Medication safety

POSITION STATEMENT

This document produced by the Society of Hospital Pharmacists of Australia (SHPA) Medication Safety Leadership Committee, outlines the position of SHPA on the role of hospital pharmacists in supporting Medicine Safety and Quality Use of Medicines, Australia's tenth National Health Priority Area.

About SHPA

The Society of Hospital Pharmacists of Australia is the national professional organisation for more than 5,000 pharmacists, pharmacists in training, pharmacy technicians and associates working across Australia's health system. SHPA is committed to facilitating the safe and effective use of medications, which is the core business of pharmacists, especially in hospitals.

SHPA members lead Pharmacy Departments and are in leadership and management positions in hospitals across Australia. SHPA members are also employed in a range of innovative outreach and liaison services in community healthcare settings.

The Medication Safety Specialty Practice Leadership Committee is the seven-member group elected to guide member education and advise on policy and advocacy related to Medication Safety.

SHPA Position

Medications can be harmful if not used appropriately, therefore medication safety is core business for all health service organisations. Consumers are entitled to safe, effective and timely medication management services while they are undergoing medical treatment. As pharmacists are experts in medication management, they should be integrated into the multidisciplinary healthcare team, working in partnership with health practitioners and consumers, to lead, facilitate and promote high standards of safe and timely prescribing, dispensing, administration and monitoring of medications, ensuring safe and optimal medication use for all Australians.

Key Points

- The use of medication is the most common healthcare intervention, with more than 9 million Australians taking a prescribed medication every day.[1]
- A 2019 report highlights that 1.2 million Australians have experienced an adverse medication event in the last six months and 250,000 hospital admissions annually are a result of medication-related problems.[2]
- Pharmacists are medication experts and are integral in leading and facilitating the safe and high-quality use of medications wherever and whenever they are used, to prevent inappropriate medication use resulting in medication-related harm.
- Pharmacist-led medication management services include:
  - taking a medication history and ensuring medications are charted correctly and available at **admission** to be administered in a timely manner

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  - regular review of the safety, quality, storage and supply of medications **during hospital stay**
  - review of **discharge** prescriptions, dispensing a sufficient supply of medications to take home, counselling patients on their medications and communicating changes to primary healthcare providers
  - ensuring appropriate follow-up and monitoring of medications **post-discharge** including in specialised clinics and outpatient services and checking for adverse reactions to medications
- In order to achieve better patient health outcomes by mitigating the risks of medication-related harms and inappropriate use of medications, SHPA's Medication Safety Specialty Practice Leadership Committee has identified the following priorities:
  - Expansion of Partnered Pharmacist Medication Charting (PPMC) to all Australian hospitals
  - Use of Interim Medication Charts in key transitions of care settings
  - Seven-day, extended hours access to clinical pharmacy services in all health settings where medications are being used
  - Pharmacist-led Medication Safety Programs in all Australian hospitals

Background

Medications are widely used in Australian society and are the most common healthcare intervention costing the Federal Government over $11 billion annually. Over 9 million Australians take a prescribed medication every day[1], with 250,000 hospital admissions occurring annually as a result of medication-related problems, costing Australians $1.4 billion each year.[2]

Critically ill Australians requiring acute care in hospitals are not shielded from medication-related problems. A study across seven public hospitals in Victoria from 2016-17 showed that 66% of patients admitted to general medicine units had at least one medication error during the medication charting process completed by prescribers upon admission.[3] Similarly, 61.5% of patients discharged after an inpatient stay in a general medicine unit had at least one medication error in their medication management plans upon discharge from hospital.[4] Over 90% of patients have at least one medication-related problem post-discharge from hospitals[2], with one in seven discharges resulting in an unplanned readmission within 28 days, some occurring within one day of discharge.[5]

Medication Safety

Medication safety is complex and requires organisation-wide systems to support and promote safe procurement, supply, storage, compounding, manufacturing, prescribing, dispensing, administering, monitoring and disposal of medications[6]. The process is further complicated by the involvement of multiple clinicians at any given time and the transitioning of patients between community and healthcare services.

