Standard of Practice in Geriatric Medicine for Pharmacy Services

Geriatric Medicine Standard Working Group*


Preface

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

This Standard references and relies upon the SHPA Standards of Practice for Clinical Services (1) 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 Australia (2) where ‘specialisation’ refers to the scope of practice rather than the level of performance. ‘Specialisation’ of itself does not confer additional expertise.

Introduction

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 active into their 70s or 80s. On the other hand, some people develop geriatric syndromes and frailty in their 50s. 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. The term ‘older’ is preferred over ‘elderly’, ‘aged’ or ‘geriatric’ when describing a person over 65 years of age, as the latter terms carry negative connotations and may lead to generalisations about the health and physical status of the older person.

Older people constitute a large and growing proportion of the population, making geriatric medicine a rapidly growing specialty. Pharmacists who specialise in geriatric medicine pharmacy practice work in a variety of settings. These include acute and subacute geriatric medicine units, other hospital...
units that focus on the care of older people (e.g. psychogeriatric and orthogeriatric units), residential aged care facilities (RACF) and community-based programs (e.g. Transition Care, Hospital Outreach, Home Care). The principles of geriatric medicine and geriatric pharmacy practice are also relevant in other healthcare settings in which older people are managed, for example general medicine units, oncology units and primary care.

A central component of geriatric medicine is ‘comprehensive geriatric assessment’ (CGA) (3). CGA provides a comprehensive assessment of the older person’s health and wellbeing, with input into the diagnosis and management plan from multiple disciplines (4). 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. Medication review and assessment of patients’ medication management are important components of geriatric assessment, and core roles of the geriatric pharmacist (3, 5).

There is a substantial body of published literature demonstrating the clinical and economic benefits of clinical pharmacy services for older people in inpatient, residential care and ambulatory settings. Clinical benefits include: prevention, identification and resolution of adverse drug reactions and other medication-related problems, improved quality of prescribing, enhanced continuity of medication management during care transitions and better medication adherence (5-20). In some patient groups, pharmacist review may reduce unplanned hospitalisations (20).

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 (Table 1). Geriatric syndromes, many of which may be caused or worsened by medicines or may impact on the older person’s ability to manage their medicines, further complicate medication management. Syndromes that are common in older people include: cognitive impairment (delirium and dementia), incontinence, immobility, falls, frailty, functional impairment and iatrogenic disease. These often have multifactorial aetiologies (including medication reactions) and have a major impact on older peoples’ quality of life.

Table 1 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 interactions and ADRs.
- Atypical presentation of illness 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).
• Variable goals of care, especially in frail individuals and those with limited remaining life expectancy (e.g. maintaining function and quality of life and avoiding ADRs 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).

ADR = adverse drug reaction

Objectives of the Service

The objective of a geriatric medicine pharmacy service is to provide patient-centred care to optimise medication-related outcomes for older people.

The pharmacist should work with other members of the multidisciplinary team to ensure that drug therapy for the older person is rational, safe, cost-effective and acceptable to the patient. They should focus on preventing and detecting ADRs, including atypical ADRs such as those that present as geriatric syndromes. 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 core objectives.

Scope

These standards describe activities consistent with best practice for the provision of clinical pharmacy services for older patients receiving geriatric care or aged care in any setting, including hospitals, residential care facilities, transition care services and in the community.
The scope of services provided by geriatric medicine pharmacists will be dependent on the setting, funding models, the priorities of the organisation and the scope of practice of the individual pharmacist. As well as providing clinical pharmacy services for individual patients, the geriatric medicine pharmacist should be a point of contact for geriatric medicine pharmacy related enquiries from other pharmacists and health professionals within the health or aged care service. The role of the pharmacist in geriatric medicine should also include involvement in development of policies, procedures, guidelines and resources, comment on medicine formulary issues, provision of educational programs and training for pharmacy students, intern pharmacists, postgraduate pharmacists, pharmacy technicians and other healthcare professionals, as well as quality improvement activities and research related to geriatric medication management.

