Standard of Practice in Geriatric Medicine for Pharmacy Services

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Preface
This Standard references and relies upon the SHPA Standards of Practice for Clinical Pharmacy Services¹ as the foremost Standard. This Standard may overlap with others and depending on the area of specialty practice it may be advisable to refer to additional Standards of Practice.

The use of the word ‘specialisation’ in this standard is in line with the National Competency Standards Framework for Pharmacists in Australia² where ‘specialisation’ refers to the scope of practice rather than the level of performance. ‘Specialisation’ of itself does not confer additional expertise.

This Standard is for professional practice and is not prepared or endorsed by Standards Australia. It is not legally binding.
Introduction

In Australia, everyone shares a fundamental right to safe and high-quality healthcare. This is enshrined in the Australian Charter of Healthcare Rights by which all healthcare systems must abide. The Charter summarises the basic rights of patients and consumers when accessing healthcare services including access, safety, respect, communication, participation, privacy, and the ability to comment. The provision of pharmacy services must encompass the Charter to deliver effective, efficient, timely and equitable patient-centred care.

The National Competency Standards Framework for Pharmacists in Australia complements the underpinnings of the Charter across five domains of competency for the pharmacy profession, namely: (1) professionalism and ethics; (2) communication and collaboration; (3) medicines management and patient care; (4) leadership and management; and (5) education and research.

The purpose of this Standard is to describe best practice provision of clinical pharmacy services for older patients (Box 1) in hospitals, residential care facilities, transition care services and in the community.

This Standard refers to both the role of the pharmacy service and the pharmacists’ practice in the care of older people. For consistency this Standard refers to all pharmacists who provide care to older people as ‘geriatric medicine pharmacists’, regardless of whether the pharmacist works in a specialist geriatric medicine service or another setting that provides care for older people. The Standard predominately refers to pharmacists but does not intend to exclude suitably qualified pharmacy technicians where appropriate. The SHPA supports both pharmacists and pharmacy technicians to operate at their full scope of practice in order to achieve optimal patient and pharmacy outcomes.

Older People

In developed countries the term ‘older’ people usually refers to people aged 65 years and over. In Australia this age is used to determine eligibility for some aged care services. However, 65 years is an arbitrary cut-off and individual people age differently. For many people better healthcare and living standards has delayed the onset of health and physical problems typically associated with ageing, so they remain healthy and physically fit beyond the age of 65 years. On the other hand, some people experience multi-morbidity, geriatric syndromes and become physically frail before turning 65.

Indigenous Australians have a lower average life expectancy than the general population and are eligible for aged care services from the age of 50 years. In this standard the terms ‘older people’ and ‘older patients’ refer to any person with ageing-related diseases, geriatric syndromes and/or frailty, regardless of their chronological age.

The term ‘older’ is preferred over ‘elderly’ or ‘geriatric’ when describing a person, as the latter terms carry negative connotations and may lead to generalisations about the health and physical status of the older person.

Box 1 Older people

Geriatric Medicine Pharmacy Practice

Older people constitute a growing proportion of the population, and are the greatest users of health services. More than 50% of adult hospital bed-days in Australia are occupied by people aged 65 years and over, and more than 50% of medicines dispensed under the Australian Pharmaceutical
Benefits Scheme are used by this group. Therefore, this Standard is relevant to pharmacists working in any setting where healthcare is provided to older people, including:

- hospital services focused primarily on the care of older people (e.g. geriatric medicine, psychogeriatric and orthogeriatric services),
- other hospital services that provide care to older people (e.g. general medicine, oncology, cardiology, nephrology, surgery, emergency medicine and rehabilitation services),
- residential aged care services,
- services delivered in the community (e.g. transition care programs, aged care assessment teams, home care packages, home nursing services),
- primary care (e.g. general practice clinics and community pharmacies).

A central component of geriatric medicine is ‘comprehensive geriatric assessment’ (CGA). CGA provides a comprehensive assessment of the older person’s health and wellbeing, with input into the diagnosis and management plan from multiple disciplines. It includes assessment of medical, cognitive, affective, functional and social issues, and development of a management plan that considers the patient’s goals and preferences. Compared to usual care, CGA leads to better patient outcomes. CGA has traditionally been the domain of specialist geriatric medicine services, however this approach to the care of older patients is increasingly used in other clinical areas such as general medicine, cardiology, oncology and primary care. Medication review and assessment of patients’ medication management are important components of geriatric assessment, and core roles of the geriatric medicine pharmacist.

There is evidence demonstrating clinical and economic benefits of clinical pharmacy services for older people in inpatient, residential care and ambulatory settings, and during transitions of care between settings. Clinical benefits include: prevention, identification and resolution of adverse drug reactions and other medication-related problems, improved quality of prescribing, and better medication adherence. In some patient groups (e.g. hospital inpatients aged 80 years and older, patients discharged from hospital with multi-morbidity and multiple medicines, patients with congestive heart failure), pharmacist review may reduce unplanned hospitalisations.

Geriatric medicine pharmacists require specialised knowledge and expertise to contribute effectively to the care of older people because medication management for older patients differs significantly from that of younger adults. Geriatric syndromes, many of which may be caused or worsened by medicines and may impact on the older person’s ability to manage their medicines, further complicate medication management. Geriatric syndromes include: cognitive impairment (delirium and dementia), incontinence, immobility, falls, functional impairment and iatrogenic disease. These frequently have multifactorial aetiologies (sometimes including adverse drug reactions or drug interactions) and they have a major impact on older peoples’ quality of life.