Well-developed medication safety systems and strategies ensure clinicians and other health professionals safely prescribe, dispense and administer appropriate medication to informed consumers and/or carers, reducing the risks associated with the incorrect use of medications, while enhancing their positive outcomes.[6]

While the misuse of medications can be associated with substantial harm, approximately 50% of all medication-related harm is preventable[7] and the appropriate use of medications fundamentally contributes to significant health gains. A coordinated national approach that identifies and promotes best practice models and measures progress towards reducing medication-related harm, has the potential to improve the health of Australians and create savings across the healthcare system.

The role of the Hospital Pharmacist

Pharmacists are medication safety experts and should be involved wherever medications are being used. Timely pharmacy services are essential in hospitals, where the most unwell Australians are treated, and the most complex and high-risk medications are used, to ensure safe medication use. To prioritise the safe and quality use of medications in the acute setting, whilst maximising patient health outcomes, hospital pharmacists undertake medication management services daily. Examples of these activities include:

- taking a thorough medication history upon admission to ensure the correct medications are charted and available for administration in an accurate and timely fashion
- undertaking a review of all new and changed medications, considering the patient's regular medications and their clinical state during an episode of care, to prevent adverse events from occurring
- assessing discharge prescriptions for safety and accuracy of medications listed, and ensuring sufficient amounts of medications are dispensed for patients to take home
- ensuring patients are well informed about their medications

- communicating all relevant changes to the patient and their primary healthcare providers.

In conjunction with these activities, hospital pharmacists play a significant role in procurement, supply, storage, compounding, monitoring and safe disposal of medications, along with educating other health professionals on the safe and judicious use of medications.

Recommendations

The safe and quality use of medications must be central to healthcare. All Australians are entitled to safe, effective and timely medication management services during each episode of care and when transitioning to other health services. Four priorities have been identified by SHPA's Medication Safety Speciality Practice Leadership Committee to achieve better patient health outcomes by mitigating the risks of medication-related harms and inappropriate use of medications:

- Expansion of Partnered Pharmacist Medication Charting (PPMC) to all Australian hospitals
- Use of Interim Medication Charts in key transitions of care settings
- Seven-day, extended hours access to clinical pharmacy services in all health settings where medications are being used
- Pharmacist-led Medication Safety Programs in all Australian hospitals

Expansion of Partnered Pharmacist Medication Charting (PPMC) to all Australian hospitals

In the PPMC model, a pharmacist conducts a medication history interview with a patient; partners in the development of a medication plan for that patient with the treating doctor, patient and nurse and then charts the patient's regular medications while the doctor charts any new medications. This model has been proven to reduce the proportion of inpatients with at least one medication error on their chart by 62.4% compared with the traditional medication charting method, while also reducing the length of inpatient stay by 10.6%.[3]

Use of Interim Medication Charts in key transitions of care settings

Medication administration delays and errors are common when patients transition between health services. An Australian study reported that patients discharged to residential care facilities (RCFs) were prescribed an average of 11 medications of which seven were new or had been modified during hospitalisation.[8] The same study also reports that up to 23% of patients experience delays or errors in medication administration after discharge from hospital to a RCF.[8] Unplanned hospital readmissions have been reported as a result of failure to receive prescribed medications after transfer to an RCF.[9] An Interim Medication Chart is a document that is populated with the patient's details and discharge medication information, completed and signed by the hospital pharmacist and sent with the patient to the RCF. This enables medications to be safely administered for five to seven days after arrival at the RCF without the need to wait for GP or locum attendance. This intervention was found to reduce missed or delayed doses by 15.6%, with 83.6% of RCF staff reporting improved continuity of care.[10]

Seven-day, extended hours access to clinical pharmacy services in all health settings where medications are being used

Australian Institute of Health and Welfare (AIHW) statistics highlight that there are more emergency department (ED) presentations on weekends compared with weekdays and that 69% of presentations occur between 8am and 8pm.[11] Hospital pharmacy services are not resourced or supported in most healthcare settings during these times. In one study, medication charts were less likely to be reviewed if patients were admitted on weekends compared to weekdays.[12] The lack of medication histories taken on admission and reviews conducted outside of business hours places patients at risk of increased medication errors and ultimately poorer health outcomes. It is therefore necessary to enable seven-day, extended hours access to clinical pharmacy services in health organisations to support timely and safe medication use in hospitals. These essential clinical pharmacy services can be delivered flexibly via telehealth where there are limited resources to provide timely face-to-face services.

