Pharmaceutical Society of Australia

Guidelines for comprehensive medication management reviews

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Contents

Acknowledgements

Executive summary

Quality use of medicines (QUM) is one of the four central objectives of Australia's National Medicines Policy. The National Medicines Policy describes QUM as[1]:

- appropriate—select the most appropriate medicine
- judicious—use all medicines only when appropriate
- safe—use all medicines safely
- effective—ensure that medicine use achieves therapeutic goals.

In November 2019, the Australian Government recognised QUM and medicines safety as the 10th National Health Priority.[2,3]

The Pharmaceutical Society of Australia (PSA) 2019 report *Medicine Safety: Take Care*[4] and 2020 report *Medicine Safety: Aged Care*[5] detail the extent of harm as a result of medicines use. The main types of harm include 250,000 hospital admissions due to medicines and adverse events, at an annual cost of $1.4 billion; half of this harm is considered preventable.[4] More than half of all people living in residential aged care facilities (RACFs) are prescribed medicines that are considered potentially inappropriate in older people.[4,5]

Comprehensive medication management reviews aim to identify, resolve and prevent medication-related problems, and optimise medicines use in partnership with medical practitioners and patients. This process occurs in consultation with the patient, and in collaboration with a medical practitioner and other healthcare providers, with the aim of optimising each patient's medication experience and clinical outcomes.

Each medicine is assessed to determine:

- appropriateness for the patient
- effectiveness for the medical condition
- safety in the context of comorbidities and other medicines being taken
- the ability to be taken by the patient as intended.

A comprehensive medication management review includes an individualised medication management plan that details the intended goals of therapy. Appropriate follow-up occurs to determine actual patient outcomes.

Comprehensive medication management reviews must be conducted by a pharmacist with the appropriate skills and expertise, acting in partnership with patients as part of a multidisciplinary team.

These guidelines apply to comprehensive medication management reviews regardless of practice setting and funding mechanisms. The guidelines describe best practice for implementation of medication management services and are not intended to provide any clinical information. It is the responsibility of individual pharmacists to maintain their clinical skills, knowledge and competency.

Home Medicines Reviews (HMRs) and Residential Medication Management Reviews (RMMRs) are types of medication management review programs that may be government funded. They aim to improve health outcomes for patients, and promote medicines safety and the quality use of medicines. HMRs are designed to support patients living in the community, whereas RMMRs are designed to support patients living in residential care. These guidelines should be read in conjunction with program rules for these funded services.

Pharmacists embedded in general practice, RACFs and Aboriginal health services may conduct comprehensive medication management reviews as part of their role in these practice settings. Additional roles for pharmacists working in multidisciplinary health care teams can be considered under three broad categories: patient-directed roles, clinician-directed roles, and system- or practice-directed roles.[6]

Details of legislative requirements are not addressed in these guidelines. At all times, pharmacists delivering these programs must comply with all relevant Commonwealth, state and territory legislation, as well as professional practice standards, and program-specific standards, codes and rules (see Figure 1).

Figure 1. Overarching guidance and regulation of pharmacy service delivery[7]
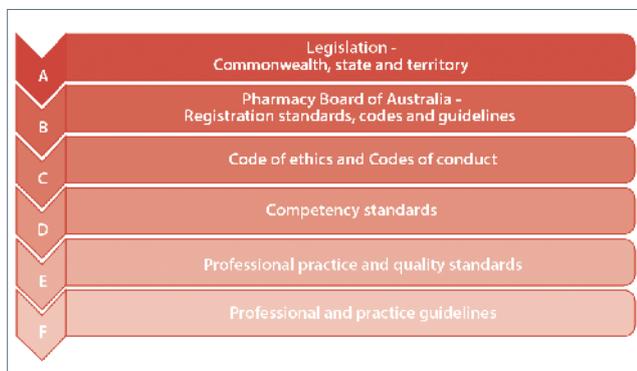
These guidelines do not replace the need for pharmacists to exercise professional discretion and judgement when delivering these programs in their own unique practice environment and managing any associated risks. Pharmacists will need to make risk–benefit assessments and other professional judgements from time to time, based on the best available information. Any significant decisions should always be documented.[7] Pharmacists are reminded that they have a professional and legal responsibility to ensure that medicines are appropriate and safe for patients to use.[7]

All pharmacists conducting comprehensive medication management reviews must have knowledge of:

- Australia's National Medicines Policy
- Pharmaceutical Society of Australia (PSA) *Professional Practice Standards,* version 5
- Medication Safety Standard of the National Safety and Quality Health Service (NSQHS) Standards
- Aged Care Quality Standards
- AS85000:2017—Quality Care Pharmacy Program Standard
- *Clinical Governance Principles for Pharmacy Services 2018*
- *PSA Code of Ethics for Pharmacists*
- *Guiding Principles for Medication Management in Residential Aged Care Facilities*
- *Guiding Principles for Medication Management in the Community*
- *Guiding Principles to Achieve Continuity in Medication Management.*

Terminology

Table 1 provides a definition of terms used in these guidelines.

Table 1. Terms used in these guidelines	
Term	**Definition**
Aboriginal health workers	Aboriginal and Torres Strait Islander Health workers providing primary health care for Aboriginal and Torres Strait Islander people
Accredited pharmacist	A registered pharmacist with appropriate skills and expertise recognised by formal accreditation to conduct medication reviews from an approved accreditation body
Aged care home	Also known as a nursing home or residential aged care facility, is for older people who can no longer live at home and need ongoing help with everyday tasks or health care
Best possible medication history	A medication history obtained by a healthcare provider that includes a thorough history of all regular medication use (prescribed and non-prescribed), using a number of different sources of information
Carer	A person who is not a health professional who provides personal care, support and help to patients in any home setting, including a residential aged care facility
Chemical restraint	Restraint that is, or involves, using medicine or a chemical substance to influence a person's behaviour, and not for the treatment of a diagnosed mental condition, physical illness or condition[8]
Clinical governance	An 'integrated set of leadership behaviours, policies, procedures, responsibilities, relationships and monitoring and improvement mechanisms that are directed towards ensuring good clinical outcomes'[8]
Clinical handover	'Transfer of professional responsibility and accountability for some or all aspects of care for a patient to another person or professional group'[9] on a temporary or permanent basis
Comprehensive medication management review	A multidisciplinary activity whereby the risks and benefits of each medicine are considered with the patient (and/or their carer, representative or substitute decision maker) and decisions made about their future therapy
Continuous improvement	A systematic, ongoing effort to improve an organisation's performance in achieving outcomes based on relevant standards[8]
DVA	Department of Veterans' Affairs
Guidelines	Advice or guidance to pharmacists on professional process issues, desired behaviour for good practice, and how responsibilities may be best fulfilled. They are not definitive statements of correct procedure
Healthcare team	Includes the patient, carer, accredited pharmacist, hospital or community pharmacist, medical practitioners, nurses, Aboriginal health workers or other healthcare providers
Home Medicines Review (HMR)	An Australian Government–funded service in which the medical practitioner and the accredited pharmacist both participate in the medication review process, consistent with the business rules for Item 900 of the Medicare Benefits Schedule. Previous terminology included Domiciliary Medication Management Review (DMMR), a term that is still used in practice. HMR is the accepted name for comprehensive medication management reviews in the community
Medical practitioner	A health professional who has a medical degree and is registered with the Medical Board of Australia. Includes general practitioners and other specialists
Medication Management Plan	A written plan agreed between the medical practitioner and patient that identifies the medication management goals and the proposed medication regimen for the patient
Medicine	Includes prescription medicines, non-prescription medicines, and complementary and alternative medicines

