www.gen-agedcaredata.gov.au//Topics/People-using-aged-care
10. Sommers, M; Rose, E; Simmonds, A; Whitelaw, C; Calver, J; Beer, C. 2010. "Quality use of medicines in residential aged care." *Australian Family Physician* 39 (6): 413–416
11. Parameswaran, NN; Chalmers, L; Bereznicki, BJ; Curtain, C; Peterson, GM; Connolly, M and Bereznicki, LR. 2017. "Adverse drug reaction-related hospitalizations in elderly Australians: a prospective cross-sectional study in two Tasmanian hospitals." *Drug Safety* 40 (7): 597–606
12. Australian Commission on Safety and Quality in Health Care. 2021. *APINCHS Classification of High Risk Medicines*. Sydney: ACSQHC. Retrieved April 2022. https://www.safetyandquality.gov.au/our-work/medication-safety/high-risk-medicines/apinchs-classification-high-risk-medicines
13. Aged Care Safety and Quality Commission; Health Outcomes International. [2020]. *Discussion paper: Better use of medications in aged care*. Canberra: Australian Government. Retrieved April 2022. https://www.agedcarequality.gov.au/media/88305
14. WHO. 2019. *Medication Safety in Transitions of Care*.
15. Hilmer, Sarah N; Gnjidic, Danijela. 2017. "Prescribing for Frail Older People." *Australian Prescriber* 40: 174-8.https://www.nps.org.au/australian-prescriber/articles/prescribing-for-frail-older-people
16. Ferrah, N; Lovell, JJ and Ibrahim, JE. 2016. "Systematic review of the prevalence of medication errors resulting in hospitalization and death of nursing home residents." *Journal of the American Geriatrics Society* 65(2): 433-442
17. Australian Institute of Health and Welfare. 2018. *Australia's Health 2018*. Canberra: AIHW. Retrieved April 2022. https://www.aihw.gov.au/getmedia/256a903d-a3ab-449b-ae52-c9cfe78381e0/aihw-aus-221-chapter-7-9.pdf.aspx
18. Ferrah, N. et al. 2016. "Systematic review of the prevalence of medication errors…"
19. Australian Commission on Safety and Quality in Health Care. [2022]. *Person-centred care*. Sydney: ACSQHC. Retrieved 20 April 2022. https://www.safetyandquality.gov.au/our-work/partnering-consumers/person-centred-care
20. Nursing and Midwifery Board of Australia. 2018. *Code of conduct for nurses*. Melbourne: NMBA. https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx
21. Australian Commission on Safety and Quality in Health Care. 2020. *Australian Charter of Healthcare Rights (second edition)*. Sydney: ACSQHC. Retrieved 21 March 2022. https://www.safetyandquality.gov.au/publications-and-resources/resource-library/australian-charter-healthcare-rights-second-edition-a4-accessible
22. Aged Care Quality and Safety Commission. 2019. *Charter of Aged Care Rights*. Canberra: Australian Government. Retrieved 21 March 2022. https://www.agedcarequality.gov.au/consumers/consumer-rights
23. Department of Health and Ageing. 1999. *National Medicines Policy*. Canberra: Commonwealth of Australia. Accessed 21 March 2022. https://www1.health.gov.au/internet/main/publishing.nsf/Content/national-medicines-policy
24. Department of Health. 2024. *Safe Use of Medicines (QUM)*. Canberra: Australian Government. Accessed March 2024. https://www.health.gov.au/topics/medicines/safe-use
25. Sackett, D; Rosenberg, W; Gray, J; Haynes, B; Richardson, S. 1996. "Evidence based medicine: what it is and what it isn't: It's about integrating individual clinical expertise and the best external evidence." BMJ 312: 71-72. DOI: http://dx.doi.org/10.1136/bmj.312.7023.71
26. Australian Commission on Safety and Quality in Health Care. 2022. *Clinical Governance and Quality Improvement to Support Medication Management*. Sydney: ACSQHC. Retrieved April 2022. https://www.safetyandquality.gov.au/standards/nsqhs-standards/medication-safety-standard/clinical-governance-and-quality-improvement-support-medication-management
27. Sluggett, Janet K; Jenni Ilomäki; Karla L Seaman; Megan Corlis and J Simon Bell. 2017. "Medication Management Policy, Practice and Research in Australian Residential Aged Care: Current and Future Directions." *Pharmacological Research* 116: 20-28. Retrieved April 2022. https://pubmed.ncbi.nlm.nih.gov/27965033/

28. Sluggett, Janet K. et al. 2017. “Medication Management Policy, Practice…”
29. “Medication Management Processes.” Commonwealth of Australia, 2022, https://www.safetyandquality.gov.au/standards/nsqhs-standards/medication-safety-standard/medication-management-processes
30. Nursing and Midwifery Board of Australia. 2021. *Nurse practitioner standards for practice*. Melbourne: NMBA. Retrieved April 2022. https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Enrolled-nurses-and-medicine-administration.aspx
31. Nursing and Midwifery Board of Australia. 2019. *Fact Sheet: Enrolled Nurse and Medicine Administration*. Melbourne: NMBA. Retrieved April 2022. https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Enrolled-nurses-and-medicine-administration.aspx