### How medication management for older people differs from younger adults

- Higher prevalence of multimorbidity and polypharmacy.
- Altered and variable pharmacokinetics and pharmacodynamics.
- Decreased physiological reserve and resilience.
- Increased susceptibility to drug-drug interactions, drug-disease interactions and adverse drug reactions (ADRs).
- Atypical presentation of illness, drug interactions and ADRs.
- Limited evidence with respect to effectiveness and safety of medications, especially in multi-morbid and frail older people (due to their exclusion from most clinical trials).
- Different goals of care, especially in frail individuals and those with limited life expectancy (e.g. maintaining function and quality of life may be prioritised over aggressive disease management and achievement of stringent treatment targets).
- Higher prevalence of impaired functional capacity and cognitive decline, impacting on patients’ ability to manage complex medication regimens.
- More complex care transitions as a result of polypharmacy, multiple medication changes, use of pharmacy-packed dose administration aids (DAAs), and transfer to settings in which medication charts or orders are needed to enable ongoing medication administration (e.g. residential aged care, community nursing care).

Box 2 How medication management for older people differs from younger adults

Objectives of the Service

The objective of a geriatric medicine pharmacy service is to provide evidence-based and patient-centred care to optimise medication-related outcomes for older people. The pharmacist should work with other members of the multidisciplinary team, as well as the individual older person, family, and carer, to ensure that pharmacotherapy is rational, safe, cost-effective and acceptable to the patient. This includes preventing and detecting ADRs, atypical ADRs such as those that present as geriatric syndromes, and resultant prescribing cascades. When appropriate, the pharmacist should recommend and assist with deprescribing to reduce unnecessary or inappropriate polypharmacy. They should assess patients’ capacity to safely manage and adhere to their medication regimen and implement strategies to assist patients and carers with this task. Patient and carer education, and ensuring continuity of medication management during care transitions are also core objectives.

Scope

This Standard applies to all pharmacists providing care to older people. The service provided by the geriatric medicine pharmacist may be delivered across several settings including both public and private hospitals. Elements of this standard will also be relevant to smaller organisations if there are pharmacists practicing in these areas.

The scope of services provided by geriatric medicine pharmacists will depend on a variety of factors including: the setting, patient population, the services that the hospital or health service provides, funding models, governance structures for geriatric medicine services, geriatric medicine and
pharmacy department priorities, organisational priorities and the scope of practice of the individual pharmacist.

The role of the geriatric medicine pharmacist should include: delivery of clinical pharmacy services to individual patients; involvement in development of policies, procedures, guidelines and resources; comment on medicine formulary issues with relevance to older people; the provision of educational programs and training for healthcare professionals; as well as quality improvement activities and research related to geriatric medication management.

Pharmacists with specialist expertise in geriatric medicine should also be a point of contact and provide advice for medicines inquiries to other pharmacists and health professionals within the health or aged care service.

**Operation**

*Access to clinical pharmacy services*

Older patients in all health and aged care settings should have access to a clinical pharmacy service.

In hospital inpatient settings, best practice is to provide a comprehensive service in accordance with these standards 7 days a week, as outlined in Table 1. If it is not possible to deliver a comprehensive service, for example on weekends and public holidays, then a basic clinical pharmacy service should be provided in accordance with the 2013 SHPA Standards of Practice for Clinical Pharmacy. A basic service includes, as a minimum, medication history and medication reconciliation on admission, medication chart review, and prescription review, patient medication counselling and clinical handover on discharge.

For residential and community aged care, best practice is to provide access to a comprehensive clinical pharmacy service, as outlined in Table 1, at least 5 days a week.
### Table 1 Recommended clinical pharmacy services and pharmacist : bed ratios for aged care services

<table>
<thead>
<tr>
<th>Type of care</th>
<th>Acute aged care</th>
<th>Subacute inpatient aged care</th>
<th>Residential aged care</th>
<th>Community aged care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Length of Stay (LOS)</strong></td>
<td>7-10 days</td>
<td>14-28 days</td>
<td>24 months (8 weeks for residential Transition Care Program [TCP])</td>
<td>Variable</td>
</tr>
<tr>
<td><strong>Optimal Full Time Equivalent (FTE) pharmacist-to-bed ratio</strong></td>
<td>1:20</td>
<td>1:30</td>
<td>1:200 (1:40 for residential TCP) &amp; &amp;</td>
<td>See footnote%</td>
</tr>
</tbody>
</table>

**Optimal clinical pharmacy service**

- Medication history and reconciliation on admission
  - Yes, within 24 hours
  - Yes, within 24 hours
  - Yes, within 48 hours
  - Yes, within 48 hours

- Medication chart review and clinical review
  - Yes, daily
  - Yes, at least 2nd-daily
  - Yes, at least monthly.
  - Yes, at least monthly

- Reconciliation of new dose administration aid (DAA) packs with medication orders/charts when packs are supplied.
  - DAAs not routinely used in acute aged care
  - Yes, if patient is using DAAs within a self-administration of medications program
  - Yes
  - Yes