Table 1. Terms used in these guidelines	
Term	**Definition**
Multipurpose service	An integrated health and aged care service that provides flexible and sustainable service options for small rural and remote communities[10]
Nominated community pharmacy	The preferred pharmacy nominated by the patient to provide and receive information related to comprehensive medication management review services
Other medical practitioner	Medical practitioners involved in the patient's care who are not the patient's usual general practitioner. This includes medical specialists and hospital-based medical practitioners
Patient	A person who uses, or is a potential user of, health services, including their family and authorised representative(s)[7]
Resident	A person living permanently in a residential aged care facility
Residential aged care facility	An aged care facility that receives a residential care subsidy in accordance with the Aged Care Act 1997[10]; includes nursing homes, hostels and multipurpose services
Residential Medication Management Review (RMMR)	An Australian Government–funded service in which the medical practitioner and the accredited pharmacist both participate in the medication review process, consistent with the business rules for Item 903 of the Medicare Benefits Schedule
Standards	Objective statements of the minimum requirements necessary to ensure that a service is delivered with a desirable level of acceptable or intended performance or results. Standards relate to the systems pharmacists should have in place for the delivery of a service and provide a benchmark against which performance can be assessed
Services Australia—Medicare	Formerly known as the Department of Human Services, and before that as Medicare Australia. Medicare is Australia's universal health insurance scheme that covers medical services, hospital treatment and prescription medicines[11]
Substitute decision maker	'A person permitted under the law to make decisions on behalf of someone who does not have capacity'[12]
Telehealth	Information and communication technologies to deliver health services outside traditional healthcare facilities or in the consumer's home

Patients' rights, confidentiality and consent

It is the patient's decision to participate in the comprehensive medication management review process. They may elect to withdraw from the service at any time. Patients should be involved in decision making to the extent that they choose or are able to. This includes considering the options, benefits and risks of their current or proposed medicines.[13] A substitute decision maker can make most healthcare decisions for a person who has lost capacity.

For all comprehensive medication management reviews, the patient has the right to choose the place of the service depending on their preferences, socioeconomic circumstances and cultural beliefs. The referring medical practitioner may identify potential safety concerns for the accredited pharmacist and recommend an alternative place for the consultation. The preferred place is the setting that best meets the patient's clinical needs. Usually, this will be the patient's home (RACFs and multipurpose services with residential facilities are considered a person's home). However, it may be appropriate to conduct a comprehensive medication management review consultation in a medical practitioner's practice, or a common area in a retirement village, community health service or Aboriginal health service. When delivering a comprehensive medication management review that the pharmacist intends to seek government remuneration for, consideration should also be given to the location requirements outlined in the Program Rules.

The Australian Commission on Safety and Quality in Health Care describes the rights that patients, or someone they care for, can expect when receiving health care[14] (see Table 2). The rights apply to all people in all places where health care is provided in Australia. These include public and private hospitals, day procedure services, general practice and other community health services.

Table 2. Australian Charter of Healthcare Rights	
I have a right to:	
Access	• Healthcare services and treatment that meets my needs
Safety	• Receive safe and high quality health care that meets national standards • Be cared for in an environment that is safe and makes me feel safe
Respect	• Be treated as an individual, and with dignity and respect • Have my culture, identity, beliefs and choices recognised and respected
Partnership	• Ask questions and be involved in open and honest communication • Make decisions with my healthcare provider, to the extent that I choose and am able to • Include the people that I want in planning and decision-making
Information	• Clear information about my condition, the possible benefits and risks of different tests and treatments, so I can give my informed consent • Receive information about services, waiting times and costs • Be given assistance, when I need it, to help me to understand and use health information • Access my health information • Be told if something has gone wrong during my health care, how it happened, how it may affect me and what is being done to make care safe
Privacy	• Have my personal privacy respected • Have information about me and my health kept secure and confidential
Give feedback	• Provide feedback or make a complaint without it affecting the way that I am treated • Have my concerns addressed in a transparent and timely way • Share my experience and participate to improve the quality of care and health services

Reproduced with permission from the Australian Charter of Healthcare Rights (second edition), developed by the Australian Commission on Safety and Quality in Health Care (ACSQHC). ACSQHC: Sydney (2019)

On 1 July 2019, a single Charter of Aged Care Rights came into effect.[15] It replaced previous charters of care recipients' rights and responsibilities. The comprehensive, concise charter provides the same rights to all patients, regardless of the type of subsidised care and services they receive. Pharmacists must recognise and respect these rights in conducting medication management reviews in residential aged care facilities (RACFs) (see Box 1).

BOX 1. CHARTER OF AGED CARE RIGHTS

I have the right to:

- safe and high quality care and services
- be treated with dignity and respect
- have my identity, culture and diversity valued and supported
- live without abuse and neglect
- be informed about my care and services in a way I understand
- access all information about myself, including information about my rights, care and services
- have control over and make choices about my care, and personal and social life, including where the choices involve personal risk
- have control over, and make decisions about, the personal aspects of my daily life, financial affairs and possessions
- my independence
- be listened to and understood
- have a person of my choice, including an aged care advocate, support me or speak on my behalf
- complain free from reprisal, and to have my complaints dealt with fairly and promptly
- personal privacy and to have my personal information protected
- exercise my rights without it adversely affecting the way I am treated.

Reference: Reproduced from the Australian Government Aged Care Quality and Safety Commission[15] available at: www.agedcarequality.gov. au/consumers/consumer-rights

Privacy processes must be established and embedded into practice. All information gathered throughout the service should be respected and safeguarded, acknowledging the patient's right to privacy and confidentiality. This includes all information acquired in the course of providing the service and any follow-up consultations, shared or discussed with other health professionals, or stored as a result of a comprehensive medication management review.[7,16]

Confidentiality needs to be maintained through the use of secure files (either electronic files or paper files stored in a secure filing cabinet). This includes ensuring that any patient information that is transmitted electronically uses encrypted or secure electronic messaging to increase security. At no time should patient information be shared with unauthorised people, relatives or other healthcare providers without the consent of the patient or their representative.[7]

Pharmacists should refer to any state or territory privacy legislation or health privacy frameworks. Pharmacists are also required to meet the relevant professional practice standards.[7]

Consent of the patient must be obtained before comprehensive medication management review services are undertaken. Consent relates to relevant patient information being given to the accredited pharmacist conducting the comprehensive medication management review, and shared with the referring medical practitioner and, if necessary, other healthcare professionals.

Professional collaboration and communication

Professional collaboration

All pharmacists involved in the comprehensive medication management review service must collaborate with relevant parties, including patients and their families or carers, community and hospital pharmacists, medical practitioners (including medical specialists), practice- and facility-based nurses, community health workers, Aboriginal health workers, and allied health professionals.

The *Royal Australian College of General Practitioners RACGP Aged Care Clinical Guide (Silver Book)* states that collaboration and multidisciplinary team–based care are essential for the optimal care of older people, particularly those in RACFs and in the community.[17]

Face-to-face meetings between pharmacists and medical practitioners, practice nurses, patients and associated healthcare providers have been shown to be critical in establishing effective working relationships. These relationships can be responsible for the effective uptake of comprehensive medication management review services, and subsequent recommendations by medical practitioners and patients.[18]

A good understanding of the role of other health professionals, particularly medical practitioners, in the care of the patient is critical for an appropriate level of professional collaboration. Accredited pharmacists undertaking comprehensive medication management reviews should be aware of the various Medicare items that can be used by medical practices and medical practitioners to support participation in comprehensive medication management reviews. These include general consultation items, specific health assessment items and chronic disease management items.[19]

Interprofessional communication

Communication can occur between the accredited pharmacist, community and/or hospital pharmacist, patient's medical practitioner and other members of the healthcare team involved in the patient's care. Clear and appropriate interprofessional communication allows the development of collaborative and trusting relationships between all healthcare service participants.

