



Standard 4

Medication Safety

Safety and Quality Improvement Guide



October 2012

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Standard 4: Medication Safety

The National Safety and Quality Health Service Standards

The *National Safety and Quality Health Service (NSQHS) Standards*¹ were developed by the Australian Commission on Safety and Quality in Health Care (the Commission) in consultation and collaboration with jurisdictions, technical experts and a wide range of other organisations and individuals, including health professionals and patients.

The primary aims of the *NSQHS Standards* are to protect the public from harm and to improve the quality of care provided by health service organisations. These Standards provide:

- a **quality assurance** mechanism that tests whether relevant systems are in place to ensure minimum standards of safety and quality are met
- a **quality improvement** mechanism that allows health service organisations to realise developmental goals.

Safety and Quality Improvement Guides

The Commission has developed Safety and Quality Improvement Guides (the Guides) for each of the 10 *NSQHS Standards*. These Guides are designed to assist health service organisations to align their quality improvement programs using the framework of the *NSQHS Standards*.

- The Guides are primarily intended for use by people who are responsible for a part or whole of a health service organisation. The structure of the Guides includes:
 - introductory information about what is required to achieve each criterion of the Standard
 - tables describing each action required and listing:
 - key tasks
 - implementation strategies
 - examples of the outputs of improvement processes
 - additional supporting resources (with links to Australian and international resources and tools, where relevant).

Direct links to these and other useful resources are available on the Commission's web site:

www.safetyandquality.gov.au

The Guides present **suggestions** for meeting the criteria of the Standards, which should not be interpreted as being mandatory. The examples of suggested strategies and outputs of improvement processes are **examples only**. In other words, health service organisations can choose improvement actions that are specific to their local context in order to achieve the criteria. The extent to which improvement is required in your organisation will heavily influence the actions, processes and projects you undertake.

You may choose to demonstrate how you meet the criteria in the Standards using the example outputs of improvement processes, or alternative examples that are more relevant to your own quality improvement processes.

Additional resources

The Commission has developed a range of resources to assist health service organisations to implement the *NSQHS Standards*. These include:

- a list of available resources for each of the *NSQHS Standards*
- an *Accreditation Workbook for Hospitals* and an *Accreditation Workbook for Day Procedure Services*
- *A Guide for Dental Practices* (relevant only to Standards 1–6)
- a series of fact sheets on the *NSQHS Standards*
- frequently asked questions
- a list of approved accrediting agencies
- slide presentations on the *NSQHS Standards*.



Overarching NSQHS Standards

Standard 1: Governance for Safety and Quality in Health Service Organisations, and Standard 2: Partnering with Consumers set the overarching requirements for the effective application of the other eight *NSQHS Standards* which address specific clinical areas of patient care.

Standard 1 outlines the broad criteria to achieve the creation of an integrated governance system to maintain and improve the reliability and quality of patient care, and improve patient outcomes.

Standard 2 requires leaders of a health service organisation to implement systems to support partnering with patients, carers and other consumers to improve the safety and quality of care. Patients, carers, consumers, clinicians and other members of the workforce should use the systems for partnering with consumers.

Core and developmental actions

The *NSQHS Standards* apply to a wide variety of health service organisations. Due to the variable size, structure and complexity of health service delivery models, a degree of flexibility is required in the application of the standards.

To achieve this flexibility, each action within a Standard is designated as either:

CORE

- considered fundamental to safe practice

OR

DEVELOPMENTAL

- areas where health service organisations can focus activities or investments that improve patient safety and quality.

Information about which actions have been designated as core or developmental is available on the Commission's web site.

Quality improvement approaches in health care

Approaches to improving healthcare quality and safety are well documented and firmly established. Examples of common approaches include Clinical Practice Improvement or Continuous Quality Improvement. The Guides are designed for use in the context of an overall organisational approach to quality improvement, but are not aligned to any particular approach.

Further information on adopting an appropriate quality improvement methodology can be found in the:

[NSW Health Easy Guide to Clinical Practice Improvement](#)²

[CEC Enhancing Project Spread and Sustainability](#)³

[Institute for Healthcare Improvement \(US\)](#)⁴



Standard 4: Medication Safety

The National Safety and Quality Health Service Standards (continued)

Roles for safety and quality in health care

A range of participants are involved in ensuring the safe and effective delivery of healthcare services. These include the following:

- **Patients and carers**, in partnership with health service organisations and their healthcare providers, are involved in:
 - making decisions for service planning
 - developing models of care
 - measuring service and evaluating systems of care.They should participate in making decisions about their own health care. They need to know and exercise their healthcare rights, be engaged in their healthcare, and participate in treatment decisions.
- Patients and carers need to have access to information about options and agreed treatment plans. Health care can be improved when patients and carers share (with their healthcare provider) issues that may have an impact on their ability to comply with treatment plans.
- The role of **clinicians** is essential. Improvements to the system can be achieved when clinicians actively participate in organisational processes, safety systems, and improvement initiatives. Clinicians should be trained in the roles and services for which they are accountable. Clinicians make health systems safer and more effective if they:
 - have a broad understanding of their responsibility for safety and quality in healthcare
 - follow safety and quality procedures
 - supervise and educate other members of the workforce
 - participate in the review of performance procedures individually, or as part of a team.

When clinicians form partnerships with patients and carers, not only can a patient's experience of care be improved, but the design and planning of organisational processes, safety systems, quality initiatives and training can also be more effective.

- The role of the **non-clinical workforce** is important to the delivery of quality health care. This group may include administrative, clerical, cleaning, catering and other critical clinical support staff or volunteers. By actively participating in organisational processes – including the development and implementation of safety systems, improvement initiatives and related training – this group can help to identify and address the limitations of safety systems. A key role for the non-clinical workforce is to notify clinicians when they have concerns about a patient's condition.
- The role of **managers in health service organisations** is to implement and maintain systems, resources, education and training to ensure that clinicians deliver safe, effective and reliable health care. They should support the establishment of partnerships with patients and carers when designing, implementing and maintaining systems. Managing performance and facilitating compliance across the organisation is a key role. This includes oversight of individual areas with responsibility for the governance of safety and quality systems. Managers should be leaders who can model behaviours that optimise safe and high quality care. Safer systems can be achieved when managers in health service organisations consider safety and quality implications in their decision making processes.
- The role of **health service senior executives and owners** is to plan and review integrated governance systems that promote patient safety and quality, and to clearly articulate organisational and individual safety and quality roles and responsibilities throughout the organisation. Explicit support for the principles of consumer centred care is key to ensuring the establishment of effective partnerships between consumer, managers, and clinicians. As organisational leaders, health service executives and owners should model the behaviours that are necessary to implement safe and high quality healthcare systems.



Terms and definitions

Adverse drug reaction (ADR): A harmful, unintended reaction to medicines that occurs at doses normally used for treatment.

Best possible medication history: A list of all the medicines a patient is taking prior to admission (including prescribed, over the counter and complementary medicines) and obtained from interviewing the patient and/or their carer where possible and confirmed using a number of different sources of information.

Consumers at risk of medication related harm: Examples of risk factors known to predispose people to medication related adverse events are:

- age 65 years and older;
- currently taking five or more regular medications;
- taking more than 12 doses of medication per day;
- significant changes made to medication treatment regimen in the last three months;
- medication with a narrow therapeutic index or medications requiring therapeutic monitoring;
- sub-optimal response to treatment with medicines;
- suspected non-compliance or inability to manage medication related therapeutic devices;
- patients having difficulty managing their own medicines because of literacy or language difficulties, dexterity problems or impaired sight, confusion/dementia or other cognitive difficulties;
- patients attending a number of different doctors, both general practitioners and specialists; and
- recent discharge from a facility/hospital (in the last four weeks).

Drug and therapeutics committee (DTC): The group assigned responsibility for governance of the medication management system, and for ensuring the safe and effective use of medicines in the health service organisation.

Electronic medication management: The entire electronic medication management process from the prescriber's medication order, to pharmacists review of the medication order and supply of medicine, to the nurse's documentation of the administration of the medicine, and all processes in between.⁵

Failure modes and effects analysis (FMEA): Failure modes and effects analysis (FMEA) is a systematic, proactive method for evaluating a process to identify where and how it might fail, and to assess the relative impact of different failures in order to identify the parts of the process that are most in need of change.⁶

Governance: The set of relationships and responsibilities established by a health service organisation between its executive, workforce, and stakeholders (including consumers). Governance incorporates the set of processes, customs, policy directives, laws, and conventions affecting the way an organisation is directed, administered, or controlled. Governance arrangements provide the structure through which the objectives (clinical, social, fiscal, legal, human resources) of the organisation are set, and the means by which the objectives are to be achieved. They also specify the mechanisms for monitoring performance. Effective governance provides a clear statement of individual accountabilities within the organisation to help in aligning the roles, interests, and actions of different participants in the organisation in order to achieve the organisation's objectives. In these Standards, governance includes both corporate and clinical governance.

High-risk medicines: Medicines that have a high risk of causing serious injury or death to a patient if they are misused. Errors with these products are not necessarily more common, but the effects can be more devastating. Examples of high-risk medicines include anticoagulants, insulin, opioids, chemotherapy, concentrated electrolytes, IV digoxin, neuromuscular blocking agents.⁷



Standard 4: Medication Safety

Terms and definitions (continued)

Medication management (action) plan:

A continuing plan for the use of medicines, developed by the healthcare professional in collaboration with the consumer, to identify and document (in a working document):

- actual and potential medication management issues (problems and needs, including risk assessment) identified during the assessment process
- medication management goals
- actions or strategies needed to address the issues and achieve the medication management goals.

The medication management (action) plan is to be shared with and used by all members of the health care team (institutional and community) and the consumer. The plan could form part of other institution's documents or be incorporated in other processes. This is not limited to a Medicare Schedule item 900.⁸

Medication reconciliation: The process of obtaining, verifying and documenting an accurate list of a patient's current medications on admission and comparing this list to the admission, transfer, and/or discharge medication orders to identify and resolve discrepancies. At the end of the episode of care the verified information is transferred to the next care provider.

Medication review: A critical review of all prescribed, over-the-counter and complementary medications undertaken to optimise therapy and minimise medication-related problems.

Medication Safety Self Assessment: The *Medication Safety Self Assessment® for Australian Hospitals* is a tool designed to help assess the safety of medication practices in health services organisations and identify opportunities for improvement.⁹

Medicine: A chemical substance given with the intention of preventing, diagnosing, curing, controlling or alleviating disease, or otherwise enhancing the physical or mental welfare of people. Prescription, non prescription and complementary medicines irrespective of their administered route are included.¹

National Inpatient Medication Chart (NIMC):

The national standard medication chart for inpatients in all Australian hospitals.

National Medication Management Plan: A standard form used by nursing, medical, pharmacy workforce to record medicines taken prior to presentation to hospital and other information required for reconciling patients' medicines on admission, intra-hospital transfer and at discharge.

Tall Man lettering: Enhancement of unique letter characters of medicines names by use of upper case characters to improve differentiation of look-alike medicines names.⁹ Australia has nationally standardised application of Tall Man lettering to medicines name pairs and groups which are at high risk of confusion and are likely to cause serious or catastrophic patient harm if confused.



Standard 4: Medication Safety

Clinical leaders and senior managers of a health service organisation implement systems to reduce the occurrence of medication incidents, and improve the safety and quality of medicine use. Clinicians and other members of the workforce use the systems to safely manage medicines.

The intention of this Standard is to:

Ensure competent clinicians safely prescribe, dispense and administer appropriate medicines to informed patients and carers.

Context:

It is expected that this Standard will be applied in conjunction with *Standard 1: Governance for Safety and Quality in Health Service Organisations* and *Standard 2: Partnering with Consumers*.