32. NMBA. 2018. *Code of Conduct for Nurses*.
33. Nursing and Midwifery Board of Australia. 2020. *Decision-making framework for nursing and midwifery*. Melbourne: NMBA. Retrieved 24 January 2022. https://www.nursingmidwiferyboard.gov.au/codes-guidelines-statements/frameworks.aspx
34. Ferrah, Noha, Janaka J Lovell, and Joseph E Ibrahim. “Systematic Review of the Prevalence of Medication Errors Resulting in Hospitalization and Death of Nursing Home Residents.” *Journal of the American Geriatrics Society* 65, no. 2 (2017): 433-42.
35. World Health Organization. “Medication Errors.” Geneva: WHO, 2016.
36. The International Council of Nurses. “Position Statement. Evidence-Based Safe Nurse Staffing.” Geneva: International Council of Nurses, 2018.
37. Aiken, Linda H, and Claire M Fagin. “Evidence-Based Nurse Staffing: ICN’s New Position Statement.” *International Nursing Review* 65, no. 4 (2018): 469-71.
38. Carthon, J Margo Brooks, Lawrence Davis, Andrew Dierkes, Linda Hatfield, Taylor Hedgeland, Sara Holland, Colin Plover, et al. “Association of Nurse Engagement and Nurse Staffing on Patient Safety.” *Journal of nursing care quality* 34, no. 1 (2019): 40.
39. Sharma, Suresh K, and Ritu Rani. “Nurse-to-Patient Ratio and Nurse Staffing Norms for Hospitals in India: A Critical Analysis of National Benchmarks.” *Journal of family medicine and primary care* 9, no. 6 (2020): 2631.
40. McHugh, Matthew D, Linda H Aiken, Carol Windsor, Clint Douglas, and Patsy Yates. “Case for Hospital Nurse-to-Patient Ratio Legislation in Queensland, Australia, Hospitals: An Observational Study.” *BMJ open* 10, no. 9 (2020): e036264
41. Aged Care Quality and Safety Commission. [2021]. *Consent for Medication in Aged Care: Fact Sheet*. Canberra: Australian Government. Retrieved April 2022. https://www.agedcarequality.gov.au/resources/consent-medication-aged-care-fact-sheet
42. Australian Commission on Safety and Quality Health Care. 2019. *National Residential Medication Chart*. Sydney: ACSQHC. Retrieved 31 January 2022. https://www.safetyandquality.gov.au/our-work/medication-safety/national-residential-medication-chart
43. Australian Commission on Safety and Quality Health Care. 2021. *Electronic National Residential Medication Chart Medication Management Systems: Your Guide to Safe Implementation in Residential Care Facilities*. Sydney: ACSQHC. Retrieved April 2022. https://www.safetyandquality.gov.au/publications-and-resources/resource-library/electronic-national-residential-medication-chart-medication-management-systems-your-guide-safe-implementation-residential-care-facilities
44. Australian Commission on Safety and Quality Health Care. 2021. *National Standard for Labelling Dispensed Medicines*. Sydney: ACSQHC. Retrieved April 2022. https://www.safetyandquality.gov.au/publications-and-resources/resource-library/national-standard-labelling-dispensed-medicines
45. Reeve, Emily; Lee-Fay, Low and Sarah N Hilmer. 2019. “Attitudes of Older Adults and Caregivers in Australia toward Deprescribing.” *Journal of the American Geriatrics Society* 67 (6): 1204-10. https://pubmed.ncbi.nlm.nih.gov/30756387/