An accredited pharmacist may communicate with a medical practitioner at different stages of the medication management review process, including, but not limited to:

• to initiate a comprehensive medication management review, by contacting the medical practitioner regarding risk factors for medication misadventure

• after receipt of a referral, to obtain additional information to make the medicine review more targeted and relevant for the medical practitioner and patient

• during or immediately after contact with the patient, to clarify potential or actual medication-related problems

• before or after preparing a report for the medical practitioner, to clarify or discuss recommendations for resolution of medication-related problems (as part of initial review or any follow-ups).

Accredited pharmacists can also participate in multidisciplinary team meetings and case conferencing. These meetings often take place regularly in practices and RACFs caring for patients with chronic health conditions. Accredited pharmacists conducting comprehensive medication management reviews are encouraged to take part in such meetings and use their expertise to advocate for the patient.

A standardised communication tool will facilitate information exchange in a more structured and systematic way. Many medical practitioners and other health professionals use the SBAR (Situation–Background—Assessment—Recommendation/request) tool (see Table 3).

Table 3. SBAR tool	
Situation Consider: • What is the situation?	**Background** Consider: • What is the clinical background?
Assessment Consider: • What is the problem/issue?	**Recommendation/request** Consider: • What do I recommend/ask to be done?

Reference: RACGP[17]

Formal arrangements for structured and documented communication and coordination should be in place between all involved parties. Any reports and communication on issues and information relating to comprehensive medication management review services should be communicated in an agreed manner with all parties involved, with confidentiality of the information a prime consideration.[7] Communication methods may include posted material, personal delivery, fax with coversheet containing disclaimer, and uploading to the patient's My Health Record. Emails should only be used if they are encrypted to ensure secure messaging.[20]

Clinical and quality governance

Pharmacists conducting comprehensive medication management reviews should maintain appropriate levels of clinical knowledge and expertise through ongoing continuing professional development (CPD) and self-evaluation activities. Quality of services should be regularly reviewed by evaluation feedback from patients, medical practitioners and others (including peers).

Accredited pharmacists have a responsibility for continuous improvement in the safety and quality of their services, and ensuring that services are patient centred, safe and effective.[21]

To ensure that all activities and services provided are consistent, high quality and safe, the following criteria should be met[21]:

- Implement clinical governance systems to improve safety and quality of health care for patients.
- Maintain appropriate qualifications, resources, knowledge and skills to provide safe, high-quality health care to patients.
- Implement incident management systems and open disclosure.
- Develop processes for feedback and complaints management.
- Comply with security and privacy regulations.
- Communicate with patients in a way that supports effective partnerships and shared decision making, to the extent that the patient chooses.
- Develop strategies to improve cultural awareness and safety to meet the needs of Aboriginal and Torres Strait Islander patients.
- Ensure that processes are in place for structured clinical handover to effectively communicate with other health providers.

- Perform comprehensive medication management reviews with patients, in line with the best available evidence and best practice.
- Prioritise comprehensive medication management reviews with patients, based on a patient's clinical needs and to minimise the risk of medication-related problems.
- Document a patient's best possible medication history (BPMH) during comprehensive medication management reviews and follow-ups.
- After a patient's medicines are reviewed, provide information to them about their medicine needs and risks.
- Monitor the effectiveness and performance of comprehensive medication management reviews and follow-ups.
- Implement strategies to improve medication management outcomes and associated processes.

Documentation

Effective documentation is essential to maximise safety, quality and efficiency. All pharmacists involved in conducting comprehensive medication management reviews must record all activities undertaken and strategies developed, and maintain accurate documentation for the services provided.[7]

Documentation should be stored in a safe, systematic and secure manner that allows timely and accurate retrieval, while reducing the risk of unauthorised access and failure of confidentiality. All documents must be securely stored in accordance with professional standards and relevant legislation.

Pharmacists conducting comprehensive medication management reviews should create and maintain a comprehensive medication management review profile for each patient. This should be updated with any follow-up reviews.[7]

Medication management review reports (initial report and any follow-up reports) should be uploaded to the patient's My Health Record, if the patient has one.

Comprehensive medication management review cycle of care

A comprehensive medication management review is a multidisciplinary activity whereby the risks and benefits of each medicine are considered with the patient (and/or their carer, representative or substitute decision maker) and decisions are made about their future medication regime. In collaboration with the medical practitioner, nursing or other care staff, and other healthcare providers, medication management services aim to optimise the use of medicines for each individual patient. The main purpose of a comprehensive medication management review is to improve the appropriateness of medicines, reduce harm and improve health outcomes, while incorporating the patient's preferences, beliefs, attitudes and priorities.

The comprehensive medication management review process involves:

- collation and consideration of information by the accredited pharmacist, obtained from the referral and from the patient consultation, discussion with carers, review of any clinical notes and pathology results, and review of any information provided by the patient's nominated community pharmacy(ies)

- identification of potential or actual medication-related problems and development of appropriate recommendations by the accredited pharmacist to address these problems. The accredited pharmacist should discuss and clarify potential problems with the referring medical practitioner, either face to face or by phone

- preparation of a comprehensive medication management review report by the accredited pharmacist that incorporates findings and recommendations to address the patient's medication-related problems and is provided to the medical practitioner. The review report should indicate whether a follow-up of the identified medication-related problems will occur.

The medical practitioner assesses the report and, in consultation with the patient, prepares a Medication Management Plan. The plan should be offered to the patient and communicated to all relevant health professionals , carers and family (with patient consent) involved in the care of the patient. Access to the Medication Management Plan will be vital if a follow-up is considered appropriate.

A summary of the steps involved in a comprehensive medication management review is shown in Figure 2.

Figure 2. Comprehensive medication management review cycle of care

MEDICATION REVIEW CYCLE OF CARE
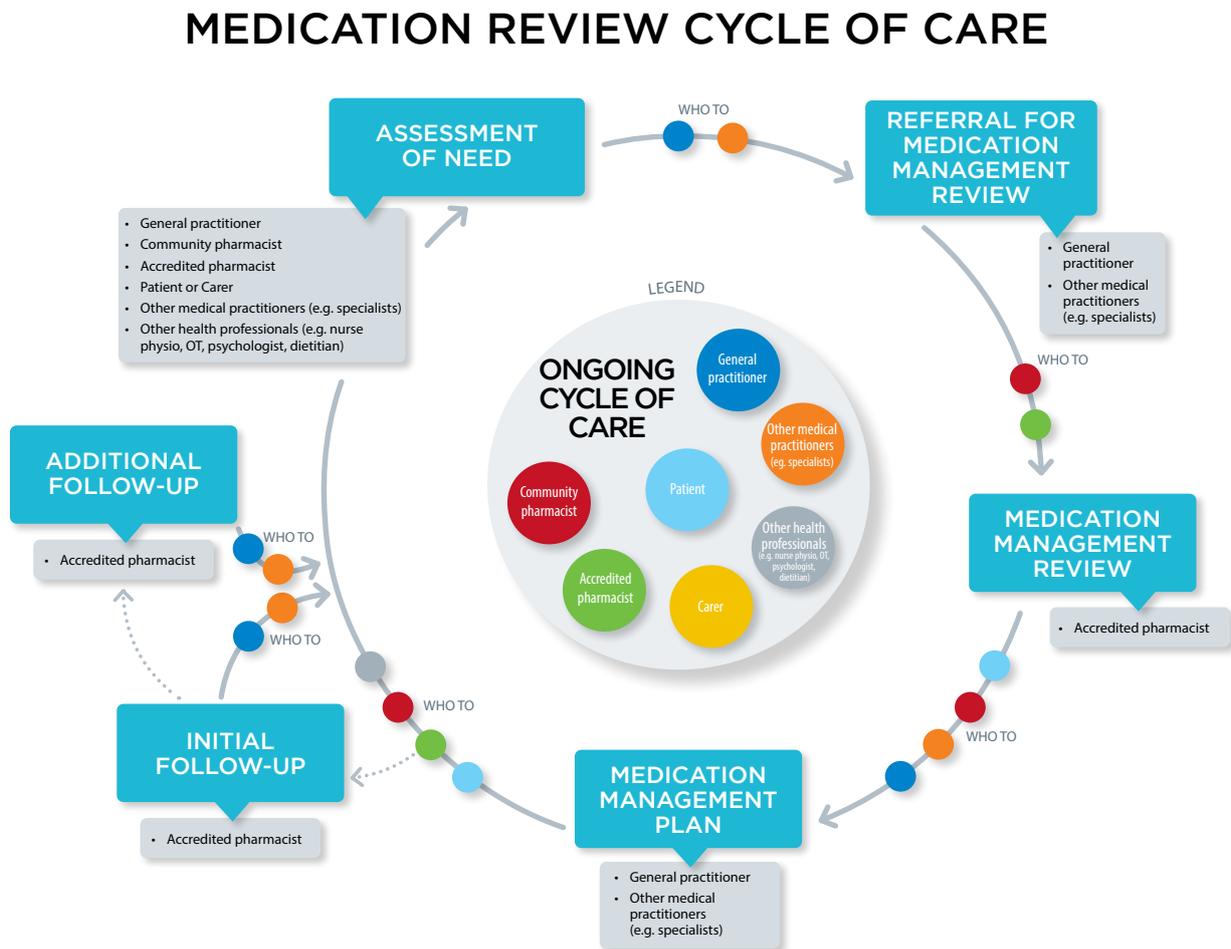
Assessment of need for comprehensive medication management review