Medicines are the most common treatment used in health care.¹⁰ Because they are so commonly used, medicines are associated with a higher incidence of errors and adverse events than other healthcare interventions.¹⁰ Some of these events are costly in

terms of morbidity, mortality and resources. Many are avoidable. The Medication Safety Standard addresses areas of medication use where there is a known risk of error, often as a result of unsafe and poor quality practices and systems.

Implementing systems to improve medication safety

The Medication Safety Standard requires health service organisations to implement systems that reduce the occurrence of medication incidents and improve the safety and quality of medicines use. The intention of the Standard is to ensure that competent clinicians safely prescribe, dispense and administer appropriate medicines to informed patients and monitor the effects.

Criteria to achieve the Medication Safety Standard:

Governance and systems for medication safety

Health service organisations have mechanisms for the safe prescribing, dispensing, supplying, administering, storing, manufacturing, compounding and monitoring of the effects of medicines.

Documentation of patient information

The clinical workforce accurately records a patient's medication history and this history is available throughout the episode of care.

Medication management processes

The clinical workforce is supported for the prescribing, dispensing, administering, storing, manufacturing, compounding and monitoring of medicines.

Continuity of medication management

The clinician provides a complete list of a patient's medicines to the receiving clinician and patient when handing over care or changing medicines.

Communicating with patients and carers

The clinical workforce informs patients about their options, risks and responsibilities for an agreed medication management plan.

For the purposes of accreditation, please check the Commission's web site regarding actions within these criteria that have been designated as core or developmental.



Standard 4

Criterion: Governance and systems for medication safety

Health service organisations have mechanisms for the safe prescribing, dispensing, supplying, administering, storing, manufacturing, compounding and monitoring of the effects of medicines

The process of prescribing, dispensing, administering and monitoring medicines is complex and involves a number of different health professionals. The system has been described as a medication management pathway or cycle. The pathway comprises nine activities and three background or system processes that are required to manage the safe and effective use of medicines for patients at each episode of care (Figure 1).¹¹

The consumer is the central focus of the pathway and may have direct involvement in some of the activities.

The pathway provides a framework for:

- identifying where there is potential for errors (i.e. weak or error prone processes)
- responding with strategies to reduce the opportunity for error in previous steps of the pathway.¹¹

The Medication Safety Standard describes the elements of a safe medication management system. It requires health service organisations to have in place strategies and systems known to reduce the risk of common causes of medication error.

Robust clinical governance frameworks and processes for evaluation, audit and feedback are important for establishing and improving medication management systems. Each healthcare facility in Australia is responsible for ensuring that its systems for managing medicines operate effectively. In many health service organisations, the governance group for medication safety is a drug and therapeutics committee (DTC). Including medication management systems in clinical governance frameworks encourages a coordinated and systematic approach to evaluation, education, policy development and system improvements.

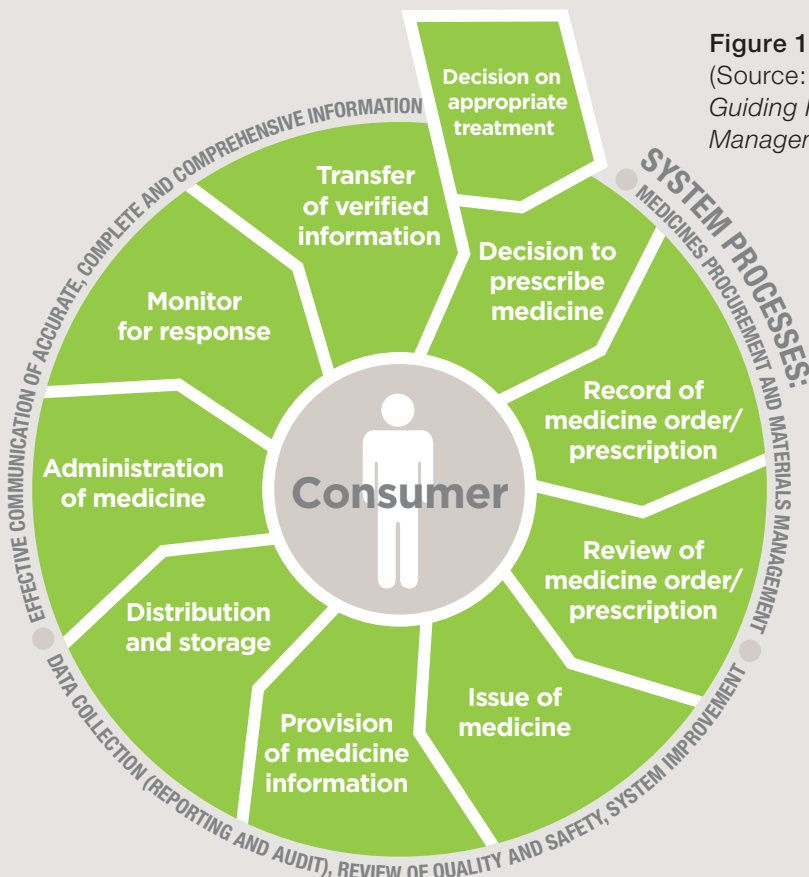


Figure 1: Medication management pathway
(Source: Australian Pharmaceutical Advisory Council. *Guiding Principles to Achieve Continuity of Medication Management 2005*⁸)

Opportunities for patient harm should be identified and barriers built into the system to prevent errors. Placing a protective strategy early in the medication management pathway can prevent adverse events occurring later in the pathway. For example, the risk of patients receiving a medicine to which they have a known allergy can be reduced by ensuring that information about known allergies are available throughout the episode of care.¹¹

Medication incidents are the second highest reported category of incident, after falls, within healthcare incident monitoring systems.³⁹ Australian studies report 2–5% drug charts contain prescribing errors and 5–18%¹² of medicines are administered in error (wrong drug, wrong patient, wrong route, wrong dose or wrong time). Up to 70% of medicines administered intravenously have one or more clinical errors and medicine administration is the most common procedure cited in patient misidentification incidents.^{13,4} A medication error occurs once in every 133 anaesthetics administered.¹⁴ Many medication errors can be prevented by introducing safe systems and safe medication practice.

Many solutions to prevent medication errors are found in standardisation and systemisation of processes (such as standard medication charts and associated processes). Other recognised solutions for reducing common causes of medication errors include:

- improving clinical workforce and clinician-patient communication
- using technology to support information recording and transfer
- providing better access to patient information and clinical decision support at the point of care.

Meeting the Standard may require health service organisations to introduce new systems or to modify existing practices. This may require local project teams to oversee, plan and coordinate implementation and evaluation. Project teams should include representation from across the range of health service professionals responsible for medication management systems. In addition, involving patients and carers as partners in these processes can result in improved services and higher satisfaction.¹⁵

A range of professionals in both the clinical and non-clinical workforce share the responsibility for establishing and maintaining medication systems. These include health service organisation owners, senior executives and managers, clinicians (medical practitioners, nurses, pharmacists and allied health professionals), technical workforce, educators and people with responsibility for policy and quality improvement. The system should be developed considering local circumstances. Consideration needs to be given to the individual roles and resources of each health service organisation – and each clinical area within the organisation. Resources such as information technology, equipment, personnel, education and training will be required to ensure patients receive safe and appropriate medicines.

Evaluation helps identify and drive system improvements, prioritise the allocation of resources, identify educational needs and develop future policy.¹⁶⁻¹⁸ Evaluating new systems establishes efficacy and identifies the changes needed to optimise performance.¹⁹ Ongoing monitoring of medication management systems is also necessary to track changes over time, to ensure that systems continue to operate effectively¹⁹ and to identify areas for improvement. Such monitoring should include a range of structure, process and outcome indicators for quality and safety of medicines use. Data obtained from evaluating medication management systems should be communicated back to the clinical workforce. It can focus health professionals on areas that need improvement, and motivate them to change practice and participate in improvement activities.²⁰⁻²² Feedback processes also contribute to a culture of transparency and accountability.

An important part of evaluating systems for medication management is engaging frontline health professionals to obtain information. Similarly, evaluating patient and carer perspectives and experiences provides valuable information on the personal aspects of care, identifies areas requiring improvement, and may provide solutions to system problems.^{18,23}



Actions required	Implementation strategies
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4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines

4.1.1 Governance arrangements are in place to support the development, implementation and maintenance of organisation-wide medication safety systems

Key task:

- **Implement governance arrangements for medication safety that include roles and responsibilities, reporting lines and mechanisms for identifying risks and measuring improvements in the medication management process**

Organisational leadership that builds and supports a culture of medication safety is central to effective risk reduction, and improved patient outcomes. In the context of medication management, this will involve incorporating medication safety issues into strategic and operational plans, and safety and quality risk registers, identifying specific risks and monitoring the impact of interventions.

Health service organisation senior executives are responsible for ensuring that medication management systems are developed, implemented and maintained in accordance with legislative requirements and jurisdictional policies. A governance framework should be established that includes a group or committee responsible for medication safety that reports through to the clinical governance system and to the senior executive.

Suggested strategies:

- 1 Develop a governance framework for medication safety that includes:
 - governance group/committee responsible for the medication management system
 - reporting lines through to the clinical governance committee and/or the senior executive
 - specific roles and responsibilities (including that of the health service organisation senior executive)
 - communication processes
 - training requirements
 - evaluation, audit and feedback processes
 - arrangements with external organisations where services are contracted for all or part of the medication management system.
- 2 Review the composition, and roles, responsibilities and accountabilities of the governance group responsible for medication management.

In most health service organisations, the group assigned responsibility for governance of the medication management system, and for ensuring its safety, will be a drug and therapeutics committee (DTC). The committee should be multidisciplinary and have members selected with reference to their positions and responsibilities.

The membership of the DTC should reflect the size of the health service organisations and the services provided. The DTC may be established at hospital level, Local Hospital Network (LHN) level or health service organisation group level. Smaller hospitals may participate in a LHN or hospital group DTC.