Operation

Access to clinical pharmacy services

Older patients in all healthcare settings should have access to a clinical pharmacy service. In hospital inpatient settings, best practice is to provide a comprehensive geriatric medicine pharmacy service in accordance with these standards 7 days a week (1). If a geriatric medicine pharmacy service is not available on weekends and public holidays, the pharmacy department should provide a general clinical pharmacy service on those days to ensure that newly admitted patients are reviewed and discharging patients are reviewed and receive discharge medication counselling and clinical handover (1). For residential and community aged care, a less intensive clinical pharmacy service would be appropriate.

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 (21) do not effectively identify those at greatest risk (22). The SHPA has developed criteria that may identify at-risk patients more effectively (23). Transitions between care settings and changes to an older person’s care needs are associated with increased risk of adverse medication events and indicate the need for a clinical pharmacist review (Table 2).
Table 2 Examples of transitions 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 and Procedures

Geriatric medicine pharmacists must have knowledge of the following:

- Australian Charter of Healthcare Rights (24).
- Pharmacy Board of Australia Code of Conduct (25).
- National Competency Standards Framework for Pharmacists in Australia (2).
- Professional Practice Standards (26).
- Legislation, specifically State and Territory Acts and Regulations.

These documents provide a framework within which the pharmacist must practice.

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 3.

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 differ.

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 differences and procedures as they relate to older patients.

Medication history and reconciliation

Medication reconciliation 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 reconciliation should be undertaken on 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 (1, 12, 27).

Medication reconciliation should also occur whenever handwritten medication charts are re-written 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 (1), is a vital component of health care for older people, especially those who use multiple medications (27-31).

An interdisciplinary approach to medication review is recommended, involving the pharmacist, medical practitioner(s) and aged care or community nurse (27, 29, 30). 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. medical power of attorney) should be involved.

For hospital inpatients, medication reviews should occur on admission, during the hospital stay and prior to discharge (1, 32, 33). Medication review on admission should focus on identifying medications and un-treated or under-treated medical problems that may have contributed to the person’s presenting complaints. 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 (34, 35). Medication review is also recommended for older surgical patients as part of pre-operative and post-operative assessments (36, 37).

In community and residential aged care settings it is recommended that a comprehensive, interdisciplinary medication review occur at least once every 12 months (27, 28, 38). People moving into a RACF should have a comprehensive medication review 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 (27, 29, 30, 38).
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 (16, 39).
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 as a result of atypical presentation (3).
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 when long-term medications are
stopped or deprescribed. Adverse drug withdrawal events include recurrence of the original
symptom, withdrawal symptoms, or rebound phenomenon (40).
Monitoring for ADRs and adverse drug withdrawal events 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 (40). Deprescribing has become a major focus of geriatric medicine and pharmacy
practice, and is especially important for older people with limited remaining life expectancy (41).
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 in people who are
clearly declining in health (41). Deprescribing should also be considered following admission to a RACF, where the average remaining 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 (40). A plan for follow-up of outcomes is also important. These steps reduce the risk of ADWEs, and allows for the prompt re-introduction of the medication 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. Protocols, algorithms and guidelines for deprescribing are available (42).

Regimen simplification

Simplification of medication regimens can improve adherence and reduce treatment burden for patients and carers. Simplification may involve medication withdrawal or changes to dose-forms, dose-times and dose-frequencies (34). Regimen simplification should form part of all comprehensive medication reviews for older people. The impact on 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 (27, 30).
Various performance-based instruments exist to assess a patient’s capacity to manage their medications (43, 44). 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 (43). Some tools use the patient’s own medication for the assessment, whereas other 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 (44). 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 (18). DAAs are not suitable for all patients (6, 18). 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 (6, 18).

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 (45, 46). Patients who complete a SAMP may demonstrate better drug knowledge, better adherence and fewer medication errors (47).