The need for a comprehensive medication management review is based on the individual's clinical status. Clinical need can be identified by the patient themselves, carers, medical practitioners, pharmacists or health professionals involved in the patient's care. In RACFs, senior nurses may identify patients likely to benefit from a comprehensive medication management review. In Aboriginal health services, Aboriginal health workers may identify patients likely to benefit. However, the decision to refer a patient for a medication review rests with the medical practitioner.

A post-discharge comprehensive medication management review can be triggered by a hospital doctor, with support from a hospital pharmacist, where available. Post-discharge comprehensive medication management reviews have an additional focus on continuity of care, medication reconciliation, and immediate patient safety and action. Hospital referral pathways require flexibility for linkage and communication with other health professionals involved in the patient's care.

Risk criteria

A comprehensive medication management review could benefit a person who is at risk of medication misadventure due to multiple chronic conditions, comorbidities, age, social circumstances, characteristics of their medicine, complexity of their medication regimen, or limited knowledge and skills to use their medicines effectively and safely.

Examples of risk criteria to identify patients likely to benefit from a comprehensive medication management review are shown in Table 4. These are not mandatory criteria or a comprehensive list but are provided as a guide to possible risk factors for referring a patient for a comprehensive medication management review service.

Referral

After clinical need is identified, and patient consent is obtained, the medical practitioner provides a written referral to either an accredited pharmacist , a business employing accredited pharmacists or the patient's preferred community pharmacy. Any medical practitioner may refer a patient for a comprehensive medication management review (for government-funded medication reviews, this must be in accordance with the Program Rules). Medical practitioners include general practitioners, geriatricians, general physicians, psychiatrists and pain specialists.

Providers of comprehensive medication management review services may also identify the need for a review and should recommend to the patient's medical practitioner that a referral for a review may be appropriate. In the aged care setting, health professionals caring for residents (e.g. nursing staff) may also recommend this to the medical practitioner.

Table 4. Risk factors suggesting a patient may benefit from a comprehensive medication management review
Goals of medication therapy not reached or maintained, including suboptimal response to medication
Chronic medical condition associated with a high risk of unplanned hospital admission (e.g. chronic obstructive pulmonary disease, heart failure, chronic pain)
Three or more chronic medical conditions
Recent discharge from hospital or frequent unplanned hospital admissions
Recent admission to a residential aged care facility
Significant changes to medication regimen, including newly prescribed medicines
High-risk medicines requiring close monitoring for adverse effects and/or efficacy (e.g. opioids, psychotropic medicines, insulin, anticoagulants, antibiotics, non-steroidal anti-inflammatory drugs—NSAIDs, anticholinergics)
Functional issues that increase the risk of harm and/or reduce the chance of benefit from medicine use (e.g. frailty, frequent falls, cognitive impairment, swallowing difficulty, renal or hepatic impairment)
Symptoms suggestive of any adverse drug reaction
Prescribing cascade (e.g. one medicine to treat an adverse effect of another)
Problems managing medicine-related therapeutic devices (e.g. inhalers, subcutaneous injections, eye drops, transdermal patches)
Difficulty understanding and following medication regimen
Language, literacy or cultural difficulties

The referral should be accompanied by appropriate and relevant information, including:

- specific reason (e.g. recent falls)
- patient risk criteria, including potentially inappropriate medicines
- past medical and social history, including overall goals of care for the patient
- current medicines
- relevant pathology and diagnostic results
- any potential occupational health and safety issues
- the need for another person to be present at the consultation.

Medication management review

Once the referral has been received, the following steps should be followed (Figure 3):

- pre-consultation preparation and planning
- information collection
- identification of medication-related problems
- preparation of written report.

Figure 3. Steps involved in the comprehensive medication management review process

Pre-consultation preparation and planning	• Assess timeline for review • Enhance referral information (e.g. pathology, dispensing history) • Arrange consumer consultation/site visit • Identify potential medication issues • Prepare additional materials (e.g. handouts)
Information collection consumer consultation other sources	• Develop a medicine review profile • Obtain a Best Possible Medication History • Undertake consumer consultation • Review other relevant information sources (e.g. My Health Record, clinical system notes, observations)
Identification of medication-related problems (MRPs)	• Review aims, need, effectiveness, and safety of each medicine with consideration of patient centredness and costs • Utilise appropriate indicator tools • Consider deprescribing and prescribing cascades where appropriate • Pay close attention to use of psycholtropics for chemical restraint
Preparation of written report	• Address MRPs in semi-structured format (e.g. SBAR) • Provide clear, evidence based recommendations to resolve or prevent MRPs • Indicate whether follow-up of MRPs will occur and timeline • Include a section for feedback from referring medical practitioner

Pre-consultation preparation and planning

On receipt of a referral for a comprehensive medication management review, the accredited pharmacist should schedule for the review to be completed within 12 weeks. Most comprehensive medication management reviews should be undertaken before this, depending on indications from the medical practitioner on the referral. Ideally, the referral should be received and acted upon within 2–4 weeks, or a timeframe nominated by the referring medical practitioner. Some situations may require a more urgent review (e.g. recent discharge from hospital with significant medication changes, suspected significant adverse effects). There is an increased risk of medicines misadventure immediately after discharge from hospital and return to community-based care, so post-discharge comprehensive medication management reviews should be conducted within 10 days of discharge.

Given the comprehensive nature of the collection of information (patient consultation and other information sources) for a comprehensive medication management review, the normal duration of the process would be 45–60 minutes or more, depending on the complexity of the issues identified. In residential care, or where the patient has impaired cognition and/or communication, some or all of this time may be spent discussing issues with carers or nursing staff (in RACFs), or obtaining information from clinical records.

For comprehensive medication management reviews conducted in the community, contacting the patient to arrange the consultation is an important preliminary step in the process. During this contact, the following should be addressed:

• Outline the process to the patient, and ask them to have all medicines and relevant dose administration aids ready to be discussed.

• Assess whether the patient wants to arrange for another person to be present at the consultation.

Before conducting the comprehensive medication management review and seeing the patient face to face, the accredited pharmacist should identify any potential issues from the information available in the referral and available case notes. They may need to contact the referring medical practitioner or the patient's regular community pharmacy to obtain additional relevant information (e.g. pathology results, dispensing history). Pharmacists should also prepare appropriate patient materials (e.g. inhaler device instructions, calcium intake guidelines).