In medium to large hospitals, LHN or private hospital group, membership should at least include a representative clinician from major specialties, a clinical pharmacologist (if available), a nurse, a pharmacist (usually the chief or deputy chief pharmacist) and an administrator.²⁴

Actions required	Implementation strategies
4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)	
<p>(continued)</p> <p>4.1.1 Governance arrangements are in place to support the development, implementation and maintenance of organisation-wide medication safety systems</p>	<p>2 (continued) Day procedure services should establish a governance group for medication management. This could comprise the facility manager, specialist visiting clinicians (including an anaesthetist in day surgeries), a nurse and a pharmacist (if available). A dedicated and committed chairperson and secretary are critical to the success and efficiency of a DTC.²⁴</p> <p>3 Appoint a senior medical practitioner, ideally well-known and respected, as the chair and the director, or deputy director, of pharmacy as the secretary of the DTC. Allot sufficient time to the chair and secretary for their DTC functions. This should be included in their job descriptions and the DTC terms of reference. Consider a consumer member for the DTC to provide input into decision making about medication safety and quality activities. (See also <i>Standard 2, Item 2.5 Partnering with consumers and/or carers to design the way care is delivered to better meet patient needs and preferences.</i>)</p> <p>4 Review the terms of reference of the DTC to ensure the functions that relate to medication management and safety are defined. These should include (but are not limited to):</p> <ul style="list-style-type: none"> • advising on all aspects of medicines management • developing and approving local medicines policies, procedures and/or protocols • developing an ongoing systems improvement plan (such as a quality improvement plan) and assigning responsibilities and timeframes for completion • advising on implementation of national and jurisdictional policies and medication safety alerts and notices • evaluating and selecting medicines for use in the health service organisation (the hospital formulary) • developing/adapting and implementing prescribing guidelines • monitoring the safety and quality of medicines use in the health service organisation • conducting interventions to improve the safety and quality of medicines use • managing adverse drug reactions and medication incidents • establishing a medication safety risk register (in small hospitals or day procedure units, medication safety risks could be included in the general risk register) • informing the workforce about medicines use issues, policies and decisions²⁴ • advising on selection, implementation and ongoing operation of technology used in medication management e.g. electronic medication management systems⁵ and ‘smart’ infusion pump technology. <p>Ensure the responsibility for implementing DTC decisions is clear. Usually this responsibility is delegated to the pharmacy and/or health service organisation management.</p> <p>Provide the DTC with an official mandate and strong and visible support from senior hospital management.</p> <p>Establish direct reporting lines from the DTC to the clinical governance unit and/or senior executive committees.</p>



Actions required	Implementation strategies
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4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)	
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(continued)

4.1.1 Governance arrangements are in place to support the development, implementation and maintenance of organisation-wide medication safety systems

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|--|---|
| | <p>5 Consider establishing a medication safety subcommittee.</p> <p>Larger health service organisations may find it helpful to establish a medication safety committee as a subcommittee of the DTC.</p> <p>Like the DTC, the medication safety committee (MSC) should be multidisciplinary and include workforce in clinical areas. Functions of the MSC could include but are not limited to monitoring and investigating medication incidents, recommending/ conducting quality improvement initiatives, developing medication educational material, safety alerts and bulletins to address medication safety problems.</p> <p>6 Consider establishing a medication safety officer position. Many large health service organisations establish such positions to manage medication safety activities.</p> <p>7 Consider designating a staff member as the medication safety officer in operating theatres or departments of anaesthesia to liaise with a designated pharmacist on drug purchasing decisions and issues relating to presentation of anaesthetic products.</p> <p>8 Include senior pharmacy staff on relevant healthcare management committees/teams.</p> <p>Senior pharmacy workforce should have active roles in healthcare management committees/teams, reflecting their authority and accountability for medication management systems performance across the organisation.²⁵ Such committees could include safety and quality, infection prevention and control, and policy and procedures.</p> <p>9 Establish mechanisms for communicating DTC decisions and medication safety alerts.</p> <p>10 Implement a training program for the workforce on safe medication practice.</p> <p>Training on medication safety should be provided during orientation of new medical, nursing and pharmacy workforce. The medicating safely section of the <i>National Patient Safety Education Framework</i> provides guidance on the level of knowledge and skills required by the different level of workforce.²⁶ (See also <i>Topic 11: Improving medication safety in the WHO Patient Safety Curriculum Guide: Multi-professional Edition</i>²⁷ which is a useful resource for educating health professionals on the common causes of medication errors and how to make medication use safer.)</p> <p>Ongoing education should be provided to inform workforce of:</p> <ol style="list-style-type: none"> medication safety risks identified from incident monitoring, risk assessments or national or jurisdictional medication safety directives, alerts and information strategies to reduce the risks. <p>Ongoing education could address:</p> <ul style="list-style-type: none"> using the <i>National Inpatient Medication Chart</i> obtaining a best possible medication history and reconciling medicines using the <i>National Medication Management Plan</i> unsafe abbreviations high-risk medicines checking procedures documenting allergies |
|--|---|

Actions required	Implementation strategies
4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)	
<p>(continued)</p> <p>4.1.1 Governance arrangements are in place to support the development, implementation and maintenance of organisation-wide medication safety systems</p>	<p>10 (continued)</p> <ul style="list-style-type: none"> • types, causes and risks of medication errors • strategies for preventing medication errors • safe preparation and administration of medicines, including labelling of injectable medicines, fluids and lines. <p>11 Require all new medical, nursing and pharmacy graduates, including international graduates, to complete the <i>NIMC Online Learning Module</i> and the <i>NPS MedicineWise Medication Safety Course</i>.</p> <p>12 Encourage new prescribers to complete the <i>National Prescribing Curriculum</i> online learning modules during the first two years post-graduation.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • a documented governance framework for medication safety with roles and responsibilities, reporting lines and indicators for measuring and monitoring improvements in the medication management system • strategic and operational plans detailing the development, implementation and maintenance of organisational-wide medication safety systems • quality improvement plans that outline designated responsibilities and timeframes for completion of improvement actions • a risk register identifying patient safety and quality risks in the medication management system • a system for disseminating medication safety alerts • reports on the implementation of recommendations from medication safety alerts • inclusion of medication management responsibilities and accountabilities in position descriptions, duty statements and/or employment contracts • medication safety training program for workforce with medication management responsibilities • records of attendance at medication management system and medication safety training • records of workforce completing on line training courses including: <ul style="list-style-type: none"> – <i>National Inpatient Medication Chart</i> (NIMC) on line training course – Medication safety modules – Antimicrobial prescribing modules (see Resources below) • terms of reference, agenda papers, meeting minutes and/or reports of relevant committees such as drug and therapeutics committee, clinical governance committee or senior executive committee that include safe management of medicines • audits of indicators that measure the effectiveness of the drug and therapeutics committee e.g. <i>Indicators for Quality use of Medicines in Australian Hospitals</i> – Indicators 1.4, 2.2, 3.2, 3.3 and 6.4.



Actions required	Implementation strategies
<p>4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)</p>	
<p>(continued)</p> <p>4.1.1 Governance arrangements are in place to support the development, implementation and maintenance of organisation-wide medication safety systems</p>	<p>Resources:</p> <p>World Health Organization. <i>Drug and therapeutics committee – a practical guide</i>, 2003. apps.who.int/medicinedocs/en/d/Js4882e/3.html</p> <p>American Hospital Association, Health Research and Educational Trust, ISMP. <i>Pathways for Medication Safety – Leading a Strategic Planning Effort</i>, 2002. www.medpathways.info/medpathways/tools/tools.html</p> <p>Department of Health (UK). <i>Building a Safer NHS for Patients – Improving Medication Safety</i>, 2004. www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4084961.pdf</p> <p>NHS National Patient Safety Agency. <i>Safety in Doses – Improving the Use of Medicines in the NHS</i>, 2009. www.nrls.npsa.nhs.uk/resources/?entryId45=61625</p> <p>Australian Council for Safety and Quality in Health Care. <i>National Patient Safety Education Framework</i>, 2005. www.safetyandquality.gov.au/wp-content/uploads/2012/06/National-Patient-Safety-Education-Framework-2005.pdf</p> <p>World Health Organization. <i>Improving Medication Safety. WHO Patient Safety Curriculum Guide: Multiprofessional Edition</i>, 2011. whqlibdoc.who.int/publications/2011/9789241501958_eng.pdf</p> <p>National Inpatient Medication Chart On line Training Course. www.nps.org.au/health_professionals/online_learning/NIMC</p> <p>NPS MedicineWise. <i>Medication Safety Course</i>. www.nps.org.au/health_professionals/online_learning/medication_safety</p> <p>NPS MedicineWise. <i>Antimicrobial modules</i>. www.nps.org.au/health_professionals/online_learning</p> <p>NPS MedicineWise. <i>The MedicinesWise Practitioner</i>. www.nps.org.au/health_professionals/online_learning/nurse_practitioner_module</p> <p>NPS MedicineWise. <i>Prescribing Competency Framework</i>. www.nps.org.au/health_professionals/prescribing_competencies_framework</p>
<p>4.1.2 Policies, procedures and/or protocols are in place that are consistent with legislative requirements, national, jurisdictional and professional guidelines</p>	<p>Key task:</p> <ul style="list-style-type: none"> • The medication safety governance group develop, implement, evaluate and maintain medication management policies <p>These policies must meet current legislative requirements, be based on clinical evidence (where available), and outline the expected operation and performance of the health service organisation medication management system.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Delegate responsibility to a medication safety governance group (for example a drug and therapeutics committee) for ensuring that policies and guidelines are current and that they incorporate jurisdictional medication management directives. This could be achieved by introducing a regular item on the agenda of the medication safety governance group meeting for policy directives, guidelines and medication safety notices issued by jurisdictions.

Actions required	Implementation strategies
4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)	
<p>(continued)</p> <p>4.1.2 Policies, procedures and/or protocols are in place that are consistent with legislative requirements, national, jurisdictional and professional guidelines</p>	<p>2 Apply the policy framework for medication safety across the whole organisation and the steps and processes of the medication management cycle described in Action 4.1.1.</p> <p>3 Develop and implement policies, procedures, protocols and/or guidelines to support safe medication management systems including safe prescribing, dispensing, supplying, administering, purchasing, storing, manufacturing, compounding and monitoring the effects of medicines. All documents should be version controlled and have a review date.</p> <p>4 Ensure that all medicines policies, procedures, protocols and guidelines are readily accessible to the workforce either in hard copy or online. Examples of the types of medicines policies, procedures, protocols and guidelines could include (but are not limited to):</p> <ul style="list-style-type: none"> • evaluation and introduction of new medicines, including a risk assessment of the labelling and packaging of the medicine • list of medicines (or formulary) approved for use in the facility • prescribing policies and guidelines • policies, procedures, and/or protocols on the preparation and compounding of medicines • policies, procedures, protocols or guidelines for administering medicines, including specific guidelines for high-risk domains such as paediatrics, anaesthetics and chemotherapy • policies, procedures, and/or protocols for checking patient identification in all patient-associated tasks in the medication management pathway. (See also <i>Standard 5: Patient Identification and Procedure Matching</i>.) • policies, procedures, and/or protocols for dispensing and distributing medicines (for on site pharmacy services) • use of nationally standard forms to order and record the administration of medicines e.g. the National Inpatient Medication Chart (NIMC) and ancillary charts in hospitals, private hospital day surgery NIMC* in day procedure centres • recording of a best possible medication history on admission • reconciling medicines on admission, transfer and discharge • provision of medicines information on discharge • procedures for managing high-risk medicines, including a list of high-risk medicines relevant to the organisation • user-applied labelling of injectable medicines, fluids and lines consistent with the <i>National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines</i>²⁸ • list of approved abbreviations for use in prescribing and administering of medicines • use of oral dispensers for administering liquid oral medicines • procedures for reporting medication incidents • procedures for managing and reporting adverse drug reactions • procedures for procuring medicines that include assessment of risks related to product labelling, packaging or storage • policy and procedures for services provided by external pharmacy providers.



Actions required	Implementation strategies
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<p>4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)</p>	
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(continued)

4.1.2 Policies, procedures and/or protocols are in place that are consistent with legislative requirements, national, jurisdictional and professional guidelines

* **Note:** The private hospital day surgery NIMC is not a mandatory form. However when medicines are ordered in a day procedure service for administration by another health professional, they should be prescribed on a form that uses a similar format and incorporates similar safety devices as the NIMC, such as the private hospital day surgery NIMC.

- 5 Implement a process whereby all policies, procedures and/or protocols for prescribing and managing medicines, including unit-based guidelines, are approved by the medication safety governance group prior to implementation.
- 6 Establish systems for distributing new and revised policies, procedures and guidelines on management of medicines. (See also *Standard 1: Criterion Governance and quality improvement systems.*)
- 7 Establish systems for reviewing and maintaining version control of policies, procedures and guidelines on the management of medicines. (See also *Standard 1: Criterion Governance and quality improvement systems.*) All policies, procedures and guidelines should have a review date.

Outputs of improvement processes may include:

- current policies, procedures and/or protocols for safe management of medicines in the organisation are readily available to the relevant workforce
- policies, procedures and/or protocols have a review date and are version controlled
- current prescribing guidelines available in clinical units.