46. Page, Amy; Clifford, Rhonda; Potter, Kathleen and Etherton-Beer, Christopher. 2018. “A Concept Analysis of Deprescribing Medications in Older People.” *Journal of Pharmacy Practice and Research* 48 (2): 132-48
47. Royal Australian College of General Practitioners. 2019. *RACGP Aged Care Clinical Guide (Silver Book)*. 5th ed. East Melbourne: RACGP. Retrieved April 2022. https://www.racgp.org.au/silverbook
48. Australian Commission on Safety and Quality in Health Care. 2022. *Joint statement on the inappropriate use of psychotropic medicines to manage the behaviours of people with disability and older people*. Sydney: ACSQHC. Retrieved May 2022. https://www.safetyandquality.gov.au/about-us/latest-news/media-releases/joint-statement-inappropriate-use-psychotropic-medicines-manage-behaviours-people-disability-and-older-people
49. Australian Commission on Safety and Quality in Health Care. 2020. *Antimicrobial stewardship clinical care standard*. Sydney: ACSQHC. Retrieved May 2022. https://www.safetyandquality.gov.au/our-work/clinical-care-standards/antimicrobial-stewardship-clinical-care-standard
50. Australian Medicines Handbook. 2021. *Aged Care Companion*. Adelaide: AMH.
51. Page, Amy et al. 2018. A Concept Analysis of Deprescribing Medications…”
52. Lambert, B L; Lin, S J; Chang, K Y; Gandhi S K. 1999. “Similarity as a risk factor in drug-name confusion errors: the look-alike (orthographic) and sound-alike (phonetic) model.” *Medical Care* 37 (12): 1214–25. Retrieved April 2022. https://pubmed.ncbi.nlm.nih.gov/10599603/
53. DeHenau C; Becker, M W; Bello N M; Liu S; Bix L. 2016. “Tallman lettering as a strategy for differentiation in look-alike, sound-alike drug names: the role of familiarity in differentiating drug doppelgangers.” *Applied Ergonomics* 52:77-84. https://pubmed.ncbi.nlm.nih.gov/26360197/

54. Australian Commission on Safety and Quality in Health Care. 2020. *Principles for the Safe Selection and Storage of Medicines: Guidance on the Principles and Survey Tool*. Sydney: ACSQHC. Retrieved April 2022. https://www.safetyandquality.gov.au/publications-and-resources/resource-library/principles-safe-selection-and-storage-medicines-guidance-principles-and-survey-tool
55. NSW Nurses and Midwives Association. "The State of Medication in Nsw Residential Aged Care." *Professional Issues* 4, no. September (2017). https://www.nswnma.asn.au/wp-content/uploads/2017/12/Medication-in-NSW-RAS-FINAL-LR.pdf
56. Nissen, Lisa M. "Australian Don't Rush to Crush Handbook." *Australian Prescriber* 35, no. 5 (2012): 147-47.
57. RACGP. 2019. *Silver Book*.
58. NMBA. 2020. *Decision-Making Framework*.
59. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
60. ACSQHC. 2019. *Electronic National Residential Medication Chart*.
61. Care Inspectorate. "Prompting, Assisting and Administration of Medication in a Care Setting: Guidance for Professionals." Dundee, Scotland, 2015.
62. Care Inspectorate. "Prompting, Assisting and Administration of Medication in a Care Setting: Guidance for Professionals." Dundee, Scotland, 2015.