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, format of medicine supply and to obtain patient consent. Medicines are dispensed with full directions, in the format that the patient will use (original packs or DAA). 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 profile. Geriatric medicine pharmacists are 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 medications are able to be safely and accurately administered after a transition of care (1, 32).

All older patients who use multiple medicines should be provided with a patient-held medication list (in addition to verbal instructions) (29, 48). At transitions of care the medication list should also include information about medicines that have been recently discontinued. As noted above, patients’ ability to manage their medicines should be assessed, and appropriate medication management strategies and supports implemented.

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 to avoid medication administration delays and errors upon arrival at the RACF (30). These can be prepared by a pharmacist or hospital medical officer (30). A copy of the interim 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 must 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.

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 down tasks and demonstration is necessary in those with cognitive impairment (49). For patients on multiple medications a medication list should be provided, and the patient should be encouraged to keep this up to date.

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 have third parties managing their medicines (e.g. carer or nurse). Whilst these parties may require medication education, 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 pharmacists to build rapport with other clinicians (e.g. medical practitioners, nurses and allied health including occupational therapists, speech pathologists and dieticians) and contribute to patient care.

Geriatric medicine pharmacists should routinely 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 discussions about 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 (21):

- educational activities for health professionals, carers and patients/residents;
- continuous quality improvement activities such drug 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 pharmacist...
staffing ratios for different aged care settings are described in Table 3. These recommendations are based on published evidence (50, 51) consensus guidelines (1, 27-30, 32, 52, 53), and consultation 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 (51). Tasks that can be undertaken by pharmacy technicians are described elsewhere (1).
### Table 3  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^&lt;sup&gt;+&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average LOS</td>
<td>7-10 days</td>
<td>14-28 days</td>
<td>24 months (8 weeks for residential Transition Care Program [TCP] clients)</td>
<td>Variable</td>
</tr>
<tr>
<td>Optimal pharmacist:bed ratio</td>
<td>1:20</td>
<td>1:30</td>
<td>1:200 (1:40 for residential TCP^&lt;sup&gt;+&lt;/sup&gt;)</td>
<td>See footnote^&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>Optimal clinical pharmacy service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medication history and</td>
<td>Yes, within 24 hours</td>
<td>Yes, within 24 hours</td>
<td>Yes, within 72 hours^&lt;sup&gt;+&lt;/sup&gt;</td>
<td>Yes, within 72 hours^&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>reconciliation on admission</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medication chart review and</td>
<td>Yes, daily</td>
<td>Yes, at least 2&lt;sup&gt;nd&lt;/sup&gt;-daily</td>
<td>Yes, at least monthly.</td>
<td>Yes, at least monthly</td>
</tr>
<tr>
<td>clinical review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Reconciliation of new dose</td>
<td>DAAs not routinely used in acute aged care</td>
<td>Yes, if patient is participating in a self-administration of medications program using DAAs</td>
<td>Yes^&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Yes^&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>administration aid (DAA) packs</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>with medication orders/charts</td>
<td></td>
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<td></td>
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<tr>
<td>when packs are supplied.</td>
<td></td>
<td></td>
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<td></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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<td>-----------------------------------------------------------------------------</td>
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<td>---------------------</td>
</tr>
<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 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 once-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>
<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>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^</td>
<td>Yes^</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>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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<td>--------------------------------------------------</td>
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</tr>
<tr>
<td>• Discharge prescription review and reconciliation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
</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)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes$^5$</td>
<td>Yes$^5$</td>
</tr>
<tr>
<td>Type of care</td>
<td>Acute aged care*</td>
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<td>between units, after hospital discharge)</td>
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<tr>
<td>• Participation in medication management committees</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</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>
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* 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 reconciliation of new 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 provided 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.
Training and Education (for the service, and of the individual)

Training for geriatric medicine pharmacists should be provided by the organisation to improve the pharmacists’ ability to care for older people, and pharmacists should also seek relevant external professional development opportunities.