Resources:

Australian Commission on Safety and Quality in Health Care. *National Inpatient Medication Chart User Guide*. www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/support-material/

Australian Commission on Safety and Quality in Health Care. *National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines*. www.safetyandquality.gov.au/our-work/medication-safety/user-applied-labelling/

Australian Commission on Safety and Quality in Health Care. *National terminology, abbreviations and symbols to be used in the prescribing and administering of medicines in Australian hospitals*. www.safetyandquality.gov.au/publications/national-terminology-abbreviations-and-symbols-to-be-used-in-the-prescribing-and-administering-of-medicines-in-australian-hospitals/

NSW Therapeutic Advisory Group. *Practical considerations for the use of premixed intravenous solutions*. <http://www.ciap.health.nsw.gov.au/nswtag/documents/publications/otherdocs/pre-mixed-parenteral-solutions-mar-2011.pdf>

NSW Therapeutic Advisory Group. *Resources for evaluating new drugs*. www.ciap.health.nsw.gov.au/nswtag/reviews/reviews.html

NSW Therapeutic Advisory Group. *Discussion papers to assist public hospitals formulate local policies*. www.ciap.health.nsw.gov.au/nswtag/reviews/otherresources.html

NSW Ministry of Health. *High-Risk Medicines Management H11/17135* Jan 2012. www.health.nsw.gov.au/policies/pd/2012/pdf/PD2012_003.pdf

Society of Hospital Pharmacists of Australia. *Standards of Practice and Definitions*. www.shpa.org.au/scripts/cgiip.exe/WService=SHPA/ccms.r?PageId=33

Actions required	Implementation strategies
4.1 Developing and implementing governance arrangements and organisational policies, procedures and/or protocols for medication safety, which are consistent with national and jurisdictional legislative requirements, policies and guidelines (continued)	
<p>(continued)</p> <p>4.1.2 Policies, procedures and/or protocols are in place that are consistent with legislative requirements, national, jurisdictional and professional guidelines</p>	<p>Further reading:</p> <p>Institute for Safe Medication Practices. www.ismp.org</p> <p>Department of Health (UK). <i>Building a Safer NHS for Patients – Improving Medication Safety</i>, 2004. www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4084961.pdf</p> <p>NHS National Patient Safety Agency. <i>Safety in Doses – Improving the Use of Medicines in the NHS</i>, 2009. www.nrls.npsa.nhs.uk/resources/?EntryId45=61625</p>
4.2 Undertaking a regular, comprehensive assessment of medication use systems to identify risks to patient safety and implementing system changes to address the identified risks	
<p>4.2.1 The medication management system is regularly assessed</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Complete an assessment of the medication management system to assess the safety of medication practices and identify areas for improvement <p>A regular assessment of the safety of the medication management system is a key medication safety activity that will assist health service organisations to identify risks with current processes and prioritise areas for improvement.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Assess the safety of the medication management system by developing a tool or using existing tools. <ul style="list-style-type: none"> • Use a multidisciplinary team that includes frontline workforce to conduct the assessment and obtain information on barriers to managing medicines safety. • Re-assess the system every three years. • Review the results of the assessment to identify opportunities for improvement. • Include actions required to address any problems identified in the medication safety quality improvement plan and assign responsibilities. <p><i>Medication Safety Self Assessment® for Australian Hospitals⁹</i> is a useful tool for assessing the safety of the medication management system in all hospitals, small and large. All assessment items may not be applicable to day procedure services but some elements will have relevance.</p> <p>Results can be entered into a web-based reporting system and hospitals can access a report of results and compare outcomes with peer and all hospitals. <i>Medication Safety Self Assessment® for Australian Hospitals</i> is divided into 10 key elements that have been shown to significantly influence safe medication use and enables hospitals to identify and prioritise areas for improvement in the medication management system.</p> 2 Assess the safety of medication management system for specialist therapeutic domains. Medication safety self-assessment tools are available for oncology and antithrombotic therapy, two areas of high-risk for medication error and adverse events. Health service organisations should use these tools to identify potential medications risk. (See also Item 4.11.)



Actions required **Implementation strategies**

4.2 Undertaking a regular, comprehensive assessment of medication use systems to identify risks to patient safety and implementing system changes to address the identified risks
(continued)

(continued)

4.2.1 The medication management system is regularly assessed

3 Participate in national NIMC auditing for public and private hospitals. Auditing reviews a sample of NIMC charts and the audit data can be entered into a web-based reporting tool. Hospitals can access reports on audit data compared to national, state and peer group aggregate data. Participation in national auditing enables hospitals to:

- evaluate the effect of NIMC safety features
- identify areas for improvement
- provide a baseline for NIMC use and quality improvement initiatives
- improve the safety of medication charting.

Day procedure services using the private hospital day surgery NIMC can conduct local audits using the relevant sections of the NIMC audit tool.

The results of the audit can be considered by the medication safety subcommittee and/or medication safety governance group. Areas for improvement can be identified and actions agreed.

4 Another method of assessing the medication management system, or part of the system, is to conduct prospective risk assessments, such as failure modes and effects analysis (or FMEA). This is a useful tool for assessing the risk of failure and harm in processes and for identifying the most important areas for process improvements. It is particularly useful for evaluating new processes prior to implementation and for assessing the effects of a proposed change on an existing process. For example, FMEA can be used when implementing a new process such as medication reconciliation.

Outputs of improvement processes may include:

- results from assessments of:
 - medication management systems
 - processes for managing high-risk medicines (e.g. oncology products, antithrombotic agents)
- inclusion of system safety assessment in the quality improvement plan every three years
- risk register or log that includes actions to address indentified risks
- quality improvement plan that includes actions to address issues identified
- prospective risk assessments (such as failure modes effect analysis)
- separate risk assessments, registers and/or action plans completed for units or service area
- audits of compliance with policies on medication management systems
- results of NIMC auditing and feedback provided to the workforce.

Resources:

Clinical Excellence Commission, NSW Therapeutic Advisory Group Inc., ISMP. *Medication Safety Self Assessment® for Australian Hospitals*, 2007.
www.cec.health.nsw.gov.au/programs/mssa

Clinical Excellence Commission, NSW Therapeutic Assessment Group Inc., ISMP. *Medication Safety Self Assessment® for Antithrombotic Therapy in Australian Hospitals*, 2007.
www.cec.health.nsw.gov.au/programs/mssa

ISMP Canada. *International Medication Safety Self Assessment for Oncology*, 2012.
www.cec.health.nsw.gov.au/programs/mssa

Actions required	Implementation strategies
<p>4.2 Undertaking a regular, comprehensive assessment of medication use systems to identify risks to patient safety and implementing system changes to address the identified risks (continued)</p>	
<p><i>continued</i>)</p> <p>4.2.1 The medication management system is regularly assessed</p>	<p>National Inpatient Medication Chart Audit. www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/national-inpatient-medication-chart-audit/</p> <p>Institute for Healthcare Improvement. <i>Failure Modes and Effects Analysis Template</i>. app.ihi.org/Workspace/tools/fmea/</p>
<p>4.2.2 Action is taken to reduce the risks identified in the medication management system</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Use information from assessment of the medication management system to develop strategies for reducing risks identified in Action 4.2.1 and plan for ongoing systems improvement <p>Note: This section should be read in conjunction with Action 4.5.2.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 The medication safety governance group considers medication safety self-assessment reports and audits, and identifies actions required to improve the system. 2 Include actions in an ongoing systems improvement plan (such as a quality improvement plan) and assign responsibilities and timeframes for completion. 3 Schedule a regular review of the plan by the medication safety governance group. 4 Submit the plan, and reports of actions, to the clinical governance committee and/or executive committee. 5 Add risks identified to the medication safety risk register along with actions identified to address the risk. Risks should be escalated to the organisational risk register where the actions required are beyond the responsibility of the medication safety governance group. 6 Communicate assessment results to clinical workforce. Reporting data from assessment and audits back to the clinical workforce can inform the clinical workforce of areas that need improvement, and motivate them to change practice and participate in improvement activities.²⁰⁻²² Feedback processes also contribute to a culture of transparency and accountability. 7 Communicate actions taken to the relevant sections of workforce. Communications may include: memos, medication safety bulletins, intranet material, intern education session presentations, grand rounds and department or unit meetings. 8 Use quality improvement methodology to introduce sustainable change when changes in practice are complex and involve multiple professional groups, for example implementing medication reconciliation or improving the use of thromboprophylaxis. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • risk register or log that includes actions to address identified risks • quality improvement plan that includes actions to address issues identified • agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken to address issues identified



Actions required	Implementation strategies
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<p>4.2 Undertaking a regular, comprehensive assessment of medication use systems to identify risks to patient safety and implementing system changes to address the identified risks (continued)</p>	
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<p>(continued)</p> <p>4.2.2 Action is taken to reduce the risks identified in the medication management system</p>	<ul style="list-style-type: none"> • examples of improvement activities that have been implemented and evaluated • results of audits, indicator data, state/territory performance measures used to monitor effect of implemented actions • communication materials developed for the workforce and patients and carers. <p>Resources:</p> <p>Grol R, Wensing M, Eccles M. <i>Improving patient care: the implementation of change in clinical practice</i>. Edinburgh; New York: Elsevier Butterworth Heinemann, 2005.</p> <p>NSW Health. <i>Easy Guide to Clinical Practice Improvement. A guide for health professionals</i>, 2002.</p> <p>www.health.nsw.gov.au/resources/quality/pdf/cpi_easyguide.pdf</p>
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<p>4.3 Authorising the relevant clinical workforce to prescribe, dispense and administer medications</p>	
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<p>4.3.1 A system is in place to verify that the clinical workforce have medication authorities appropriate to their scope of practice</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement a system whereby only those members of the workforce with the authority to do so can prescribe, dispense and administer medicines <p>Note: This section should be read in conjunction with <i>Standard 1: Governance for Safety and Quality in Health Service Organisations</i>.</p> <p>To ensure that medicines are prescribed, dispensed and administered appropriately, health service organisations must have systems in place by which only those members of the workforce with authority to do so can prescribe, dispense and administer medicines. For many practitioners, this authority will be registration as a health professional with the National Health Practitioner Regulation Agency e.g. pharmacists and registered nurses. For others, such as enrolled nurses, their authority to administer medicines may be authorised by the jurisdiction. The organisation may be responsible for establishing the qualifications and competence required by the workforce working in extended roles and/or managing particular medicines requiring a specific level of knowledge and skill. For example, nurses qualified to administer chemotherapy, medical practitioners authorised to administer intrathecal chemotherapeutic injections and nurses authorised to administer medicines against standing orders.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Identify all areas where specific authorisation is required to prescribe, dispense, or administer medicines. 2 Develop and maintain a log or register for individual professions and/or positions where an authority is required to prescribe, administer, or dispense medicines. 3 Develop a mechanism for ensuring initial qualifications and competencies are assessed when workforce is recruited. This may include: <ul style="list-style-type: none"> • sighting qualifications or registration certificates • checking if registered practitioners have conditions placed on their registration • assessing the practitioner’s competency.
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Actions required	Implementation strategies
4.3 Authorising the relevant clinical workforce to prescribe, dispense and administer medications (continued)	
<p><i>(continued)</i></p> <p>4.3.1 A system is in place to verify that the clinical workforce have medication authorities appropriate to their scope of practice</p>	<p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • delegations detailing clinical positions that have the authority to prescribe, dispense, or administer medicines • registers of workforce whose current authorities have been sighted or confirmed • position descriptions, duty statements and/or employment contracts detailing responsibilities, accountabilities and scope of practice with respect to medicines • records of workforce competency assessments for practices requiring competency demonstration.
<p>4.3.2 The use of the medication authorisation system is regularly monitored</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement a system for monitoring that members of workforce prescribing, dispensing and administering medicines have the authority to do so <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Implement a process for regular review of the logs/registers of professions and/or positions requiring authorities to prescribe, administer or dispense medicines. 2 Review medication incidents in which unauthorised practitioners have prescribed, supplied or administered medicines. 3 Review the risk register for any breaches of the authorisation system. 4 Undertake audits to verify practitioners prescribing, dispensing and administering medicines have the necessary authorisation. 5 Implement a system for revalidating authorities. This may include reassessment of competencies. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • review of logs/registers of workforce whose current authorities to prescribe, administer or dispense medicines have been sighted or confirmed • agenda papers, meeting minutes and/or reports of relevant committees reporting on analyses of medication incidents in which the authorisation system has been breached • audits verifying the authorisation of practitioners prescribing, administering or dispensing medicines.
<p>4.3.3 Action is taken to increase the effectiveness of the medication authority system</p>	<p>Key task:</p> <p>Review medication authorisation system and identify areas for improvement</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Use information gathered by monitoring the medication authorisation system (as outlined in Action 4.3.2) to identify when the system has been breached and implement changes to increase its effectiveness.