63. Pharmaceutical Society of Australia. 2017. *Guidelines for pharmacists providing dose administration aid services, Appendix 6*. Canberra: PSA. Retrieved April 2022. https://my.psa.org.au/s/article/Guidelines-for-pharmacists-providing-dose-administration-aid-services
64. Pharmacy Board of Australia. 2015. *Guidelines on dose administration aids and staged supply of dispensed medicines*. 2015. Melbourne: Pharmacy Board. Retrieved April 2022. https://www.pharmacyboard.gov.au/codes-guidelines.aspx
65. Lau, Esther T L; Steadman, Kathryn J; Cichero, Julie A Y and Nissen, Lisa M. 2018. "Dosage Form Modification and Oral Drug Delivery in Older People." *Advanced Drug Delivery Reviews* 135: 75-84. https://pubmed.ncbi.nlm.nih.gov/29660383/
66. Cichero, Julie A Y. 2018. "Age-Related Changes to Eating and Swallowing Impact Frailty: Aspiration, Choking Risk, Modified Food Texture and Autonomy of Choice." *Geriatrics* 3 (4): 69. https://pubmed.ncbi.nlm.nih.gov/31011104/
67. Lau, Esther T L. et al. 2018. "Dosage Form Modification..."
68. Lau, Esther T L. et al. 2018. "Dosage Form Modification..."
69. Society of Hospital Pharmacists of Australia. 2021. *Don't Rush to Crush*. 4th ed. Collingwood (Vic): SHPA. Accessed April 2022. https://www.shpa.org.au/publications-resources/drtc/drtc-4-updates
70. NMBA. 2018. *Code of Conduct for Nurses*.
71. Rhode, E & Domm, E. 2018. "Nurses' clinical reasoning practices that support safe medication administration: An integrative review of the literature." *Journal of Clinical Nursing* 27(3-4): e402
72. Adair, Kathryn C, Annemarie Heath, Maureen A Frye, Allan Frankel, Joshua Proulx, Kyle J Rehder, Erin Eckert, et al. "The Psychological Safety Scale of the Safety, Communication, Operational, Reliability, and Engagement (Score) Survey: A Brief, Diagnostic, and Actionable Metric for the Ability to Speak up in Healthcare Settings." *Journal of patient safety* 18, no. 6 (2022): 513-20.
73. NMBA. 2018. *Code of Conduct for Nurses*.
74. SHPA. 2021. *Don't Rush to Crush*.
75. ACSQHC. 2019. *National Residential Medication Chart*.
76. ACSQHC. 2019. *Electronic Medication Management*.
77. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
78. Dike, Ogechi N and Farris, Grace. "Discharge Planning." In *Geriatric Practice: A Competency Based Approach to Caring for Older Adults*, edited by Audrey Chun, 483-89. Cham: Springer International Publishing, 2020.
79. WHO. 2019. *Medication Safety in Transitions of Care*.
80. Dike, Ogechi N et al. 2020. "Discharge Planning."
81. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
82. Australian Commission on Safety and Quality Health Care. 2019. *Documentation of Patient Information*. Accessed April 2022. https://www.safetyandquality.gov.au/standards/nsqhs-standards/medication-safety-standard/documentation-patient-information
83. Sluggett, Janet K; Bell Simon J; Lang, Catherine; Corlis, Megan; Whitehead, Craig; Wesselingh, Steven L and Inacio, Maria C. 2021. "Residential Medication Management Reviews in Australian Residential Aged Care Facilities." *Medical Journal of Australia* 214 (9): 432-33. https://www.mja.com.au/journal/2021/214/9/residential-medication-management-reviews-australian-residential-aged-care
84. WHO. 2019. *Medication Safety in Transitions of Care*.
85. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
86. ACSQHC. 2019. "Electronic Medication Management."

87. Pearce, Robert and White, Ian. 2018. “Electronic Medication Management: Is it a Silver Bullet?” *Australian Prescriber* 41 (2): 32-3. https://www.nps.org.au/australian-prescriber/articles/electronic-medication-management-is-it-a-silver-bullet
88. Australian Commission on Safety and Quality Health Care. 2017. *National Guidelines for on-Screen Display of Medicines Information*. Sydney: ACSQHC. Accessed April 2022. https://www.safetyandquality.gov.au/publications-and-resources/resource-library/national-guidelines-screen-display-medicines-information
89. Australian Commission on Safety and Quality Health Care. 2019. *Electronic Medication Management Systems: A Guide to Safe Implementation*. 3rd ed. Sydney: ACSQHC. https://www.safetyandquality.gov.au/our-work/medication-safety/electronic-medication-management/electronic-medication-management-systems-guide-safe-implementation
90. Australian Commission on Safety and Quality Health Care. 2021. *Electronic National Residential Medication Chart Medication Management Systems. Your Guide to Safe Implementation in Residential Care Facilities*. Sydney: ACSQHC. https://www.safetyandquality.gov.au/our-work/medication-safety/electronic-medication-charts/electronic-national-residential-medication-chart
91. Aged Care Quality and Safety Commission. 2021. *The Aged Care Quality Standards*. Canberra: ACQSC. Accessed March 2022. https://www.agedcarequality.gov.au/providers/standards
92. Australian Commission on Safety and Quality in Health Care. 2021. *National Residential Medication Chart (version 4)*. Sydney: ACSQHC. Retrieved 20 April 2022 https://www.safetyandquality.gov.au/publications-and-resources/resource-library/national-residential-medication-chart-version-4