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<table>
<thead>
<tr>
<th>Type of care</th>
<th>Acute aged care*</th>
<th>Subacute inpatient aged care</th>
<th>Residential aged care</th>
<th>Community aged care*</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Comprehensive interdisciplinary medication review</td>
<td>Yes, within 3 days of admission</td>
<td>Yes, within 7 days of admission</td>
<td>Yes, within 4-6 weeks of admission and repeated at intervals determined by clinical need (not less than yearly, and within 5-10 days of returning from an unplanned hospital admission)</td>
<td>Yes, within 4-6 weeks of admission and repeated at intervals determined by clinical need (not less than yearly, and within 5-10 days of returning from an unplanned hospital admission)</td>
</tr>
<tr>
<td>• Monitoring and review of deprescribing plan and outcomes following a comprehensive medication review.</td>
<td>Yes, at least twice-weekly (with plan for ongoing monitoring provided in discharge summary)</td>
<td>Yes, at least weekly (with plan for ongoing monitoring provided in discharge summary)</td>
<td>Yes, at least 4 weekly</td>
<td>Yes, at least 4 weekly</td>
</tr>
<tr>
<td>• Multidisciplinary ward round participation</td>
<td>Yes, at least twice-weekly</td>
<td>Yes, at least weekly</td>
<td>Yes (if available)</td>
<td>Yes (if available)</td>
</tr>
<tr>
<td>• Multidisciplinary team meeting / case conference participation</td>
<td>Yes, weekly</td>
<td>Yes, weekly</td>
<td>Yes (if available)</td>
<td>Yes (if available)</td>
</tr>
<tr>
<td>Type of care</td>
<td>Acute aged care*</td>
<td>Subacute inpatient aged care</td>
<td>Residential aged care</td>
<td>Community aged care*</td>
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</tr>
<tr>
<td>• Provision of information and advice to prescribers, nurses and carers</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>• Provision of information to patients and/or carers about medication changes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Yes&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>• Assessment of patients’ ability to self-administer medications</td>
<td>Yes, if discharge plan is for patient to manage own medicines</td>
<td>Yes, if discharge plan is for patient to manage own medicines</td>
<td>Yes, if patient wishes to self-administer medicines</td>
<td>Yes, if patient wishes to self-administer medicines.</td>
</tr>
<tr>
<td>• Self-administration of medicines program^^</td>
<td>Not routinely used in acute aged care</td>
<td>Yes, if plan is to manage own medicines after discharge</td>
<td>Yes, if patient wishes to self-administer medicines</td>
<td>Yes, if patient wishes to self-administer medicines</td>
</tr>
<tr>
<td>• Development of a plan for medication management after discharge</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (residential TCP)</td>
<td>Yes</td>
</tr>
<tr>
<td>• Discharge prescription review and reconciliation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
</tr>
<tr>
<td>Type of care</td>
<td>Acute aged care*</td>
<td>Subacute inpatient aged care</td>
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</tr>
<tr>
<td>• Preparation and delivery of discharge medication information for patient/carer#</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
</tr>
<tr>
<td>• Preparation and delivery of medication information for clinical handover (to community pharmacy, GP, community nurse, RACF and/or hospital as applicable)@</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>• Referral to post-discharge medication review service if patient meets eligibility and risk criteria$</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>• Medication reconciliation after any care transition (e.g. transfer between units, after hospital discharge)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes$</td>
<td>Yes$</td>
</tr>
<tr>
<td>• Participation in medication management committees</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Type of care</td>
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</tr>
<tr>
<td>Quality Use of Medicines activities (e.g. audits, staff education)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Contributing to Medication policy and procedure development</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Acute aged care: Acute medical units for the aged and other acute units with a focus on older people (e.g. orthogeriatric units)

^ Community aged care: Formal care provided to the older person in their own home, such as Home Care Packages, community-based Transition Care Programme and home nursing services.

&& Pharmacist to bed ratio in RACFs assumes the clinical pharmacist is not involved in weekly or fortnightly reconciliation of DAA packs with RACF medication administration charts or provision of counselling/education to the patient or substitute decision-maker each time a new medication is dispensed (because these services are the responsibility of the dispensing pharmacy service). If these roles are included, increased pharmacist resource would be needed. The pharmacist resource required will also be affected by the size of the facility, number of medical practitioners, and the model of care (e.g. fewer medical practitioners who attend regularly for ‘ward rounds‘ would increase efficiency of the clinical pharmacy service).

% The ratio of pharmacists to patients is variable as a result of variable length of stay within community aged care services and variable travel distances (e.g. metropolitan versus rural). On average, a community-based clinical pharmacist can perform a comprehensive medication review for 2 to 3 patients/day depending on patient complexity and travel distance.

** If possible, the medication history should be obtained prior to admission (at the patient’s home) as this results in a more accurate history and will reduce the risk of medication charting errors on admission. Reconciliation of the medication chart with the medication history should then occur as soon as possible after admission.

$ May be performed by the supplying pharmacy

^^ It is usually not feasible for all patients to participate in self-administration of medications program. Patients at highest risk of medication errors should be identified and targeted.
Verbal information, patient medication list (including all current medicines and medicines ceased in hospital) and consumer medicines information if applicable.

Includes contributing medication information to the medical discharge summary, communicating medication changes to the patient's community pharmacy and/or preparation of an interim residential care medication administration chart.