Actions required	Implementation strategies
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4.3 Authorising the relevant clinical workforce to prescribe, dispense and administer medications (continued)	
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<p>(continued)</p> <p>4.3.3 Action is taken to increase the effectiveness of the medication authority system</p>	<ol style="list-style-type: none"> 2 Review the risk register for any breaches of the authorisation system and identify and implement actions to address identified risks. 3 Communicate with the workforce about changes to the medication authorisation system. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • risk register or log that includes actions to address identified risks • quality improvement plan includes actions to address issues identified • agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken • examples of improvement activities to increase the effectiveness of the medication authority system that have been implemented and evaluated • communication material developed for the workforce.
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4.4 Using a robust organisation-wide system of reporting, investigating and managing change to respond to medication incidents	
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<p>4.4.1 Medication incidents are regularly monitored, reported and investigated</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Establish a system for monitoring and investigating medication incidents including adverse drug reactions <p>Note: This section should be read in conjunction with <i>Standard 1: Governance for Safety and Quality in Health Service Organisations</i>.</p> <p>Medication incidents are the second most commonly reported incidents in Australian hospital incident monitoring systems.²⁹ Organisations can learn about the safety of medication management processes by reviewing incidents and undertaking in depth analyses of incidents causing, or with the potential to cause, patient harm.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Review all medication incidents, adverse events and near misses reported in the incident monitoring system. 2 Review incident reports, adverse events and near misses to identify if there are any trends in the type and causes of errors, particular areas in the medication management pathway where incidents are occurring, or specific medicines involved. This can be done by generating customised reports from the incident monitoring system. 3 Undertake in depth analysis, such as root cause analysis, of incidents causing, or having the potential to cause, serious patient harm. Actions identified from the analysis should be reported to the relevant governance group in the organisation and to the medication safety governance group. Responsibilities for the actions should be assigned and a process introduced to ensure that the actions have been completed within defined timeframes. 4 Include a pharmacist (when possible) on the team analysing incidents when medicines are involved.
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Actions required	Implementation strategies
<p>4.4 Using a robust organisation-wide system of reporting, investigating and managing change to respond to medication incidents</p>	<p>(continued)</p>
<p>(continued)</p> <p>4.4.1 Medication incidents are regularly monitored, reported and investigated</p>	<ol style="list-style-type: none"> 5 Prepare a register or consolidated reports of medication incidents, adverse events and near misses for the medication safety governance group to consider and recommend actions to reduce the recurrence of incidents. When there are a large number of medication incident reports, the health service organisation may consider establishing a medication safety subcommittee to consider incident reports and prepare summary reports for the medication safety governance group with recommendations for action. (See Action 4.1.1.) 6 Include a summary report of medication incidents with recommendations for action in the agenda papers of relevant committees e.g. the quality committee, executive committee. 7 Develop a policy on reporting adverse drug reactions to the Therapeutic Goods Administration. 8 Include adverse drug reactions reported to the Therapeutic Goods Administration as a regular item on the medication safety governance group meeting agenda. 9 Educate healthcare professionals on how to report medication incidents, near misses and adverse drug reactions in the orientation program. 10 Provide regular feedback to the workforce on incidents reported and actions required to prevent recurrence. This demonstrates actions that are taken to prevent similar incidents recurring and encourages the workforce to report incidents. <p>Note: The number of incidents reported is a fraction of the actual number of medication incidents occurring. Rates of medication incidents are not useful measures of the safety of the medication management system and they should not be used for that purpose. Using them in that way is misleading and may deter the workforce from reporting.</p> <p>Further reading:</p> <p>Cohen MR, Smetzer JL. <i>Medication Error Reporting Systems. Medication Error. 2nd Ed.</i> 2007 American Pharmacists Association, Washington DC.</p> <p>NHS National Patient Safety Agency. <i>Safety in Doses – Improving the Use of Medicines in the NHS</i>, 2009. www.nrls.npsa.nhs.uk/resources/?EntryId45=61625</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and/or protocols for reporting and managing medication incidents and drug reactions • incident reporting management system, such as a register or log, that document analysis and review of medication incidents • agenda papers, meetings minutes and/or reports of relevant committees that demonstrate medication incidents are routinely reviewed • documented investigations of medication incidents • root cause analysis of adverse medicines events causing harm • records of adverse drug reaction reports sent to Therapeutic Goods Administration • investigation of serious breaches of policies, procedures and protocols involving medicines.



Actions required	Implementation strategies
4.4 Using a robust organisation-wide system of reporting, investigating and managing change to respond to medication incidents (continued)	
4.4.2 Action is taken to reduce the risk of adverse medication incidents	<p>Key task:</p> <ul style="list-style-type: none">• Develop solutions and actions to reduce risks of medication errors identified through the incident monitoring system <p>Suggested strategies:</p> <ol style="list-style-type: none">1 Implement recommendations from root cause analyses.2 Involve the clinical workforce in identifying the causes of incidents, adverse events and near misses and developing potential solutions to reduce the risk of similar errors occurring. Clinical workforce groups could include:<ul style="list-style-type: none">• frontline workforce in the specific department/unit where the incident occurred• members of the medication safety subcommittee• the medication safety governance group• workforce attending morbidity and mortality committees/meetings• Root cause analysis teams.3 Present solutions to the medication safety governance group for consideration and agreement on actions.4 Include actions in the quality improvement plan along with timeframes for implementation and responsible personnel.5 Include identified risks in the medication risk register, or the general risk register or log, along with actions to address the risks. When the action is beyond the responsibility of the medication safety governance group, the risk and related actions should be added to the organisation's general risk register.6 Communicate to the workforce and students about medication incidents and actions and proposed practice changes to reduce occurrence. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none">• risk register or log that includes actions to address identified risks• quality improvement plan includes actions to address issues identified• agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken• examples of improvement activities to reduce the risk of adverse medication incidents that have been implemented and evaluated. These could include (but are not limited to):<ul style="list-style-type: none">- implementation of specific medication forms, where appropriate- development of guides for safe use of medicines- implementation of recommendations for safe medication practices- inclusion of alerts and decision support tools in electronic medication management systems (where used to prescribe, dispense and record administration of medicines)- programs encouraging consumers to speak up if they believe a medication error has occurred

Actions required	Implementation strategies
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4.4 Using a robust organisation-wide system of reporting, investigating and managing change to respond to medication incidents (continued)	
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<p>(continued)</p> <p>4.4.2 Action is taken to reduce the risk of adverse medication incidents</p>	<ul style="list-style-type: none"> • communication material developed for the workforce. This could include (but is not limited to): <ul style="list-style-type: none"> – memos – medication safety or drug bulletins – information on the intranet – medication safety alerts, notices – presentations in grand rounds – medical intern/resident education sessions – nursing, pharmacy education sessions – ward/unit feedback sessions.
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4.5 Undertaking quality improvement activities to enhance the safety of medicines use	
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<p>4.5.1 The performance of the medication management system is regularly assessed</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Establish measures to monitor performance of the medication management system and include in the quality improvement plan <p>The medication safety governance group is responsible for monitoring the safety of the medication management system and for measuring the effect of quality improvement activities outlined in the quality improvement plan. These activities may include actions recommended to address risks identified from the medication incident management system, root cause analyses, state or national medication safety notices or alerts, <i>Medication Safety Self Assessment</i>[®] outcomes or <i>National Inpatient Medication Chart</i> audit results.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Select suitable performance measures to monitor the: <ul style="list-style-type: none"> • safety and quality of the medication management system • effect of quality improvement activities. 2 Performance measures could include audits, process measures such as indicators (e.g. <i>Indicators for Quality Use of Medicines in Australian Hospitals</i>) or state and territory performance measures. The medication safety governance group should select performance measures relevant to the health service organisation’s resources, medication safety strategies and initiatives. 3 Consider using the <i>Institute of Healthcare Improvement Global Trigger Tool</i>³⁰ to identify adverse medicines events and areas for improvement in the medication management system. 4 Evaluate the effectiveness of changes implemented in the medication management system in line with national recommendations and safety alerts. Examples could include (but are not limited to): <ul style="list-style-type: none"> • auditing the <i>National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines</i> • auditing the percentage of medication areas (outside pharmacy) where potassium ampoules are available (<i>Indicator 6.1: Indicators for Quality Use of Medicines in Australian Hospitals</i>)
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Actions required	Implementation strategies
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4.5 Undertaking quality improvement activities to enhance the safety of medicines use
(continued)

(continued)

4.5.1 The performance of the medication management system is regularly assessed

2 (continued)

- auditing use of safety controls on storage of potassium ampoules
- auditing number of vincristine doses prepared in syringes and mini-bags
- measuring percentage of medication orders that include error prone abbreviations (e.g. *Indicator 3.3 – Indicators for Quality Use of Medicines in Australian Hospitals*).

5 Audit compliance with recommendations in national and relevant state or territory medication safety alerts and notices.

6 Participate in the national NIMC audit (see Action 4.2.1) or audit use of electronic medicines management system if used to prescribe and document administration of medicines.

Outputs of improvement processes may include:

- results of activities such as monitoring indicators e.g. *Indicators for Quality Use of Medicines in Australian Hospitals* and other performance measures of medication safety
- regular (annual) auditing of the *National Inpatient Medication Chart* to monitor standards of prescribing and administering of medicines documentation
- agenda papers, meeting minutes and/or reports of relevant committees that detail audit reports or results
- results of audits of national recommendations and medication safety alerts, for example:
 - *National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines*
 - percentage of medication areas (outside pharmacy) where potassium ampoules are available (*Indicator 6.1 – Indicators for Quality Use of Medicines in Australian Hospitals*)
 - use of safety controls on storage of potassium ampoules
 - number of vincristine doses prepared in syringes, mini-bags
 - percentage of medication orders that include error prone abbreviations (e.g. *Indicator 3.3 – Indicators for Quality Use of Medicines in Australian Hospitals*)
- results of drug use evaluation studies
- published work on quality improvement activities
- review of clinical pharmacy reports/interventions that identify medication related risks.