Pharmacist-led Medication Safety Programs in all Australian hospitals

Medication safety is fundamental to a health service organisation's risk management strategy. The primary goal of a medication safety program is to ensure systems and governance are in place to reduce the risk of preventable harm from medications for patients, using an evidence-based, multidisciplinary approach to achieve system improvements. Pharmacist-led Medication Safety Programs drive organisation-wide system changes that place the safe and judicious use of medications central to consumer healthcare. Fundamentally, these programs embed systems that:

- Lead the governance of medication safety committees.
- Lead the development and implementation of improvement initiatives using change management techniques.

- Promote a ‘just culture’ and ‘open disclosure’ in developing safety systems for medication use.
- Share knowledge with other health professionals.
- Lead the development and review of policies to enhance medication use.
- Report and review errors, near misses and adverse medications events.
- Report and monitor adverse reactions to medications.
- Monitor trends and review work practices and systems to identify risks or gaps in practice e.g., medications use review, chart audit.
- Introduce evidence-based medication safety initiatives and programs that can be monitored against accreditation standards.
- Educate healthcare staff about medication safety.

VERSION	**1**
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References

1. NPS MedicineWise 2019. Be Medicinewise Week 2019: Why every Australian should record the medicines they are taking. https://www.nps.org.au/media/be-medicinewise-week-new-survey-findings
2. Pharmaceutical Society of Australia. Medicine Safety: Take Care. Canberra: PSA; 2019.
3. Tong EY, Mitra B, Yip GS, Galbraith K, Dooley M, PPMC Research Group. Multi-site evaluation of partnered pharmacist medication charting and in-hospital length of stay. Br J Clin Pharmacol 2020 (Feb); 86(2): 285-90.
4. Tong EY, Roman CP, Mitra B, Yip GS, Gibbs H, Newnham HH, et al. Reducing medication errors in hospital discharge summaries: a randomised controlled trial. Med J Aust 2017 (16 Jan); 206(1): 36-9.
5. Considine J, Fox K, Plunkett D, Mecner M, O Reilly M, Darzins P. Factors associated with unplanned readmissions in a major Australian health service. Aust Health Rev 2019 (Feb); 43(1): 1-9.
6. Australian Commission on Safety and Quality in Health Care. National safety and quality health service standards. Sydney: Australian Commission on Safety and Quality in Health Care; 2012.
7. Roughead EE, Semple SJ. Medication safety in acute care in Australia: where are we now? Part 1: a review of the extent and causes of medication problems 2002-2008. Aust New Zealand Health Policy 2009 (11 Aug); 6: 18.
8. Elliott RA, Tran T, Taylor SE, Harvey PA, Belfrage MK, Jennings RJ, Marriott JL. Gaps in continuity of medication management during the transition from hospital to residential care: an obervational study (MedGap Study). Australas J Ageing 2012 (Dec); 31(4): 247-54.
9. Elliott RA, Taylor SE, Harvey PA, Tran T, Belfrage MK. Unplanned Medication-Related Hospital Readmission following transfer to a Residential Care Facility. J Pharm Pract Res 2009 (Sep); 39(3): 216-18.
10. Elliott RA, Taylor SE, Harvey PA, Belfrage MK, Jennings RJ, Marriott JL. Impact of a pharmacist-prepared interim residential care medication administration chart on gaps in continuity of medication management after discharge from hospital to residential care: a prospective pre- and post-intervention study (MedGap Study). BMJ Open 2012 (25 May); 2(3): e000918.
11. Australian Institute of Health and Welfare. Australia's health 2014. Australia's health series no. 14. Cat. no. AUS 178. Canberra: AIHW; 2014
12. Barton L, Futtermenger J, Gaddi Y, Kang A, Rivers J, Spriggs D, et al. Simple prescribing errors and allergy documentation in medical hospital admissions in Australia and New Zealand. Clin Med (Lond) 2012 (Apr); 12(2): 119-23.