For example, hospital outreach medication review, HMR or RMMR service, to review medication management and outcomes of medication changes in consultation with GP within 5-10 days of discharge.
Identifying patients who require clinical pharmacist review

If a geriatric medicine pharmacy service cannot review all patients, it should target people at greatest risk of adverse medication events. The broad criteria used to determine eligibility for pharmacist services such as Home Medicines Reviews do not effectively identify those at greatest risk. The SHPA has developed criteria that may identify at-risk patients more effectively.

Transitions between care settings and changes to an older person’s care needs are associated with high risk of adverse medication events and indicate the need for a timely clinical pharmacist review (Table 2).

Table 2 Examples of transitions of care that indicate need for clinical pharmacist review of an older person

- Admission to hospital
- Discharge from hospital
- Discharge from a Transition Care Program
- Admission to a residential aged care facility (RACF)
- Referral to an Aged Care Assessment Team (ACAT)
- Referral to a home nursing service for medication management
- Admission to a home care package (Australian Government-funded aged care at home)
- Admission to a palliative care service

Policies, Procedures and Governance

Pharmacists must have knowledge of the following:

- Australian Charter of Healthcare Rights
- National Safety and Quality Health Service Standards including the National Model Clinical Governance Framework
- Pharmacy Board of Australia Code of Conduct
- SHPA Code of Ethics
- National Competency Standards Framework for Pharmacists in Australia
- Professional Practice Standards
- Clinical Governance Principles for Pharmacy Services
- Legislation, specifically State and Territory Acts and Regulations.

These documents provide a framework within which the pharmacist must practice.
Regarding geriatric medicine, there are no national policies or procedures that stipulate the requirements of a geriatric medicine pharmacy service. The Australian and New Zealand Society for Geriatric Medicine (ANZSGM) publishes a number of position statements, some of which may have relevance for pharmacists. Additional guidelines of relevance to geriatric medicine pharmacists are listed in Appendix 1. Resources.

Components of a geriatric medicine clinical pharmacy service

A summary of the components of a geriatric medicine pharmacy service in different practice settings is provided in Table 1. The range of services provided by a geriatric medicine pharmacist are generally similar to those provided for other patient populations, however the focus or prioritisation of the service may be different. This section of the standards does not describe all clinical pharmacy procedures that form a geriatric medicine pharmacy service. Its purpose is to highlight key services and their application to older patients.

Medication history and reconciliation

Timely medication reconciliation, to reduce the risk of prescribing errors, is especially important for older patients due to the high prevalence of multimorbidity and polypharmacy, interaction with multiple health services and prescribers, and factors that make history-taking more challenging, such as cognitive impairment and poor health literacy. Greater time and effort may be required to obtain the best possible medication history in this population.

Medication history and reconciliation should be undertaken as early as possible upon every:

- presentation or admission to a health or aged care service (including hospitals, clinics, and residential and community aged care services);
- transfer between wards and care settings within an organisation;
- transfer between community-based providers.

Medication reconciliation should also occur whenever medication charts are re-written, prior to a medication review, and when there are significant changes to a person’s medication regimen (e.g. following a medication review), to ensure that intended medication changes are correctly implemented.

Medication review

Medication review, referred to as ‘assessment of current medication management’ in the Standard of Practice for Clinical Pharmacy Services, is a vital component of health care for older people, especially those who use multiple medications.

An interdisciplinary approach to medication review is recommended, involving the pharmacist, medical practitioner(s) and aged care or community nurse. The patient’s views, concerns and wishes should be central to the review. For patients who are unable to participate in the review, for example due to severe cognitive impairment, their advance care plans should be considered, if available, and their carer or substitute decision-maker (e.g. power of attorney, guardian or next of kin) should be involved.
For hospital inpatients, medication review should occur on admission, during the hospital stay and prior to discharge. Medication review on admission should focus on identifying medications that may have contributed to the person’s presenting complaint (for example, ADR, drug interaction or failure to receive appropriate treatment due to under-prescribing or non-adherence). Subsequent medication reviews provide an opportunity to reassess the benefits and risks of pre-admission medications, ensure appropriateness of new medications, deprescribe unnecessary or inappropriate medications and simplify the discharge medication regimen. For older surgical patients, medication review is recommended as part of pre-operative and post-operative assessments.

In community and residential aged care settings it is recommended that a comprehensive, interdisciplinary medication review occur at least once every 12 months. People moving into a RACF from the community should have a comprehensive medication review within 4 to 6 weeks after admission. This timing allows the person to adjust to their new environment, with potentially improved nutrition, hydration and medication adherence. It is also an ideal time to reassess the benefits and risks of long-term medications and develop and implement a deprescribing plan if necessary. Additional reviews should occur when there is a significant change to the patient’s health or medication regimen, and within 5-10 days of discharge from hospital.

Referral to an aged care assessment team (ACAT) or home nursing service should trigger a medication review since these events indicate a decline in functional capacity which may be related to medications or may impact on the older person’s ability to manage medications.

The Commonwealth Government funds pharmacist medication reviews for people living in the community and in residential aged care via the Home Medicines Review (HMR) and Residential Medication Management Review (RMMR) programs respectively. Program rules and other factors mean that these programs are often unable to be accessed when they are needed, and therefore health services and pharmacists should consider other service delivery models when appropriate to meet the needs of their older clients.