Resources:

IHI Global Trigger Tool for Measuring Adverse Events (Second Edition).
www.ihl.org/knowledge/Pages/IHIWhitePapers/IHIGlobalTriggerToolWhitePaper.aspx

Australian Commission on Safety and Quality in Health Care medication safety alerts.
www.safetyandquality.gov.au/our-work/medication-safety/medication-alerts/

Australian Commission on Safety and Quality in Health Care. *National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines.*
www.safetyandquality.gov.au/our-work/medication-safety/user-applied-labelling/

NSW Therapeutic Advisory Group. *Indicators for Quality Use of Medicines in Australian Hospitals*, 2007.
www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf

Actions required	Implementation strategies
4.5 Undertaking quality improvement activities to enhance the safety of medicines use (continued)	
<p>(continued)</p> <p>4.5.1 The performance of the medication management system is regularly assessed</p>	<p>State/territory patient safety sites:</p> <p>NSW Ministry of Health. Safety Alert Broadcast System. www.health.nsw.gov.au/quality/sabs/index.asp</p> <p>Queensland Government. Patient Safety and Quality Improvement Service. www.health.qld.gov.au/psq/default.asp</p> <p>SA Health. Medication Safety. www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/safety+and+quality/medication+safety</p> <p>Victorian Government Health Information. Quality Use of Medicines. www.health.vic.gov.au/clinrisk/publications/riskwatch.htm</p> <p>Western Australian Department of Health. Office of Safety and Quality in Health Care. Patient Safety Alerts. www.safetyandquality.health.wa.gov.au/home/patient_news.cfm</p>
<p>4.5.2 Quality improvement activities are undertaken to reduce the risk of patient harm and increase the quality and effectiveness of medicines use</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Use information from the assessment of the performance of the medication management system from Action 4.5.1 and external sources to develop strategies for reducing risk of patient harm and plan for ongoing systems improvement <p>Suggested strategies:</p> <p>Note: Strategies 1 – 4 are mandatory requirements.</p> <p>1 Implement national recommendations and safety alerts including:</p> <ul style="list-style-type: none"> • <i>National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines</i> www.safetyandquality.gov.au/our-work/medication-safety/user-applied-labelling/ • National medication safety alerts for: <ul style="list-style-type: none"> – Intravenous potassium chloride www.safetyandquality.gov.au/our-work/medication-safety/medication-alerts/intravenous-potassium-chloride/ – Vincristine www.safetyandquality.gov.au/our-work/medication-safety/medication-alerts/vincristine/ • <i>Recommendations for Terminology, Abbreviations and Symbols used in Prescribing and Administering of Medicines</i> www.safetyandquality.gov.au/publications/national-terminology-abbreviations-and-symbols-to-be-used-in-the-prescribing-and-administering-of-medicines-in-australian-hospitals/ <p>2 Implement the <i>National Inpatient Medication Chart</i> (NIMC) and related specialist and ancillary charts in hospitals.</p> <p>Day procedure services can use the private hospital day surgery NIMC. (This is not mandatory).</p> <p>3 Implement patient identification processes consistent with Standard 5 throughout the medication management cycle.</p> <p>4 Implement barcode (machine readable codes) checking in the pharmacy dispensing process.</p>



Actions required	Implementation strategies
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4.5 Undertaking quality improvement activities to enhance the safety of medicines use
(continued)

(continued)

4.5.2 Quality improvement activities are undertaken to reduce the risk of patient harm and increase the quality and effectiveness of medicines use

- 5 Include barcode checking at the bedside when planning for procurement and implementation of electronic medication management systems.
- 6 Review the *National Tall Man Lettering List* for medicines used in the health service organisation that require application of Tall Man lettering. Consider using in:
 - electronic systems for ordering and dispensing medicines (when software supports Tall Man lettering)
 - medicine libraries in electronic medicine infusion devices ('smart pumps')
 - labelling of shelving where medicines are stored (e.g. pharmacies and imprest cupboards)
 - labelling of products dispensed for inpatient use.
www.safetyandquality.gov.au/our-work/medication-safety/national-tall-man-lettering/
- 7 Implement recommendations from safety alerts and notices issued by national and relevant state and territory authorities. Examples are available from: www.safetyandquality.gov.au/our-work/medication-safety/medication-alerts/high-risk-medicines/
- 8 Implement actions recommended from the medication management system assessments undertaken in Action 4.2.1 and identified in the quality improvement plan.
- 9 Implement actions identified in annual auditing of the NIMC in hospitals.
- 10 Implement quality improvement activities to address known gaps in practice and evaluate the effect using audits and performance indicators. For example:
 - safe management of high-risk drugs
 - use of thromboprophylaxis to reduce preventable venous thromboembolism
 - safe and appropriate prescribing of antimicrobial agents (see antimicrobial stewardship criterion in *Standard 3: Preventing and Controlling Healthcare Associated Infections*).
- 11 Develop and implement materials to support medication safety strategies, for example end-of-bed guidelines for high-risk medicines and electronic decision support tools.
- 12 Standardise work practices and products:
 - remove concentrated electrolytes injectables from ward stock areas
 - use pre-mixed solutions or preloaded syringes for injectable high-risk medicines
 - use standardised single concentrations of high-risk medicines infusions
 - standardise dosing protocols
 - standardise medication administration times
 - standardise medication checking procedures
 - implement policies, procedures and workforce training to support standardisation.
- 13 Introduce infusion pumps with safety software ('smart pump' technology) and medicines libraries for administering parenteral medicines.

Actions required	Implementation strategies
<p>4.5 Undertaking quality improvement activities to enhance the safety of medicines use (continued)</p>	
<p>(continued)</p> <p>4.5.2 Quality improvement activities are undertaken to reduce the risk of patient harm and increase the quality and effectiveness of medicines use</p>	<p>14 Introduce devices (oral dispensers) for measuring and administering oral liquid doses to avoid wrong route errors.</p> <p>15 Implement a training program for workforce on safe medication practice (see Action 4.1.1 for further information).</p> <p>16 Promote medication safety awareness through memos, newsletters, posters, presentations, in service education sessions, awareness campaigns, desktop icons.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken • risk register that includes actions to address identified risks • quality improvement plan that includes actions to address issues identified • examples of improvement activities that have been implemented and evaluated • results of audits of quality improvement activities • national recommendations and safety alerts implemented, for example: <ul style="list-style-type: none"> – <i>National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines</i> – National medication safety alerts for intravenous potassium chloride, vincristine – <i>Recommendations for Terminology, Abbreviations and Symbols used in Prescribing and Administering of Medicines</i> – Patient identification processes consistent with Standard 5 throughout the medication management cycle. • improvement activities to reduce gaps in practice that have been implemented and evaluated. For example: <ul style="list-style-type: none"> – actions to improve venous thromboembolism (VTE) risk assessment and appropriate VTE prophylaxis prescribing – implementation of an antibiotic stewardship program – safe management of high risk medicines e.g. anticoagulants, insulin • standardised work practices and products. For example: <ul style="list-style-type: none"> – premixed solutions or preloaded syringes for injectable high risk medicines – standardised single concentrations of infusions of high risk medicines – standardised dosing protocols • implementation of infusion pumps with safety software ('smart pumps') • implementation of oral dispensers for oral liquid medicines • reports of drug use evaluation studies • reports on use indicators to monitor appropriateness of interventions e.g. <i>Indicators for Quality Use of Medicines in Australian Hospitals</i> • communication material developed for the workforce and/or patients regarding changes implemented as a result of medication safety audits.



Actions required	Implementation strategies
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<p>4.5 Undertaking quality improvement activities to enhance the safety of medicines use (continued)</p>	
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(continued)

4.5.2 Quality improvement activities are undertaken to reduce the risk of patient harm and increase the quality and effectiveness of medicines use

Resources:

Australian Commission on Safety and Quality in Health Care Medication Safety web site.
www.safetyandquality.gov.au/our-work/medication-safety/

Institute of Health Innovation provides guidance and tools to assist organisations conduct quality improvement activities known to reduce adverse medication events.
www.ihi.org/Pages/default.aspx

NHS National Patient Safety Agency publishes medication safety alerts and guidance on interventions to address errors reported to the *NHS National Incident Reporting and Learning System*.
www.nrls.npsa.nhs.uk/resources/type/

Institute of Safe Medication Practices is an internationally recognised resource for impartial, timely, and accurate medication safety information.
www.ismp.org/

Institute of Safe Medication Practices Canada. Source of medication safety initiatives being conducted in Canada.
www.ismp-canada.org/index.htm

The Society of Hospital Pharmacists of Australia practice standards for the provision of hospital pharmacy services.
www.shpa.org.au

Global Patient Safety Alerts.
www.globalpatientsafetyalerts.com/English/ContributingOrganizations/Pages/default.aspx

NSW Therapeutic Advisory Group.
www.ciap.health.nsw.gov.au/nswtag/

Western Australia Therapeutic Advisory Group.
www.watag.org.au/home/

Pharmacy Board of Australia Guidelines for dispensing medicines.
www.pharmacyboard.gov.au/Codes-Guidelines.aspx

State/territory patient safety sites:

NSW Ministry of Health. Safety Alert Broadcast System.
www.health.nsw.gov.au/quality/sabs/index.asp

Queensland Government. Patient Safety and Quality Improvement Service.
www.health.qld.gov.au/psq/default.asp

SA Health. Medication Safety.
www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/safety+and+quality/medication+safety

Victorian Government Health Information. Quality Use Of Medicines.
www.health.vic.gov.au/clinrisk/publications/riskwatch.htm

Western Australian Department of Health. Office of Safety and Quality in Health Care. Patient Safety Alerts
www.safetyandquality.health.wa.gov.au/home/patient_news.cfm



Standard 4

Criterion: Documentation of patient information

The clinical workforce accurately records a patient's medication history and this history is available throughout the episode of care

All patients should receive a comprehensive medicines assessment prior to any decision to prescribe a new medicine. A key component of this assessment is obtaining a thorough medication history. The history is used as the basis for therapeutic decision making, for ensuring continuity of regular medicines while a patient is in hospital and to identify adverse medicines events.

Medication histories are often incomplete, with medicines, strengths and doses missing and over the counter and complementary medicines often omitted. Studies have shown as many as 70% of medication histories contain one or more errors, with around one third having the potential to cause harm.^{31,32} If not corrected, the errors can persist throughout the episode of care and onto discharge. Inaccurate medication histories can lead to discontinuation of therapy, recommencement of medicines that have been ceased, inappropriate orders and failure to identify a drug related problem.

Internal hospital transfer of care also carries considerable risks. At least one in six patients has one or more clinically significant medication discrepancies on transfer, for example when a patient is transferred from intensive care to a general ward.^{33,34,35}

At discharge, patients are at risk of prescription errors of omission, including the unintentional discontinuation of medicines they were taking prior to admission. One Australian study reported 15% of drugs intended to be continued were omitted on the discharge prescription.³⁶ Another found 12% of patients had one or more errors in their discharge prescription, including unintentional omissions and continuation of drugs which had been ceased.³⁷

Instituting a formal, systematic process for obtaining a current and accurate list of the medicines a patient is taking when admitted to hospital, known as a best possible medication history (BPMH), and reconciling this history against the patient's medicines ordered on the medication chart has been shown to reduce medication errors on admission by over 50%.³⁸ Detailed information on the BPMH is available at:

www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/nmmp/

The Australian Pharmaceutical Advisory Council's *Guiding principles to achieve continuity in medication management* provides useful information on obtaining a good medication history and the information that should be recorded.⁸

The concept of a BPMH acknowledges that it is not always possible to have an exact record of a patient's medication history, but that at all times efforts should be made to construct the most accurate medication history possible given the resources available. This history should also include documentation of the patient's allergies and previous adverse drug reactions.

For planned admissions, the BPMH should be documented as part of the pre-admission process.⁸ This can be facilitated by involving clinical pharmacists, or other clinicians specifically trained in taking medication histories, in the pre-admission process.