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

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

Educational material and resource and links to professional development opportunities are 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 include those organised by SHPA, The Australian and New Zealand Society for Geriatric Medicine and The Australasian 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 Specialities 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 (1), 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 of the indicators under discussion nationally and internationally have a
g medication-related element.

Indicators relevant to geriatric medicine pharmacy services include:

**Australian National QUM indicators** e.g.

- 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)* e.g.

- ALL vulnerable elders should have an annual drug regimen review
- IF a vulnerable elder is prescribed a drug, THEN the prescribed drug 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. (26)

There are also numerous sets of indicators of appropriate prescribing for older people that could
potentially be used as a measure of the quality of care provided to geriatric medicine patients
(Appendix 1).

**Research**

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

Geriatric 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 (54-57).

Presentation and publication of research is important 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.

External funding enables larger and more complex 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.

Acknowledgements

This Standard of Practice has been produced with expert consensus from the Geriatric Medicine Practice Standards Working Group: Rohan Elliott (Chair), Alex (Ho Yin) Chan, Gauri Godbole, Ivanka Hendrix, Lisa Pont, Dana Sfetcopoulos, John Woodward, with support from Courtney Munro, Lead Pharmacist Specialty Practice, SHPA.

The SHPA additionally wish to acknowledge the substantive work of Rohan Elliott, Mary Etty-Leal and John Woodward of the former SHPA Committee of Specialty Practice in Geriatric Medicine on a previous draft of this Standard.

References

8. 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 Long-Term Care Facility? Results of a Randomized, Controlled Trial. The American Journal of Geriatric Pharmacotherapy. 2004;2(4):257.
22. Elliott RA, Lee CY. Poor uptake of interdisciplinary medicine reviews for older people is a barrier to deprescribing. BMJ. 2016;353:i3496.


46. 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>
<thead>
<tr>
<th><strong>Recommended texts</strong></th>
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<tbody>
<tr>
<td>Australian Medicines Handbook Aged Care Companion</td>
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<tr>
<th><strong>Discretionary texts</strong></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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</table>

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<thead>
<tr>
<th><strong>Guidelines and standards</strong></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>
</tr>
<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>
</tr>
<tr>
<td>Guidelines for pharmacists providing Home Medicines Review (HMR) services. Pharmaceutical Society of Australia 2011</td>
</tr>
<tr>
<td><a href="#">Guidelines for pharmacists providing dose administration aids (DAA) services</a>. Pharmaceutical Society of Australia 2017</td>
</tr>
<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>

### Indicator sets for identifying potentially appropriate prescribing for older people

- Beers criteria 2015
- STOPP (Screening Tool of Older Person’s Prescriptions) and START (Screening Tool to Alert doctors to Right Treatment) criteria
- 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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<th>Organization</th>
<th>Website</th>
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<tr>
<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></td>
<td>• Guidelines and recommendations</td>
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<tr>
<td>Australian and New Zealand Society for Geriatric Medicine (ANZSGM)</td>
<td><a href="http://www.anzgeriatricmedicine.org/">http://www.anzgeriatricmedicine.org/</a></td>
</tr>
<tr>
<td></td>
<td>• Position statements</td>
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<tr>
<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></td>
<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>
</tr>
<tr>
<td></td>
<td>• Guidelines for pre- and peri-operative care</td>
</tr>
<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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- Key geriatric pharmacy references and Geriatric curriculum guide

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<tr>
<td>Polypharmacy Guidance (NHS Scotland)</td>
<td><a href="http://www.polypharmacy.scot.nhs.uk/">http://www.polypharmacy.scot.nhs.uk/</a></td>
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<tr>
<td>Deprescribing.org</td>
<td><a href="https://deprescribing.org/">https://deprescribing.org/</a></td>
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<tr>
<td>- Guidelines and algorithms for deprescribing</td>
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**Geriatric medicine podcasts**

- MDTea
- GeriPal

**SHPA Contact Details**

Address for Correspondence The Society of Hospital Pharmacists of Australia PO Box 1774 Collingwood, Victoria 3066, Australia. Email: shpa@shpa.org.au