Whenever possible, medication reviews (in all settings) should include face-to-face discussion between the pharmacist and prescriber(s) to enable efficient and effective communication and decision-making and ensure that potential medication-related problems are addressed. If a face-to-face discussion is not possible, telehealth is an alternative. Professional practice guidelines and standards for pharmacists relating to the medication review process are listed in Appendix 1.

ADR detection and management

Iatrogenic disease and prescribing cascades (where a medication is prescribed to manage the adverse effects of another medication) are common in older patients. ADRs may be difficult to detect due to atypical presentation. ADR should be considered as a potential cause of any new symptom in an older person. Monitoring for ADRs should occur when any new medication is commenced, or a dose is increased. Monitoring should also occur following any change to an older person’s medication management that may lead to a sudden increase in medication adherence, such as admission to hospital or a RACF, assistance with medication-taking (e.g. by a home nursing service) or implementation of a DAA.

It is also important to monitor for adverse drug withdrawal events (ADWEs) when long-term medications are dose-reduced or stopped (deprescribed). ADWEs include recurrence of the original symptoms following medication dose reduction or discontinuation.
symptom, withdrawal symptoms, or rebound phenomenon. Deprescribing a medication may also unmask an ADR caused by another medication, if the discontinued medication was part of a prescribing cascade.

Monitoring for ADRs and ADWEs is a shared responsibility involving the prescriber, pharmacist, nurse, and the patient and their carer.

Deprescribing

Deprescribing attempts to balance the potential for benefit and harm by systematically withdrawing unnecessary or inappropriate medications, with the goal of managing polypharmacy and improving outcomes. Deprescribing has become a major focus of geriatric medicine and pharmacy practice, and is especially important for older people with limited life expectancy.

Since people in their last year of life present to hospital on average two to four times, admission to hospital may be a trigger to discuss end of life care and consider deprescribing. Deprescribing should also be considered following admission to a RACF, where the average life expectancy is around two years.

Other triggers to consider deprescribing include: ADR, high treatment burden, or a decline in functional capacity (which may be indicated by referral to an ACAT, home nursing service or home care package).

The rationale for deprescribing decisions should be documented in the patient’s medical record and communicated in clinical handover, including criteria for reintroduction of the medication. A plan for follow-up to review outcomes is also important. These are some steps that reduce the risk of ADWEs, and may allow for the prompt re-introduction of the medication or alternatives if indicated.

Deprescribing decisions should occur as part of a comprehensive medication review and in consultation with the patient and/or their carer or substitute decision-maker. A large array of protocols, algorithms and guidelines for deprescribing are available.

Regimen simplification

Simplification of medication regimens can improve adherence and reduce treatment burden for older patients and their carers. Simplification may involve deprescribing or changing dose-forms, dose-times and dose-frequencies. Regimen simplification should form part of all comprehensive medication reviews for older people. Regimen complexity should also be considered at the time of prescribing, reviewing or dispensing a new medication, because sometimes an alternative medication, dose-form or dose-regimen may be available that will have less impact on the complexity of the patient’s medication regimen.

Assessment of patient’s ability to manage medicines

Older patients are more likely to have barriers to accurate and safe medication management than younger patients. Barriers include: polypharmacy, cognitive or sensory impairment, reduced manual dexterity and poor health literacy. Assessment of a patient’s (or carer’s) ability to manage and adhere to their medication regimen helps to determine whether a patient needs assistance or medication aids such as medication reminders or a dose administration aid (DAA).
Examples of situations where an assessment of a patient’s ability to manage medicines should be considered include: when there has been a change in the patients’ functional capacity (e.g. following an acute event such as stroke or delirium), when there are changes to the patient’s medication regimen (especially changes that increase regimen complexity or introduce new dose-forms), or when there are concerns about the patient’s capacity to safely manage their medicines. In residential care, when a resident wants to self-administer medicines an assessment of their capacity must be conducted.

Various performance-based instruments exist to assess a patient’s capacity to manage their medications. Content of tools is variable, but most include ability to read and explain a dispensing label, open packaging and remove a dose, orientation to time and memory recall. Some tools use the patient’s own medication for the assessment, whereas others use a mock medication regimen. The former may be best suited to settings in which the patient’s own medications are available, such as in the patient’s home. The latter may be more feasible in the hospital setting.

Supervised self-administration of medicines (see next section) can also be used to assess a patients’ ability to manage medicines.

An assessment of medication management ability should be performed before implementing a DAA such as a Dosett box, blister pack (e.g. Webster Pak) or sachet system. DAAs are not suitable for all patients. Sometimes simpler, less costly alternatives may be suitable, such as regimen simplification and use of reminder charts or alarms. Approaches to assessing patients’ suitability for DAAs have been published.

**Self-administration of medicines programs (SAMP)**

Self-administration of medicines programs (SAMP) are used mainly in sub-acute hospital units and residential care facilities to assess patients’ ability to safely manage their medications, encourage patient participation in their care, provide education and training in medication-taking and identify supports required for ongoing medication management. Patients who complete a SAMP may demonstrate better medicines knowledge, better adherence and fewer medication errors.

In hospitals, a SAMP should be considered for patients who plan to self-administer their medicines after discharge and have had significant changes to their medication regimen and/or changes in their functional capacity. In residential care, a SAMP should be conducted when a resident wants to self-administer their medicines. SAMP could also be considered in other settings such as people living at home with an aged care package or community nursing support.