When delivering a medication review that the pharmacist intends to seek government remuneration for, consideration should be given to the location requirements outlined in the Program Rules. Best practice means that the preferred location for the consultation is the setting that best meets the patient's clinical needs. Most often this will be the patient's home (this covers RACFs and multipurpose services with residential facilities). However, it may be appropriate to conduct a comprehensive medication management review consultation in a medical practitioner's practice, or a common area in a retirement village, community health service or Aboriginal health service. For Aboriginal and Torres Strait Islander people, conducting the review with an Aboriginal health worker in the primary care setting is often preferable.[22,23,24]

To ensure the wellbeing and safety of the accredited pharmacist, professional judgement about the setting should be used, and any occupational health and safety risks associated with the provision of the comprehensive medication management review service should be managed.

Information collection

Patient information can be gathered and collated in a comprehensive medication management review profile, which should include information relating to both medicines and medical conditions/symptoms.

Obtaining a BPMH is an important first step in developing a medication profile. NPS MedicineWise has developed a module on taking an accurate and complete medication history.[25]

The key steps in taking a BPMH include:

- reviewing sources of available medicines information
- interviewing the patient and/or carer
- verifying the information with one or more sources
- recording the information in a medication profile.

Medication reconciliation is an important part of a comprehensive medication management review, particularly on admission to an RACF, after a hospital admission and for patients new to a health organisation (e.g. general practice). Medication reconciliation is the formal process of obtaining, verifying and documenting an accurate list of a patient's current medicines on admission and comparing this list with the admission, transfer and discharge orders, to identify and resolve discrepancies.[26] Transition points of care are particularly prone to unintended changes in medication regimens and other errors.

Possible sources of medicines information used to verify the patient's medication history include:

- patient's own medicines (including dose administration aids) and prescriptions
- patient's medicines list
- patient and/or carer
- medical practitioner referral
- community pharmacy dispensing history
- electronic care documentation and medication charts in RACFs
- discharge summaries
- medical specialist communication
- electronic medical records (e.g. My Health Record).

Pharmacists embedded in general practice, RACFs and Aboriginal health services may have remote access to medical records.

The BPMH includes drug name, dose, frequency and route of administration for medicines a patient is currently taking, even though these may be different from what was actually prescribed.

The comprehensive medication management review profile should include:

- summary of all relevant past and current medical conditions
- reason for use of each medicine
- all current medicines (including prescription, non-prescription and complementary medicines), compliance aids, therapeutic devices and appliances
- medication history, including immunisations
- dose, strength, dose form, directions, route of administration, duration of therapy and indication for use for each medicine, with any special medicine administration instructions

- when-necessary ('PRN') medicines and the frequency of their administration
- short-term medicines (e.g. antibiotic courses)
- relevant observations and notes on symptoms and signs at the time of review
- relevant pathology results.

The comprehensive medication management review profile can be used to record information obtained at patient consultation and from other sources.

Patient consultation

The comprehensive medication management review consultation is an important component of the service. Its purpose is to:

- discuss the patient's health-related concerns, beliefs, attitudes and preferences
- consider the patient's quality of life and life expectancy
- obtain information from the patient to inform the comprehensive medication management review report
- where appropriate, provide education and support to the patient and, if present, their carer and family members, so that they can make better-informed choices about medicines and health; education and support can also facilitate health behaviour change and improve health literacy.

When communicating with patients, all pharmacists need to be sensitive to, and aware of, different perspectives, expectations, levels of understanding and cultural views. This will allow patients to make informed decisions about their medicines and treatment. The inclusion of Aboriginal health workers,[22] qualified interpreters, appropriate carers or family members during the interview may facilitate greater patient understanding and involvement in health decision making. In residential aged care, patient interaction may be limited by functional and/or cognitive factors.

By establishing good patient communication, the pharmacist has an opportunity to build trust, enhance the patient's satisfaction with the service and achieve better health outcomes. The patient will be more involved in the health decision-making process, leading to increased health literacy.[27]

During the comprehensive medication management review consultation, the accredited pharmacist must demonstrate effective communication skills, as well as clinical competence, empathy, compassion, understanding and ethical conduct.[28] Effective communication can be achieved by:

- displaying or providing appropriate identification, such as an identification card, business card or proof of pharmacy registration
- ensuring introduction before entering the patient's home, as invited
- explaining each step of the consultation, including the process of preparing a report and discussion with the referring medical practitioner
- asking the patient's permission before asking questions or providing information

- emphasising that the patient is the focus of the service, but their spouse, partner, carer and family are also part of the team if the patient wishes them to be

- being sensitive to any cultural needs and differences

- listening to the patient and speaking in a language they understand to facilitate improved health literacy. (Use of a professional interpreter or Aboriginal health worker may be required. Further information is available from the Translating and Interpreting Service website.)

- taking care not to undermine the patient's confidence in their medical practitioner, community pharmacist or other healthcare providers

- asking permission before moving around the home to inspect medicine storage or other areas

- acknowledging the patient for their input and cooperation in the process, and explaining the next stages of the review process, including developing a report

- informing the patient that the accredited pharmacist may need to see them again to follow up on potential medicines issues

- informing the patient that their medical practitioner will discuss the comprehensive medication management review report with them and formulate a Medication Management Plan; the medical practitioner will also liaise with other pharmacists involved in the medicines management of the patient to ensure that all tasks are completed and follow-up occurs

- informing the patient of an expected timeframe for the medical practitioner to receive the report.

The type and range of information gathered may include:

- demographic and personal information (e.g. patient name, Medicare/Department of Veterans' Affairs/concession details, address, date of birth, gender, weight, height, body mass index)

- relevant social history (e.g. previous occupation; lifestyle; cultural factors; family and/or social support systems; attitudes to health, illness and treatment; general understanding of current situation; health status; expectations)

- medical history (e.g. surgical and specialist history; current conditions or comorbidities; pathology and diagnostic investigations and results determining renal, hepatic and cardiovascular function and electrolyte status; allergies; previous adverse drug reactions; nicotine, alcohol and caffeine consumption; dietary requirements)

- patient assessment (e.g. frailty, vision, hearing, swallowing, recent falls and falls risk, balance, pain, cognition, memory, mood, gait, mobility and dexterity, psychological status).

Other information sources

Other sources may provide useful information about signs and symptoms, including pathology, to improve the specificity and relevance of the comprehensive medication management review process. These may include the electronic health record for the patient, medical specialist communication, real-time reporting data, feedback from carers and other health professionals involved in the care of the patient, and, in residential care, information from clinical care documentation systems.

The My Health Record system provides online access to a patient's key health information, including medicines, allergies, medical conditions and pathology results. It supports improvements in the safety, quality and efficiency of Australia's healthcare system. Pharmacists can access a range of clinical information in a patient's My Health Record, including information about medicines, allergies and current medical conditions (see Table 5). Pharmacists have a professional responsibility to integrate the use of the My Health Record system into comprehensive medication management reviews, where appropriate. However, My Health Record should not be assumed to be a complete record, because it is a patient-controlled record, and not all healthcare providers use the My Health Record system or upload every clinical patient interaction.

In RACFs, other sources—such as electronic medical records, observation charts (e.g. blood pressure, weight, blood glucose levels), sleep charts, pain assessments and incontinence charts—can provide additional information to inform recommendations for resolution or prevention of any identified medication-related problems.

Table 5. Clinical information sources for a My Health Record		
Clinical documents contributed by healthcare providers	Medicare information	Patient-uploaded information
Shared health summary	PBS/RPBS information	Advance care plans
Event summaries	MBS/DVA information	Advance care planning custodian details
Discharge summaries	Organ donor status	Personal health summary
Specialist letters	Immunisation records	Personal health notes
Pathology and diagnostic imaging reports		Emergency contact details
Pharmacist Shared Medicines List (PSML)		
Prescription and dispense records		
e-referrals		

Reference: PSA[29]
DVA = Australian Government Department of Veterans' Affairs; MBS = Medicare Benefits Schedule; PBS = Pharmaceutical Benefits Scheme;

RPBS = Repatriation Pharmaceutical Benefits Scheme.