A standardised form such as the national *Medication Management Plan*, or electronic equivalent, has been shown to increase the accuracy of medication histories³⁹ and should be used to guide medication history taking. The form/information should be easily accessible to all clinicians involved in managing the patient's medicines and used to reconcile with medication orders on admission, transfer to another level care and on discharge from hospital. Reconciling medicines at these care transition points has been shown to decrease medication errors by 50–94%.^{33,35,40-41}

At the end of an episode of care, verified information should be transferred to the next care provider.^{33,41-42} The aim of medication reconciliation is to ensure that a patient's medication information is as complete as possible, easily accessible, and communicated effectively to all involved in the patient's care so as to ensure continuity of medication management.

Implementing medication reconciliation can be challenging. To be effective the process needs to be integrated into existing processes for medication management and patient flow. Whilst specific aspects of medication reconciliation may be attributable to one professional group, medication reconciliation is everybody's business and a multi-disciplinary approach to medication reconciliation is crucial to success.

The key to the success of medication reconciliation at all transitions of care is first to have a process working effectively at admission to the health service organisation. Implementation of a formal medication reconciliation process at admission is the foundation for efficient and appropriate reconciliation at internal transfer and discharge.



Actions required | **Implementation strategies**

4.6 The clinical workforce taking an accurate medication history when a patient presents to a health service organisation, or as early as possible in the episode of care, which is then available at the point of care

4.6.1 A best possible medication history is documented for each patient

Key task:

- **Implement a formal systematic process for obtaining and recording a best possible medication history**

An up-to-date and accurate medication list is essential for ensuring safe prescribing and continuity of medication management. A best possible medication history (BPMH) is a list of all the medicines a patient is taking prior to admission (including prescribed, over the counter and complementary medicines) and obtained from interviewing the patient and/or their carer (where possible) and confirmed using a number of different sources of information.

Suggested strategies:

- 1 Review current procedures for obtaining a history of medicines taken prior to admission.
- 2 Develop and implement a policy, procedure or guideline on obtaining and documenting a best possible medication history (BPMH). This should include:
 - a structured interview process
 - key steps of the process
 - where the BPMH should be documented
 - what information should be documented
 - roles and responsibilities for workforce.

The history should include:

- prescription, over the counter and complementary medicines
- allergies and previous adverse drug reactions
- medicines that have been recently ceased
- treatment plan for the medicines on admission (i.e. whether medicines are to be ceased/withheld/changed/restarted on discharge).

- 3 Use a standard form for recording the BPMH. In hospitals this can be the section for medicines taken prior to presentation to hospital on the front of the *National Inpatient Medication Chart*, the national *Medication Management Plan (MMP)** or an electronic or paper-based equivalent.

* The national *Medication Management Plan* is designed to document the BPMH and to record the key steps of medication reconciliation. It is suitable for use in both adult and paediatric settings.

In day procedure services, the BPMH can be documented on the *Medicines taken prior to presentation to hospital* section on the front of the private hospital day surgery NIMC or in the preoperative medical record. It should be placed in a designated area of the patient's clinical record.

Use of a standardised form to record medicines taken prior to admission to hospital and to aid reconciliation on admission, intra-hospital transfer and discharge is considered an essential component of a formal process of medication reconciliation in hospitals.

- 4 Introduce the practice of keeping the MMP together with the current NIMC throughout the episode of care.

Actions required	Implementation strategies
<p>4.6 The clinical workforce taking an accurate medication history when a patient presents to a health service organisation, or as early as possible in the episode of care, which is then available at the point of care</p>	<p>(continued)</p>
<p>(continued)</p> <p>4.6.1 A best possible medication history is documented for each patient</p>	<p>5 Conduct training in using a systematic approach to obtaining and documenting a BPMH. Require all members of the workforce with responsibility for obtaining a medication history to attend the training and demonstrate competence in taking a medication history.</p> <p>Clinical pharmacists have been shown to take the most comprehensive medication histories and, if resourced, can be used to teach other members of the workforce.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and protocols on obtaining and documenting the BPMH • use of the national <i>Medication Management Plan</i> (MMP) or medication history form (electronic or hard copy) to document BPMH • MMP or equivalent kept with NIMC • results on use of the NIMC and/or MMP to document medication history from NIMC audit • audit of admitted patients with a documented BPMH • education resources on taking a BPMH • records of attendance for clinical workforce in obtaining and documenting a BPMH • evaluation feedback from participants that have undertaken BPMH training • use of indicators e.g. <i>Indicator 6.2 Indicators for Quality Use of Medicines in Australian Hospitals</i> (2007) or jurisdictional indicators. <p>Resources:</p> <p>National <i>Medication Management Plan</i>. www.safetyandquality.gov.au/wp-content/uploads/2010/01/Medication-Management-Plan.pdf</p> <p>National <i>Medication Management Plan</i> implementation materials:</p> <p>Guide on how to complete the MMP. www.safetyandquality.gov.au/publications/medication-management-plan-user-guide/</p> <p>MMP Poster. www.safetyandquality.gov.au/wp-content/uploads/2012/02/MMP-Poster.pdf</p> <p>MMP Flash training tool with audio voice over. www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/nmmp/</p> <p>Match Up Medicine educational materials. www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/match-up-medicines/</p> <p>Australian Pharmaceutical Advisory Council. <i>Guiding Principles to achieve continuity in medication management</i>, July 2005. www.health.gov.au/internet/main/publishing.nsf/Content/4182D79CFCB23CA2CA25738E001B94C2/\$File/guiding.pdf</p> <p>WA Department of Health Office of Safety and Quality. <i>Pharmaceutical Review Policy</i>. www.safetyandquality.health.wa.gov.au/docs/medication_safety/Pharmaceutical_Review_Policy.pdf</p> <p>Government of South Australia/SA Health. <i>Continuity in Medication Management – a Handbook for South Australian Hospitals</i>, November 2010. www.sahealth.sa.gov.au/wps/wcm/connect/e055bd8044fd8fc2aff7efcfa5ded0ab/Pharmaceutical+Reform+Handbook+V7_Print+version.pdf?MOD=AJPERES&CACHEID=e055bd8044fd8fc2aff7efcfa5ded0ab&CACHE=NONE</p>



Actions required	Implementation strategies
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<p>4.6 The clinical workforce taking an accurate medication history when a patient presents to a health service organisation, or as early as possible in the episode of care, which is then available at the point of care (continued)</p>	
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<p>(continued)</p> <p>4.6.1 A best possible medication history is documented for each patient</p>	<p>National Patient Safety Agency (UK). <i>Technical patient safety solutions for medicines reconciliation on admission of adults to hospital.</i> www.nice.org.uk/nicemedia/pdf/PSG001Guidance.pdf</p> <p>Medications at Transitions of Care and Clinical Handoffs (MATCH). <i>Toolkit for Medication Reconciliation.</i> www.ahrq.gov/qual/match/</p> <p>Canadian Institute for Patient Safety. <i>Safer Health Care Now! Medication Reconciliation Initiative.</i> www.saferhealthcarenow.ca/EN/Interventions/medrec/Pages/default.aspx</p> <p>Institute for Healthcare Improvement. <i>Reconcile Medications at All Transition Points.</i> www.ihl.org/knowledge/Pages/Changes/ReconcileMedicationsatAllTransitionPoints.aspx</p>
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<p>4.6.2 The medication history and current clinical information is available at the point of care</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Develop and implement processes to ensure the medication history and current clinical information is available at the point of care <p>The medication history and other relevant clinical information should be accessible when decisions are made to prescribe medicines. This information could be in hard copy (such as the MMP, NIMC or preoperative medical record) or electronically (such as in an electronic medication management system or the electronic health record).</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Review current processes to ensure the BPMH and current clinical information are available when medicines are prescribed, i.e. at the point of care. 2 Introduce policy to keep the MMP (or equivalent form) with the patient's current NIMC and ancillary medication charts throughout the hospital admission. <p>The patient's medication history should be available when medicines are prescribed. It will also assist the process of medication reconciliation when care is transferred (e.g. patients moving from intensive care to a general ward) and when patients are discharged.</p> 3 Implement procedures requiring changes to medicines during the patient's stay, or any issues identified through the process of medication reconciliation or medication review, to be documented on the MMP (or equivalent) or in the electronic health record. This will assist in the preparation of discharge medication orders, medicines list and summary when the patient is discharged from hospital. 4 Ensure that recording a BPMH and the functions of medication reconciliation are included in the organisation's information technology planning. This can occur through representation on relevant expert committees. 5 Consider the recording of the BPMH and the functions of medication reconciliation within the organisational strategy for electronic medicines management. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures or protocols on accessing the medication history and clinical information at the point of care • completed medication history forms such as the MMP or their electronic equivalents in the patient medical record
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Actions required	Implementation strategies
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4.6 The clinical workforce taking an accurate medication history when a patient presents to a health service organisation, or as early as possible in the episode of care, which is then available at the point of care (continued)	
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<p>(continued)</p> <p>4.6.2 The medication history and current clinical information is available at the point of care</p>	<ul style="list-style-type: none"> • National Medication Management Plan (MMP) or other medication history forms filed with the patient’s NIMC on the ward • audits of the MMP or other medication history form • policies, procedures or protocols and guidelines on how to use the MMP, or other form (hard copy or electronic). <p>Resources:</p> <p>See Action 4.6.1.</p> <p>Australian Commission on Safety and Quality in Health Care. <i>Electronic medication management systems: A Guide to Safe Implementation 2nd edition</i>. www.safetyandquality.gov.au/wp-content/uploads/2011/01/EMMS-A-Guide-to-Safe-Implementation-2nd-Edition-web-version.pdf</p>
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4.7 The clinical workforce documenting the patient’s previously known adverse drug reactions on initial presentation and updating this if an adverse reaction to a medicine occurs during the episode of care	
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<p>4.7.1 Known medication allergies and adverse drug reactions are documented in the patient clinical record</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Develop and implement processes to ensure known medication allergies and adverse drug reactions are documented for each patient and available at the point of care <p>The administration of medicines to patients with a known allergy or prior adverse drug reaction is highly preventable by putting systems in place to alert clinicians who prescribe, dispense and administer medicines to previous adverse reactions.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Review the organisation’s current processes for documenting medication allergies and adverse drug reactions. 2 Include obtaining and recording allergies and previous adverse drug reactions in the policy, procedure or guideline on obtaining and documenting a best possible medication history (BPMH). 3 Implement a policy, procedure, protocol or guideline on: <ul style="list-style-type: none"> • recording known allergies and adverse drug reactions in the patient record including: <ul style="list-style-type: none"> – the medication history (paper or electronic) – all forms on which medicines are ordered such as the NIMC and ancillary charts in hospitals, private hospital day surgery NIMC and anaesthesia record – electronic ordering and dispensing systems – an adverse drug reaction summary sheet at the front of the patient’s notes – placing an allergy alert sticker on the front of the medical record • clinical workforce responsible for recording the allergy and adverse drug reaction information • recording adverse drug reactions occurring during the episode of care in the patient notes
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Actions required	Implementation strategies
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4.7 The clinical workforce documenting the patient’s previously known adverse drug reactions on initial presentation and updating this if an adverse reaction to a medicine occurs during the episode of care

(continued)

4.7.1 Known medication allergies and adverse drug reactions are documented in the patient clinical record

3 (continued)

- informing the patient about the adverse drug reaction and the importance of informing other prescribers and members of their healthcare team
- informing the patient’s general practitioner and other members of the patient’s healthcare team (e.g. community pharmacist) of the adverse drug reaction in the patient’s discharge summary
- reporting adverse drug reactions occurring in the health service organisation internally and to the Therapeutic Goods Administration (see Action 4.7.3).

4 Undertake an audit of adverse drug reactions documentation on the medication chart and MMP or equivalent form. For hospitals, this data could be collected during NIMC auditing.