A SAMP commences with an assessment to determine suitability of the patient for the program and format of medicine supply (original packs or DAA), and to obtain patient consent. Medicines are dispensed with full directions, in the format that the patient will use. The patient then administers their medicines with direct nurse supervision. If the patient demonstrates correct administration over several days the program may allow for greater patient independence with regular monitoring.

Patients suitable for SAMP are medically stable with a consistent medication regimen. The geriatric medicine pharmacist should be involved in identifying suitable patients, patient assessment, organising the supply of medicines in the required format, providing education and monitoring outcomes.
Facilitating continuity of medication management on transition between care settings

Geriatric medicine pharmacists should provide medicines information to patients, carers and health professionals during transitions of care, ensure ongoing access to medicines, and ensure that medicines are able to be safely and accurately administered after a transition of care.\(^1,39\).

All older patients who use multiple medicines should be provided with a patient-held medication list (in addition to verbal instructions)\(^36,60\). At transitions of care the medication list should also include information about medicines that have been recently discontinued.

If RACF staff or community nurses will be supporting the patient, they usually require medication administration orders. It is recommended that hospitals provide an interim medication administration chart for all patients discharged to RACFs and home care services to avoid medication administration delays and errors, which commonly occur during the first 24-72 hours after discharge\(^37\). These can be prepared by a pharmacist or hospital medical officer\(^37\). The interim chart should be reconciled against the discharge medication orders to ensure accuracy. A copy of the chart should be provided to the patient’s community pharmacy.

When a community pharmacy-packed DAA is used upon discharge from hospital, the packing pharmacy should be provided with information to enable timely and accurate DAA preparation.

Provision of discharge medication information to community pharmacists is also important for non-DAA users who have had significant changes to their medication regimen in hospital.

The pharmacist should also ensure the patient will have access to medications immediately after discharge from hospital to avoid missed doses and inadequate symptom management\(^17,36\).

Patient and carer education

Medication information and education should be provided to all older patients, including those using a DAA and patients living in residential care facilities, even if they are not self-administering their medicines. It should include both verbal and written information. For some patients with cognitive impairment or poor literacy, Consumer Medicines Information may be too complex and simpler written materials should be offered. Pharmacists should ensure language used is simple and clear and avoids unnecessary medical terminology. Physical impairments including visual and auditory changes may impair an older person’s ability to receive the message being delivered. Use of appropriate light, colour, font and a lower pitch voice and checking for hearing aids are important when delivering medication information. Speaking slowly, breaking downs tasks and demonstration is necessary in those with cognitive impairment\(^61\). For patients on multiple medications a medication list should be provided, and the patient should be encouraged to keep this up to date and take it to all health provider consultations.

It is recommended that education for inpatients is provided throughout the admission, because delivering a large volume of information at the point of discharge may be overwhelming and ineffective.

Older persons may delegate the management of their medicines to someone else (e.g. a carer or nurse). Whilst these people may require medication education, but it is important to still involve the patient unless they are unable or have indicated that they do not want to receive education.
Interdisciplinary teamwork

Interdisciplinary teamwork is at the core of evidence-based models of geriatric medicine. Participation in interdisciplinary activities is an effective avenue for geriatric medicine pharmacists to build rapport with other clinicians (e.g. medical practitioners, nurses, allied health and dental professionals) and contribute to patient care.

Geriatric medicine pharmacists should participate in interdisciplinary ward rounds and other forums at which decisions about medication management are made, such as team meetings and case conferences. The geriatric medicine pharmacist’s contributions to team discussions should include providing information about current and recent medication use and medication changes, ADR identification, advice about appropriate medication selection, deprescribing and discharge planning.

Geriatric medicine pharmacists must be proactive participants in hospital discharge planning, to ensure that medication management issues are considered and addressed before decisions are made about the discharge destination and support services.

Quality use of medicines activities

Geriatric medicine pharmacists should lead or contribute to quality use of medicines (QUM) activities, to optimise medication management and patients’ health outcomes in all health and aged care settings.

QUM activities can take many forms including:

- educational activities for health professionals, carers and patients/residents;
- continuous quality improvement activities such medicines use evaluations;
- participation in Medication Advisory Committees;
- development of medicine-related policies and procedures;
- assisting the organisation to meet and maintain medication management accreditation standards.

Recommended Staffing

The level of geriatric medicine pharmacy service should be agreed with the health or aged care service provider and the healthcare team, and resourced appropriately to enable delivery of the agreed service. The ideal geriatric medicine clinical pharmacy service and associated full-time equivalent pharmacist staffing ratios for different aged care settings are described in Table 1. These recommendations are based on published evidence, consensus guidelines, and consultation with experienced geriatric medicine pharmacists and geriatricians. They assume the pharmacist will be primarily providing clinical services and will have limited or no direct involvement in medication supply functions.

Many factors influence the ability of geriatric medicine pharmacists to deliver the clinical services recommended in these standards, such as funding, staffing levels, extent of integration of pharmacists into the multidisciplinary team, education and training of the pharmacist and availability of support staff (e.g. pharmacy technicians, dispensary pharmacists, quality use of medicines pharmacists). In residential and community aged care settings, the size of the service, travel...
distances required to provide the service and the number and location of medical practitioners will impact on efficiency of the clinical pharmacy service and staffing levels required.

Where possible, pharmacy technicians should be employed to support the geriatric medicine clinical pharmacist, because this has been shown to increase the number of patients able to be reviewed by the pharmacist and improve timeliness of review. Tasks that can be undertaken by pharmacy technicians are described elsewhere.