Identification of medication-related problems

After the patient consultation, the information gathered is collated and reviewed by the accredited pharmacist, who assesses the information for actual or potential medication-related problems (see Table 6). Presenting signs and symptoms should be linked to actual or potential medication-related problems.

When conducting a comprehensive medication management review, the pharmacist should consider the following[30]:

- Is there a documented reason or evidence base for use of a medicine?
- Does the patient still need the medicine?
- Is the medicine still working?
- What risks are associated with use of the medicine, and what monitoring is required?
- Are there any patient-specific issues that will affect use of the medicine?

Table 6. Step-by-step approach to identifying medication-related problems		
Aims	What matters to the patient?	Review diagnoses and identify therapeutic objectives with respect to: - understanding of medication therapy goals - management of existing health problems - prevention of future health problems
Need	What are the essential medicines?	Identify essential medicines (not to be stopped without specialist advice), such as: - medicines that have essential replacement functions (e.g. thyroxine) - medicines to prevent rapid symptomatic decline (e.g. medicines for Parkinson's disease)
	Does the patient take unnecessary medicines?	Identify and review the (continued) need for medicines: - with temporary indications - with higher-than-usual maintenance doses - with limited benefit in general for the indication they are used for - with limited benefit for the particular patient under review
Effectiveness	Are therapeutic objectives being achieved?	Identify the need for adding/intensifying medication therapy to achieve therapeutic objectives: - to achieve symptom control - to achieve biochemical/clinical targets - to prevent disease progression/exacerbation
Safety	Does the patient have, or are they at risk of, adverse drug reactions?	Identify patient safety risks by checking for: - drug–disease interactions - drug–drug interactions - robustness of monitoring mechanisms for high-risk medicines - risk of accidental overdosing
	Does the patient know what to do if they are ill?	Identify adverse drug effects by checking for: - specific symptoms/laboratory markers (e.g. hypokalaemia) - cumulative adverse drug effects - medicines that may be used to treat adverse drug reactions caused by other medicines
Costs	Is therapy cost-effective?	Identify unnecessarily costly medicines by: - considering more cost-effective alternatives (but balance against effectiveness, safety, convenience)
Patient centredness	Is the patient willing and able to take medicines as intended?	Does the patient understand the outcomes of the review? Does the patient understand why they need to take their medicines? Consider teach-back techniques to ensure full understanding Ensure that medicines changes are tailored to patient preferences: - Is the medicine in a form the patient can take? - Is the dosing schedule convenient? Consider what assistance the patient might have and when this is available Is the patient able to take medicines as intended? Agree and communicate plan: - Discuss with the patient therapeutic objectives and treatment priorities - Decide with the patient what medicines have an effect of sufficient magnitude to consider continuation or discontinuation - Inform relevant healthcare and social care providers about change in treatments across care transitions

Reference: World Health Organization[31]

A medication-related problem can be described as any undesirable event experienced by a patient that is thought to involve drug therapy, and that actually or potentially interferes with a desired outcome. Medication-related problems include[13]:

- medicine use without indication—absence of medical evidence with no medically valid indication
- untreated indication—patient is not receiving the appropriate therapy
- improper drug selection—incorrect medicine, or patient is taking a medicine that is not the medicine of choice or the most appropriate for their individual needs
- subtherapeutic dosage—too little of the correct medicine
- overdosage—too much of the correct medicine
- unnecessary medicine—medicine for a medical condition that has resolved
- ineffective medicine continued with evidence of a lack of desired outcome
- adverse drug reactions—adverse drug reaction, toxicity or adverse event
- incorrect administration of a medicine (e.g. crushing a sustained-release product or dosing at the wrong time)
- poorly written or ambiguous medicine order, creating confusion for facility staff
- drug interactions—medical issue that is the result of a drug–drug, drug–food or drug–laboratory test interaction
- failure to receive medicine—patient is not receiving prescribed medicine.

The accredited pharmacist should consider the effectiveness of the patient's medicines in the context of their clinical status.

Evidence demonstrates that exposure to potentially inappropriate medicines in older people is associated with increased hospitalisation and attendance at emergency departments, increased harm, poorer health outcomes and even death.

Indicator tools

Several prescribing indicator tools are designed to identify potentially inappropriate medicines, especially in patients over the age of 65 years (Table 7). These tools can form an important part of the comprehensive medication management review process and should be considered as a reference guide for accredited pharmacists. Once medication-related problems are identified, their clinical relevance should be assessed, evaluated and prioritised in the context of the patient's health status.

Prescribing cascades

Prescribing cascades occur when a new medicine is prescribed to treat an adverse drug event to another medicine in the mistaken belief that a new medical condition requiring treatment has developed.[37] Older people are at high risk of experiencing prescribing cascades as a result of their higher incidence of polypharmacy and medicine side effects. BPMHs should explore any temporal association and may identify if new symptoms could be caused by current medicines. Patients should be asked if they have experienced any new symptoms, particularly if a medicine has recently been started or the dose has been changed.

Table 7. Tools to assess appropriateness of medicines in older people	
START (Screening Tool to Alert doctors to the Right Treatment)	Criteria indicating medicines that are considered beneficial, arranged according to physiological systems[32]
STOPP (Screening Tool of Older Persons' potentially inappropriate Prescriptions)	Criteria indicating medicines that are considered inappropriate in the older person, including drug–drug and drug–disease interactions, medicines that adversely affect older patients at risk of falls and duplicate drug class prescriptions, arranged according to physiological systems[33]
Anticholinergic Burden	Cumulative effect of taking one or more medicines with anticholinergic properties.[34] Anticholinergic Cognitive Burden (ACB) calculator is available at www.acbcalc.com
Drug Burden Index (DBI)	Evidence-based tool that measures a person's total exposure to medicines with sedative and anticholinergic properties, which have been shown to impair cognitive and physical function
Beers criteria[35]	Potentially inappropriate medicines in older adults
STOPPFrail (Screening Tool of Older Persons Prescriptions in Frail adults with limited life expectancy)[36]	A list of explicit criteria for potentially inappropriate medicines use in frail older adults with limited life expectancy. STOPPFrail may assist in deprescribing medicines in patients

Deprescribing

Deprescribing is an important part of comprehensive medication management reviews. Deprescribing is the systematic process of identifying and discontinuing drugs when existing or potential harms outweigh existing or potential benefits, in the context of an individual patient's care goals, current level of functioning, life expectancy, values and preferences.

Several deprescribing tools are available to assist and support pharmacists in recommending tapering or cessation of medicines:

- Bruyère Deprescribing Guidelines in the Elderly Project
- NSW Therapeutic Advisory Group
- Primary Health Tasmania.

The Medicines Conversation Guide (see Appendix 1) is a shared decision-making tool developed for pharmacists to support discussion of deprescribing with patients and their carers in the context of a comprehensive medication management review.

The guide aims to increase patient involvement and support discussions about[38]:

- general health understanding
- decision making and information preferences
- health priorities related to medicines
- patient goals and fears
- views on important activities and trade-offs.

Chemical restraint

There is, and will continue to be, an increase in the attention paid to the appropriate use of psychotropic medicines in patients living with dementia. The Aged Care Quality and Safety Commission requires RACFs to document a number of aspects of use of psychotropics, including consent for use of psychotropics for chemical restraint.[39]

Frequent review and follow-up of patients living with dementia receiving psychotropics is recommended. Previous reports of the management of responsive behaviours in people living with dementia have recommended a 12-weekly (3-monthly) review of the ongoing dose of, and necessity for, psychotropics in such patients.[40,41]

As part of a comprehensive medication management review for such patients, accredited pharmacists should ensure that any recommendations for addition of, or other changes to, psychotropic agents be undertaken with the consent of the patient or their substitute decision maker.