93. WHO. 2019. Medication Safety in Transitions of Care.
94. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
95. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
96. Commonwealth of Australia, Department of Health and Aged Care. *Role of a Medication Advisory Committee. User Guide*. Canberra: Commonwealth of Australia, Department of Health and Aged Care, 2022. https://www.health.gov.au/resources/publications/user-guide-role-of-a-medication-advisory-committee?language=en
97. Aged Care Quality and Safety Commission. [2021]. *Consent for Medication in Aged Care: Fact Sheet*. Canberra: Australian Government. Retrieved April 2022. https://www.agedcarequality.gov.au/resources/consent-medication-aged-care-fact-sheet
98. Australian Government. Department of Health and Aged Care. Therapeutic Goods Administration. Complementary medicines overview Canberra: Australian Government. Department of Health and Aged Care; 2019. Retrieved from: https://www.tga.gov.au/topics/complementary-medicines
99. Aged Care Quality and Safety Commission. “Consent for Medication in Aged Care. Fact Sheet.” Australia: Australian Government, ND. https://www.agedcarequality.gov.au/sites/default/files/media/consent-for-medication-in-aged-care-fact-sheet_0.pdf
100. Cox, JL, and MD Simpson. “Cultural Humility: A Proposed Model for a Continuing Professional Development Program.” *Pharmacy* 8, no. 214 (020). https://doi.org/doi:10.3390/pharmacy8040214
101. NMBA. 2018. *Code of Conduct for Nurses*
102. Australian Medicines Handbook. *AMH Aged Care Companion (Online)*. Adelaide, Australia: Australian Medicines Handbook Pty Ltd, 2020. https://shop.amh.net.au/products/digital
103. World Health Organization. *Medication Safety in Transitions of Care*. Geneva: World Health Organization, 2019. https://www.who.int/publications/i/item/WHO-UHC-SDS-2019.9
104. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
105. Australian Medicines Handbook. AMH Aged Care Companion (Online). Adelaide, Australia: Australian Medicines Handbook Pty Ltd, 2020. https://shop.amh.net.au/products/digital
106. Venes D. Taber’s Cyclopedic Medical Dictionary. 24 ed. New York New York: McGraw-Hill; 2021.
107. Venes D. Taber’s Cyclopedic Medical Dictionary. 24 ed. New York New York: McGraw-Hill; 2021.
108. Australian Medicines Handbook. *AMH Aged Care Companion (Online)*. Adelaide, Australia: Australian Medicines Handbook Pty Ltd, 2020. https://shop.amh.net.au/products/digital
109. Australian Government. Department of Health and Aged Care. Acronyms and Glossary. Therapeutic Goods Administration; 2020.
110. Australian Government. Department of Health and Aged Care. Scheduling basics. Therapeutic Goods Administration; ND.
111. Commonwealth of Australia, Department of Health and Aged Care, 2022. *Medication Management in Residential Aged Care Facilities. Guiding Principles*.
112. Care Inspectorate. “Prompting, Assisting and Administration of Medication in a Care Setting: Guidance for Professionals.” Dundee, Scotland, 2015.
113. Pharmacy Programs Administrator. “Residential Medication Management Review and Quality Use of Medicines.” (2018). https://www.ppaonline.com.au/programs/medication-management-programs/residential-medication-management-review-and-quality-use-of-medicines
114. World Health Organization. Transitions of Care. Technical series on safer primary care. Geneva: World Health Organisation; 2016