Training and Education

It is essential to develop the pharmacy workforce through training and education of pharmacists and technicians to enable the delivery of advanced pharmacy care in geriatric medicine. Pharmacists commencing practice in geriatric medicine should be provided with training by the organisation to improve the pharmacists’ ability to care for older people, and pharmacists should also seek relevant external professional development opportunities.

Geriatric medicine pharmacists should have a scope of practice competency profile with a continuing professional development (CPD) plan that covers the five domains of professional performance as per the National Competency Standards Framework for Pharmacists in Australia 2016. Although the Framework itself is not tied to any area of specialisation, for geriatric medicine pharmacists there are educational activities, knowledge, skills and credentials that are recommended in addition to those of a clinical pharmacist. These have been informed by the SHPA Geriatric Medicine Leadership Committee.

Educational Activities

Education, training and professional development can be sourced from professional bodies such as:

- SHPA
- Australian Association of Consultant Pharmacy
- American Society of Consultant Pharmacists
- American Society of Health-System Pharmacists
- Universities, e.g. Monash University Geriatric pharmacy practice and Geriatric disease state management postgraduate units.

Educational material, resources and links to professional development opportunities are also provided on the SHPA Specialty Practice Geriatric Medicine stream page on the SHPA eCPD website. For geriatric medicine pharmacists, joining and actively participating in the Geriatric Medicine Stream at the Practice Group level is strongly recommended. Attendance at specialist conferences and educational meetings is encouraged to maintain and update specialist knowledge in geriatric medicine. Relevant domestic conferences includes those organised by SHPA, The Australian and New Zealand Society for Geriatric Medicine and The Australian Association of Gerontology. International conferences in geriatric medicine include those organised by the International Association of Gerontology and Geriatrics, the British Geriatrics Society and the American Geriatrics Society.
Credentialing

Pharmacists can obtain credentialing in geriatric medicine pharmacy practice by passing the Board of Pharmacy Specialties Geriatric Pharmacy examination. This credential also enables pharmacists to gain accreditation by the SHPA as a provider of Home Medicines Reviews (HMR) and Residential Medication Management Reviews (RMMR). The Australian Association of Consultant Pharmacy (AACP) can also accredit pharmacists to provide HMRs and RMMRs.

Quality Improvement

In addition to quality measures outlined in Chapter 14 of the SHPA Standards of Practice for Clinical Pharmacy Services, a geriatric medicine pharmacy quality improvement program should demonstrate that the service is targeting and delivering high quality care for patient groups at greatest risk for medicine misadventure. The geriatric medicine pharmacist should ensure that the focus is not only on the timeliness of care, but also on the quality of care in line with national or state-based indicators. Many indicators under discussion nationally and internationally have a medication-related element.

Examples of indicators relevant to geriatric medicine pharmacy services include:

**Australian National QUM indicators**

- 3.1 Percentage of patients whose current medicines are documented and reconciled at admission
- 5.5 Percentage of patients with a new adverse drug reaction (ADR) that are given written ADR information at discharge AND a copy is communicated to the primary care clinician
- 5.9 Percentage of patients who receive a current, accurate and comprehensive medication list at the time of hospital discharge
- 6.2 Percentage of patients that are reviewed by a clinical pharmacist within one day of admission (to hospital),

**ACOVE 3 quality indicators** (Assessing the care of vulnerable elders, RAND Corp, USA)

- ALL vulnerable elders should have an annual medicines regimen review
- IF a vulnerable elder is prescribed a medicine, THEN the prescribed medicine should have a clearly defined indication
- IF a vulnerable elder is prescribed an ongoing medication for a chronic medical condition, THEN there should be documentation of response to therapy.

Standard 14 (Medication Review) of the Pharmaceutical Society of Australia’s Professional Practice Standards may be used to assess the quality of pharmacist medication review services.

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i Note, the list below is a limited list offered for general information and does not represent an endorsement of any provider; new providers may emerge, and this is list is current as of April 2019.
There are numerous sets of indicators of appropriate prescribing and guidelines for older people that could potentially be used as a measure of the quality of care provided to geriatric medicine patients (Appendix 1).

Research

Geriatric medicine pharmacists should contribute to the generation of new knowledge and evidence related to medication management for older people. This may include investigating problems with medication use and evidence-practice gaps, developing and testing new approaches to improve medication use or delivery of pharmacy services, and evaluating novel treatments. Research Ethics Committee approval should be sought where applicable. It is advisable to establish an interdisciplinary research team, including consumer representation, to ensure the research is relevant to key stakeholders. Where applicable, core outcome sets for trials aimed at improving medication use in older people should be used 67-70.

External funding enables larger and, feasibly, multi-centre studies to be conducted. The SHPA National Translational Research Collaborative (NTRC) funds research grants, practitioner grants and educational grants. Grants may also be available from other organisations such as the Australian Association of Gerontology and various charitable trusts with an interest in aged care.

Presentation and publication of research at relevant conferences and seminars as referenced in Training and Education is recommended to support the development of geriatric medicine pharmacy practice and drive improvements in medication use and safety. Studies should be designed and conducted with this in mind, to ensure the findings are publishable.

Further information on research can be found in Chapter 11 of the SHPA Standards of Practice for Clinical Pharmacy Services 1.