Preparation of a written report

A written report or letter must be provided by the accredited pharmacist to the referring medical practitioner in a timely manner after the patient consultation. The report may be prepared before or after a discussion of relevant findings and suggested management strategies with the medical practitioner. This discussion may be face to face, or by telephone or other telehealth services.

The report should be concise and written in a style according to the agreed preference of the medical practitioner. Standard communication tools such as SBAR can be used in these reports (see Table 3). The reason for referral should be addressed, regardless of whether any actual problem is identified.

The accredited pharmacist should formulate and prioritise recommendations for resolution or prevention of any identified medication-related problems. Any critical issues should be verbally communicated to the referring medical practitioner.

All recommendations should be evidence based, integrating patient preferences with the best available evidence and clinical expertise. The patient's rights, beliefs and preferences need to be considered in making clinical decisions about management of their medicines.

The report or letter should include:

- date, time and place of the patient consultation
- name of the referring medical practitioner and accredited pharmacist
- details of the patient's nominated community pharmacy, if the patient has given consent
- details of other healthcare providers contacted as part of the comprehensive medication management review process
- summary of the patient's medicines experience (if appropriate), including their understanding, concerns, preferences, beliefs and behaviour
- general comments about the patient's ability to manage and administer all medicines
- advice and resources provided to the patient during the consultation
- details of any assessments conducted during the consultation.

As well as suggested medicines management strategies, the report should contain details of any issues identified and resolved during the course of the consultation (e.g. starting or stopping non-prescription and complementary medicines).

The report should also indicate whether some or all of the issues identified will be followed up by the accredited pharmacist, and an approximate timeline for doing so (see 'Follow-up', below).

To facilitate the development of a Medication Management Plan (see below), it is recommended that the comprehensive medication management review report includes a section for feedback from the referring medical practitioner on specific recommendations.

Medication Management Plan

Where appropriate, the accredited pharmacist and the referring medical practitioner should discuss the findings, recommendations and suggested medicines management strategies, either by phone or face to face. The discussion may not be required if:

- there are no recommended changes from the review
- changes are minor in nature and do not require immediate discussion
- the pharmacist and medical practitioner agree that issues from the review should be considered in a multidisciplinary case conference.

If a follow-up is recommended in the initial comprehensive medication management review, the medical practitioner may have information that reduces the need for the follow-up. In this case, further discussion between the accredited pharmacist and medical practitioner should determine other strategies for monitoring and resolving any medication-related problems.

At a subsequent consultation, the medical practitioner and patient discuss the findings and recommendations in the comprehensive medication management review report and agree on a Medication Management Plan, which is documented in the patient's notes.

The Medication Management Plan prepared by the medical practitioner includes feedback on the recommendations made in the comprehensive medication management review report, actions taken by the medical practitioner with respect to treatment regimens and lifestyle adjustments, and agreed therapeutic goals. The Medication Management Plan also documents when a follow-up is recommended by the accredited pharmacist and agreed by the medical practitioner.

A collaborative case conference involving the medical practitioner, the pharmacist conducting the review and another health professional may be an appropriate method for addressing complex issues.

Once agreed, the details of the Medication Management Plan are provided to the patient, the accredited pharmacist who undertook the review, the patient's nominated community pharmacy and other relevant members of the healthcare team (with patient consent). If the medical practitioner preparing the medication management plan is not the patient's usual general practitioner (GP), a copy should be sent to the GP.

Implementation of the Medication Management Plan

The patient's usual care team (e.g. GP, specialists, usual community pharmacist, RACF staff) will continue to provide ongoing care for the patient, based on the intent of the actions determined in the Medication Management Plan.

The patient's nominated community pharmacy may be involved in certain recommendations contained in the Medication Management Plan, such as:

- reinforcing advice and information provided by the medical practitioner, as outlined in the Medication Management Plan and, where appropriate, providing additional information and advice about medicines, medication aids and therapeutic devices
- being responsible for ongoing support, assessment and guidance of the patient once the comprehensive medication management review is completed (e.g. checking inhaler technique, assessing behaviour change, assessing adherence, facilitating the patient's ongoing adherence to the Medication Management Plan through follow-up actions and monitoring)
- using the agreed Medication Management Plan in the normal course of contact with the patient and their GP as the basis for ongoing monitoring of the patient's health and wellbeing.

Follow-up

In some circumstances, a follow-up consultation with the patient following the initial review will be required to assess the outcomes of the recommendations from the comprehensive medication management review. This would be determined by the accredited pharmacist who conducted the initial review, in conjunction with the referring medical practitioner. The follow-up is not a comprehensive medication management review of all issues and should be related to one or more specific medication-related issues identified at the initial review. A follow-up consultation will not be necessary after all initial comprehensive medication management reviews.

For recent hospital admissions involving significant changes, or commencement of new medicines, a new referral for another comprehensive medication management review may be more appropriate (see Table 4).

Follow-up is based on clinical need. Follow-up should be based on the individual patient's circumstances and the clinical need for assessing whether medication-related problems identified in the initial review have been resolved. The timeline for the follow-up should be determined at the time of the initial review, and will usually be 1–3 months. For issues of higher clinical significance, a shorter timeline for follow-up (less than 1 month) may be necessary, however follow-up provided less than 1 month after the initial patient interview will not be eligible for Government remuneration. Table 8 provides some suggested considerations for determining when a follow-up would be beneficial. The timing of any follow-up may change based on the patient's clinical status.

A follow-up requires a face-to-face consultation with the patient to assess the outcomes of previous recommendations or to continue to monitor high-risk situations. In some circumstances, it may be appropriate to use telehealth options. The accredited pharmacist who conducted the initial review is the most appropriate person to conduct the follow-up. In exceptional circumstances, the accredited pharmacist may liaise with another accredited pharmacist or the patient's nominated community pharmacist to conduct the follow-up under the guidance of the initial accredited pharmacist. Appropriate clinical handover, including all documentation, must be provided to the pharmacist conducting the follow-up.

If a follow-up is conducted, the accredited pharmacist who conducts it is required to provide a report to the patient's medical practitioner and the preferred community pharmacist.

Examples of situations when a follow-up of a comprehensive medication management review may be appropriate are shown in Table 8.

These are not mandatory criteria for a follow-up and are provided as a guide to possible risk factors to consider.

Given the targeted nature of the follow-up consultation, it is expected that the normal duration of the consultation would be 20 minutes or more, depending on the complexity and number of issues being followed up.

An additional follow-up, conducted by the same accredited pharmacist, may be required in situations where resolution of any problem is not optimal or the problem requires ongoing close monitoring. The timeline for this additional follow-up should be determined after the initial follow-up and documented in the report to the medical practitioner. The timing of any additional follow-up may change based on the patient's clinical status.

Table 8. Examples of situations when a follow-up may be required	
Medicine changes recommended in initial review	**Patient has had recommendations made to change high-risk medicines:** • opioids, psychotropics, insulin, anticoagulants, antibiotics, NSAIDs, anticholinergics, dopamine replacement therapy, diuretics
	Deprescribing of a medicine requiring slow tapering of dose: • medicines associated with withdrawal syndromes (SSRIs, SNRIs, benzodiazepines, opioids) • medicines associated with recurrence of underlying conditions (antihypertensives, proton pump inhibitors, antidepressants, analgesics)
	Patient has multiple medication-related problems identified in the initial review: • 4 or more changes recommended that require monitoring for changes in symptoms and signs • follow-up and clarification of agreed multiple changes to be implemented sequentially
	Patient has a serious medication-related problem identified in the initial review: • problem identified in initial review likely to require ongoing monitoring and assessment • problem likely to require additional medical attention • problem likely to require emergency department visit or hospital admission • patient identified as non-adherent with medicines in the initial review
Ongoing high risk of medication-related problems	**Patient continues high-risk medicines that require close clinical monitoring for efficacy and/or adverse effects:** • opioids, psychotropics, insulin, anticoagulants, antibiotics, NSAIDs, anticholinergics, Parkinson's disease treatment, diuretics, digoxin, thyroxine, electrolyte supplements
	Patient has multiple ongoing, complex, chronic conditions: • conditions associated with a high risk of hospitalisation (e.g. heart failure, COPD, chronic pain) • suboptimal control of chronic condition related to medicines (e.g. diabetes, chronic pain, heart failure) • responsive behaviours associated with dementia (e.g. psychotropics being used for chemical restraint)
	Patient is taking 9 or more regular medicines
	Functional issues that increase the risk of harm and/or reduce the chance of benefit from medicines use: • frailty, frequent falls, cognitive impairment, swallowing difficulty, renal or hepatic impairment

COPD = chronic obstructive pulmonary disease; NSAID = non-steroidal anti-inflammatory drug; SNRI = serotonin–noradrenaline re-uptake inhibitor; SSRI = selective serotonin re-uptake inhibitor

Evaluation

The clinical governance principles and NSQHS Standards require service providers to evaluate and continually improve services, including measuring and monitoring.

Providers of comprehensive medication management review services should monitor the effectiveness and relevance of the service provided through ongoing, evidence-based quality improvement activities.

This may involve activities such as:

• actively seeking feedback from patients and medical practitioners about the impact and outcomes of comprehensive medication management review services

• reviewing any feedback provided regarding the medication management review service and responding appropriately (including responding to complaints)

• undertaking personal reflection about the comprehensive medication management review services provided, and CPD activities undertaken in this area

• evaluating actual outcomes of services against the intended outcomes

• undertaking regular assessment against the quality indicators

• benchmarking against national dataset(s), if available.

Figure 4 shows how the steps involved in undertaking a medication management review link into the medication review cycle of care.

Figure 4. The medication review cycle of care and steps involved in the medication management review.

MEDICATION REVIEW CYCLE OF CARE

Pre-consultation preparation and planning
- Assess timeline for review
- Enhance referral information (e.g. pathology, dispensing history)
- Arrange consumer consultation/site visit
- Identify potential medication issues
- Prepare additional materials (e.g. handouts)

Information collection consumer consultation other sources
- Develop a medicine review profile
- Obtain a Best Possible Medication History
- Undertake consumer consultation
- Review other relevant information sources (e.g. My Health Record, clinical system notes, observations)

Identification of medication-related problems (MRPs)
- Review aims, need, effectiveness, and safety of each medicine with consideration of patient centredness and costs
- Utilise appropriate indicator tools
- Consider deprescribing and prescribing cascades where appropriate
- Pay close attention to use of psycholtropics for chemical restraint

Preparation written report
- Address MRPs in semi-structured formal (e.g. SBAR)
- Provide clear, evidence based recommendations to resolve or prevent MRPs
- Indicate whether follow-up of MRPs will occur and timeline
- Include a section for feedback from referring medical practitioner

REFERRAL FOR MEDICATION MANAGEMENT REVIEW
WHO TO
- General practitioner
- Other medical practitioners (e.g. specialists)

MEDICATION MANAGEMENT REVIEW
- Accredited pharmacist

ASSESSMENT OF NEED
WHO TO
- General practitioner
- Community pharmacist
- Accredited pharmacist
- Patient or Carer
- Other medical practitioners (e.g. specialists)
- Other health professionals (e.g. nurse physio, OT, psychologist, dietitian)

MEDICATION MANAGEMENT PLAN
WHO TO
- General practitioner
- Other medical practitioners (e.g. specialists)

ONGOING CYCLE OF CARE

LEGEND
- General practitioner
- Other medical practitioners (eg. specialists)
- Other health professionals (e.g. nurse physio, OT, psychologist, dietitian)
- Patient
- Carer
- Accredited pharmacist
- Community pharmacist

ADDITIONAL FOLLOW-UP
WHO TO
- Accredited pharmacist

INITIAL FOLLOW-UP
WHO TO
- Accredited pharmacist

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Appendix 1. Resources

Standards, guidelines and policies

- Aged Care Quality Standards: www.agedcarequality.gov.au/providers/standards

- Quality use of medicines (QUM): www.health.gov.au/internet/main/Publishing.nsf/Content/nmp-quality.htm

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- *My Health Record Guidelines for Pharmacists:* www.psa.org.au/wp-content/uploads/2019/09/MHR-Guidelines-for-Pharmacists.pdf

- *Professional Practice Standards, version 5:* https://my.psa.org.au/s/article/Professional-Practice-Standards-Version-5

- Quality Care Pharmacy Program: www.qcpp.com

- Standards of practice for clinical pharmacy services: www.shpa.org.au/resources/standards-of-practice-for-clinical-pharmacy-services

- *Guidelines for Preventive Activities in General Practice (Red Book), 9th edition:* www.racgp.org.au/guidelines/redbook

- RACGP Aged Care Clinical Guide (Silver Book): www.racgp.org.au/silverbook

HMR

- Aged care: www.health.gov.au/health-topics/aged-care

- *Guiding Principles for Medication Management in the Community:* https://www1.health.gov.au/internet/main/publishing.nsf/content/EEA5B39AA0A63F18CA257BF0001DAE08/$File/Guiding-principles-for-medication-management-in-the-community.pdf

- Domiciliary Medication Management Review (DMMR): https://www1.health.gov.au/internet/main/publishing.nsf/Content/medication_management_reviews.htm

- Home Medicines Review: www.ppaonline.com.au/programs/medication-management-programs/home-medicines-review

- Quality Care Pharmacy Program: www.qcpp.com

- Medicines Conversation Guide: https://ses.library.usyd.edu.au/handle/2123/18330

RMMR

- Aged care: www.health.gov.au/health-topics/aged-care

- *Guiding Principles for Medication Management in Residential Aged Care Facilities*: www.health.gov.au/sites/default/files/documents/2020/02/guiding-principles-for-medication-management-in-residential-aged-care-facilities.pdf

- Residential Medication Management Review (RMMR): https://www1.health.gov.au/internet/main/publishing.nsf/Content/medication_management_reviews.htm

- Residential Medication Management Review and quality use of medicines: www.ppaonline.com.au/programs/medication-management-programs/residential-medication-management-review-and-quality-use-of-medicines

- Resource kit to enable implementation of the APAC guidelines on medication management in residential aged care facilities: https://www2.health.vic.gov.au/about/publications/policiesandguidelines/apac-resource-kit-implementation-medication-management-residential-aged-care-facilities

Additional resources

- Australian Association of Consultant Pharmacy: https://aacp.com.au

- Medication reconciliation: www.cec.health.nsw.gov.au/Quality-Improvement-Academy/qi-academy-curriculum/tailored-f2f-training/medication-reconciliation

- Hughes J, Tenni P, Peterson G. The Australian pharmacist aged care primer. Canberra: Pharmaceutical Society of Australia; 2007.

- World Health Organization Medication Safety in High-risk Situations: https://www.who.int/patientsafety/medication-safety/en

- World Health Organization Medication Safety in Polypharmacy: https://www.who.int/patientsafety/medication-safety/en

- World Health Organization Medication Safety in in Transitions of Care: https://www.who.int/patientsafety/medication-safety/en

- Get it right! Taking a best possible medication history: https://learn.nps.org.au/mod/page/view.php?id=5436

- Medicine Safety: Aged Care: www.psa.org.au/advocacy/working-for-our-profession/medicine-safety/aged-care

- Medicine Safety: Take Care: www.psa.org.au/advocacy/working-for-our-profession/medicine-safety/take-care

- Best possible medication history interview guide: https://elentra.healthsci.queensu.ca/assets/modules/mr/appendix-2.htm

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