Acknowledgements

The SHPA additionally wish to acknowledge Mary Etty-Leal, member of the former SHPA Committee of Specialty Practice in Geriatric Medicine, for her contribution to a previous draft of this Standard.

References


18. Crotty M. Does the Addition of a Pharmacist Transition Coordinator Improve Evidence-Based Medication Management and Health Outcomes in Older Adults Moving from the Hospital to a LongTenn Care Facility? Results of a Randomized, Controlled Trial. *The American Journal of Geriatric Pharmacotherapy* 2004; 2(4): 257.


26. Elliott RA, Lee CY. Poor uptake of interdisciplinary medicine reviews for older people is a barrier to deprescribing. BMJ 2016; 353: i3496.


57. SHPA Committee of Specialty Practice in Rehabilitation and Aged Care. SHPA Guidelines for Self-Administration of Medication in Hospitals and Residential Care Facilities. 2002; 32(4).


Appendices

Appendix 1. Resources for geriatric medicine pharmacy practice

<table>
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<tr>
<th>Recommended texts</th>
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<tr>
<td>• Australian Medicines Handbook Aged Care Companion</td>
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<tr>
<th>Discretionary texts</th>
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<tbody>
<tr>
<td>• Brocklehurst's textbook of geriatric medicine and gerontology. 8th ed. Fillit HM, Rockwood K, Young JB, eds. Elsevier Science; ScienceDirect 2016 (comprehensive text)</td>
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<tr>
<th>Guidelines and standards</th>
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<tr>
<td>• Australian Pharmaceutical Advisory Council. <a href="#">Guiding principles to achieve continuity in medication management</a>. Canberra: Commonwealth of Australia; 2005</td>
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<tr>
<td>• Australian Pharmaceutical Advisory Council. <a href="#">Guiding principles for medication management in the community</a>. Canberra: Commonwealth of Australia; 2006</td>
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<tr>
<td>• Department of Health and Ageing. <a href="#">Guiding principles for medication management in residential aged care facilities</a>. Canberra: Commonwealth of Australia; 2012</td>
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<tr>
<td>• <a href="#">Guidelines for pharmacists providing Residential Medication Management Review (RMMR) and Quality Use of Medicines (QUM) services</a>. Pharmaceutical Society of Australia 2011.</td>
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<tr>
<td>• Guidelines for pharmacists providing Home Medicines Review (HMR) services. Pharmaceutical Society of Australia 2011</td>
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<tr>
<td>• <a href="#">Guidelines for pharmacists providing dose administration aids (DAA) services</a>. Pharmaceutical Society of Australia 2017</td>
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<tr>
<td>• <a href="#">Quality standards and practice principles for senior care pharmacists</a>. American Society of Consultant Pharmacists 2016</td>
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<table>
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<tr>
<th>Indicator sets for identifying potentially appropriate prescribing for older people</th>
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</table>
- **STOPP (Screening Tool of Older Person’s Prescriptions) and START (Screening Tool to Alert doctors to Right Treatment) criteria**, version 2
- **STOPPFrail (Screening Tool of Older Persons Prescriptions in Frail adults with limited life expectancy): consensus validation**

### Geriatric medicine journals

- **Age and Ageing**
- **Australasian Journal on Ageing**
- **Drugs and Aging**
- **JAGS: Journal of the American Geriatrics Society**
- **Geriatric Therapeutics Review** section in JPPR

### Useful websites

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<td>American Geriatrics Society (AGS)</td>
<td><a href="http://www.americangeriatrics.org">http://www.americangeriatrics.org</a></td>
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<tr>
<td>- Guidelines and recommendations</td>
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<td>Australian and New Zealand Society for Geriatric Medicine (ANZSGM)</td>
<td><a href="http://www.anzsgeriatricmedicine.org/">http://www.anzsgeriatricmedicine.org/</a></td>
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<tr>
<td>- Position statements</td>
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<td>British Geriatrics Society (BGS)</td>
<td><a href="http://www.bgs.org.uk">http://www.bgs.org.uk</a></td>
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<tr>
<td>- Good practice guides, clinical guidelines</td>
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<tr>
<td>Coalition for Quality in Geriatric Surgery</td>
<td><a href="https://www.facs.org/quality-programs/geriatric-coalition">https://www.facs.org/quality-programs/geriatric-coalition</a></td>
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<tr>
<td>- Guidelines for pre- and peri-operative care</td>
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<tr>
<td>American Society of Consultant Pharmacy (ASCP)</td>
<td><a href="https://www.ascp.com/articles/geriatric-pharmacotherapy">https://www.ascp.com/articles/geriatric-pharmacotherapy</a></td>
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<tr>
<td>Key geriatric pharmacy references and Geriatric curriculum guide</td>
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<tr>
<td><strong>The ultimate guide for pharmacists working in care homes. Royal Pharmaceutical Society (UK) 2016</strong></td>
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<td><strong>Polypharmacy Guidance (NHS Scotland)</strong></td>
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<td><a href="http://www.polypharmacy.scot.nhs.uk/">http://www.polypharmacy.scot.nhs.uk/</a></td>
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<td><strong>Deprescribing.org</strong></td>
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<td><strong>Primary Health Tasmania: Deprescribing guide</strong></td>
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<td><strong>Geriatric medicine podcasts</strong></td>
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<td><strong>MDTea</strong></td>
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