5 Monitor the effectiveness of the process by use of indicators (e.g. *Indicators for Quality Use of Medicines in Australian Hospitals*⁴³ and jurisdictional indicators⁴⁴).

6 Provide education to workforce on:

- taking an allergy and adverse drug reaction history and documenting the information in the patient record (e.g. NIMC and MMP). This could be part of training on taking a BPMH
- documenting known allergies and previous adverse drug reactions on the NIMC, or other forms where medicines are prescribed e.g. anaesthetic records
- documenting and reporting adverse drug reactions occurring during the episode of care.

7 Ensure that adverse drug reactions recorded in electronic health records are available in electronic medicines management systems when medicines are prescribed, dispensed and administered.

Outputs of improvement processes may include:

- policy, procedure, protocol or guideline on recording, managing and reporting of adverse drug reactions
- policy, procedure, protocol or guideline on using the adverse drug reaction section on the NIMC and checking adverse drug reactions history prior to prescribing, dispensing and administering medicines
- audits of adverse drug reaction documentation on the NIMC and MMP/Medication history form or entered into patient’s electronic record
- use of indicators e.g. 3.2 and 5.5 *Indicators for Quality Use of Medicines in Australian Hospitals* or jurisdictional indicators.

Resources:

See Action 4.6.1

National Inpatient Medication Chart (NIMC).
www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/

National Inpatient Medication Chart User Guide including paediatric versions.
www.safetyandquality.gov.au/publications/national-inpatient-medication-chart-user-guide-including-paediatric-versions/

Actions required	Implementation strategies
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4.7 The clinical workforce documenting the patient’s previously known adverse drug reactions on initial presentation and updating this if an adverse reaction to a medicine occurs during the episode of care (continued)

4.7.2 Action is taken to reduce the risk of adverse reactions

- Key task:**
- **Monitor quality and use of documentation of adverse drug reactions**
- Suggested strategies:**
- 1** Undertake an audit of adverse drug reaction documentation on the medication chart and MMP or equivalent form and communicate to the clinical workforce. Hospitals could collect this data during the NIMC audit.
 - 2** Monitor the effectiveness of the organisation’s process of documenting adverse drug reactions using process indicators e.g. Indicator 3.2 of *Indicators for Quality Use of Medicines in Australian Hospitals*.⁴³
 - 3** Monitor use of allergy alert systems in electronic systems for managing medicines e.g. prescribing, dispensing and administering.
 - 4** Identify actions to improve documentation and use of information in the quality improvement plan, assign responsibilities and timeframes for completion.
 - 5** Include any risks identified in the medication safety risk register with actions to address the risks.
 - 6** Implement a policy, procedure or guideline on:
 - recording known allergies and adverse drug reactions in the patient record including the medication history (BPMH), the medication chart (NIMC) or electronic equivalents and other parts of the record
 - placing an alert in the patient’s record
 - recording adverse drug reactions occurring during the episode of care in the patient’s notes
 - reporting adverse drug reactions occurring in the health service organisation internally and to the Therapeutic Goods Administration (see Action 4.7.3).
 - informing the patient about the adverse drug reaction and importance of informing other prescribers and members of their healthcare team about the adverse drug reaction
 - informing the patient’s general practitioner and other members of the patient’s healthcare team (e.g. community pharmacist) through inclusion of the adverse drug reactions in the patient’s discharge summary.
 - 7** Consider using an adverse drug reaction summary sheet at the front of the patient’s notes.
 - 8** Provide training on:
 - taking an allergy and adverse drug reaction history and documenting the information in the patient record (NIMC and MMP). This could form part of training for taking a BPMH
 - documenting known allergies and previous adverse drug reactions on the NIMC
 - documenting and reporting adverse drug reactions occurring during the episode of care.



Actions required	Implementation strategies
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<p>4.7 The clinical workforce documenting the patient’s previously known adverse drug reactions on initial presentation and updating this if an adverse reaction to a medicine occurs during the episode of care (continued)</p>	
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(continued)

4.7.2 Action is taken to reduce the risk of adverse reactions

- 9** Ensure that adverse drug reactions recorded in electronic health records are available in electronic medicines management systems when medicines are prescribed, dispensed and administered.
- 10** Review reports of adverse drug reactions issued by the Therapeutic Goods Administration and other sources and inform workforce through medication safety or drug bulletins or other communication channels.
- 11** Implement procedures for obtaining patient consent to transfer information on adverse drug reactions to their Patient Controlled Electronic Health Record where this functionality is available through electronic systems.

Outputs of improvement processes may include:

- agenda papers, meeting minutes and/or reports of relevant committees that include actions taken to address adverse drug reaction risks
- register of adverse drug reactions that includes actions to address the identified risks
- quality improvement plan includes actions to address issues identified and evaluation of outcomes
- actions that are implemented from the review of adverse drug reaction data such as change to policy and procedures, publication of medication safety/quality use of medicines information
- audit of use of adverse drug reaction alert systems in electronic medicines management systems used for prescribing, dispensing and administering medicines
- audit of patient clinical records identifies patients who were administered a medication to which they have had an allergy or previous adverse drug reaction
- audit of patient clinical record that confirms any new adverse drug reactions have been communicated to the patient and carer and the next primary care clinician
- use of indicators e.g. *Indicators 3.2 and 5.5 Indicators for Quality Use of Medicines in Australian Hospitals* or jurisdictional indicators
- educational resources and records of attendance at training of workforce on obtaining and documenting an allergy and adverse drug reaction history; and managing and reporting adverse drug reactions occurring during the episode of care
- communication material developed for workforce and patients and carers.

Resources:

Therapeutic Goods Administration. *Reporting Adverse Drug Reactions*. www.tga.gov.au/hp/problem-medicine-reporting-reactions.htm

SHPA Standards of Practice for Clinical Pharmacy. Appendix J: Adverse Drug Reaction Management, *J Pharm Pract Res*. 2005;35(2):122-146

Actions required	Implementation strategies
4.7 The clinical workforce documenting the patient’s previously known adverse drug reactions on initial presentation and updating this if an adverse reaction to a medicine occurs during the episode of care (continued)	
<p>4.7.3 Adverse drug reactions are reported within the organisation and to the Therapeutic Goods Administration</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement a system to report adverse drug reactions within the organisation and to the Therapeutic Goods Administration (TGA) <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Include reporting of adverse drug reactions within the organisation and to the TGA in the organisation’s adverse drug reaction policy, procedures or guidelines. 2 Review adverse drug reactions reported and feed back information to workforce in medication safety or drug bulletins, at workforce in-service session or in grand rounds. 3 Encourage clinicians to report adverse drug reactions through adverse drug reaction campaigns and access to online reporting. 4 Provide orientation, training and education to clinicians on reporting adverse drug reactions to the TGA. 5 Ensure the facility to report adverse drug reactions online to the TGA is included in the organisation’s information technology planning through representation on relevant expert committees. 6 Include a facility to report adverse drug reactions online to the TGA within the organisational strategy for electronic medicines management. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and protocols for documenting, managing and reporting adverse drug reactions within the organisation and to the TGA • agenda papers, meeting minutes and/or reports of relevant committees that include information on adverse drug reactions reported • register of adverse drug reactions • record of adverse drug reactions reports submitted to the TGA • educational resources used to train workforce on reporting adverse drug reactions occurring during the episode of care • access to tools for reporting adverse drug reactions, e.g. Therapeutic Goods Administration’s blue card adverse drug reaction reporting forms, online reporting • communication material developed for workforce. <p>Resources:</p> <p>See Actions 4.7.1 and 4.7.2</p>



Actions required	Implementation strategies
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4.8 The clinical workforce reviewing the patient’s current medication orders against their medication history and prescriber’s medication plan, and reconciling any discrepancies

4.8.1 Current medicines are documented and reconciled at admission and transfer of care between healthcare settings

Key task:

- **Implement a formal structured process to ensure all patients admitted to the health service organisation receive accurate and timely medication reconciliation at admission, transfer of care and on discharge.**

This section should be read in conjunction with the *Continuity of medication management* criterion.

Medication reconciliation is an important initiative to improve medication management and overall patient care. It is designed to reduce medication errors and adverse medicines events when patient care is transferred. Medication reconciliation is not applicable to day procedure services.

The process of medication reconciliation is a complex process that involves several professional disciplines across the organisation. To be effective organisations need to have a formal, structured process in place that is done in partnership with the patient, carer or family member. There needs to be collaboration and team work with shared accountability amongst team members.

Models of medication reconciliation will differ between health service organisations depending on the infrastructure and resources available. The model in a small rural hospital where the local general practice provides the medical care and there is no onsite pharmacist will differ from that in a large hospital where care is transferred to another health provider, the risk of communication error is high and pharmacists are available to reconcile the medicines.

Organisations implementing medication reconciliation are encouraged to use quality improvement methodology to effect the change and to monitor performance.

Suggested strategies:

- 1 Develop and implement policies, procedures and/or protocols on reconciling medicines that include roles and responsibilities of the workforce in the process.
- 2 Develop a procedure, protocol or guideline for a formal, structured process on reconciling medicines that is consistent with advice on the Commission’s web site at: www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/
- 3 Ensure a multidisciplinary approach to implementation and integrate the process into existing work flow.
- 4 Use the national *Medication Management Plan* or equivalent (paper or electronic) document to support the reconciliation process.
- 5 Provide training for the workforce responsible for reconciling medicines.
- 6 Implement a process that involves patients and carers in the process.
- 7 Give priority to reconciling medicines in patients with a higher risk of experiencing medication related adverse events such as patients over 65 years of age, those on multiple or high risk medicines, with multiple providers or suspected non-compliance.

Actions required	Implementation strategies
<p>4.8 The clinical workforce reviewing the patient's current medication orders against their medication history and prescriber's medication plan, and reconciling any discrepancies (continued)</p>	
<p>(continued)</p> <p>4.8.1 Current medicines are documented and reconciled at admission and transfer of care between healthcare settings</p>	<p>8 Use a quality improvement approach to implementation.</p> <p>9 Evaluate implementation by auditing or the use of indicators and provide feedback to workforce.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and/or protocols on reconciling the medication history on admission, transfer and discharge • audits of patient clinical records in relation to medicines reconciliation on admission and/or transfer and/or discharge. This could include: <ul style="list-style-type: none"> – percentage of patients whose medicines are reconciled at one or more of these transfer points; and/or – quality of the medication reconciliation process • audits of patient clinical records of completion of the steps of the medication reconciliation process • audit of patient clinical records with a completed national <i>Medication Management Plan</i> or equivalent (manual or electronic). This could form part of NIMC auditing • audit of indicators such as <i>Indicators 3.1 and 5.3 in Indicators for Quality Use of Medicines in Australian Hospitals</i>⁴³ • review medication incidents that are related to medication reconciliation failures • educational resources developed and records of attendance at training provided for workforce assigned responsibility for reconciling medicines. <p>Resources:</p> <p>See Action 4.6.1</p> <p>Society of Hospital Pharmacists of Australia <i>Standards of Practice for the Provision of Medication Reconciliation</i>. J Pharm Pract Res 2007;37(3):231-3.</p> <p>WA Department of Health. <i>Pharmaceutical Review Policy</i>, 2007. www.health.wa.gov.au/circularsnew/attachments/284.pdf</p> <p>Safer Systems Saving Lives project tools. www.health.vic.gov.au/sssl/interventions/adverse.htm</p> <p>NSW Therapeutic Advisory Group. <i>Indicators for Quality Use of Medicines in Australian Hospitals</i>, 2007. www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf</p> <p>Canadian Patient Safety Institute. <i>Safer Healthcare Now! Medication Reconciliation Measures</i>. www.saferhealthcarenow.ca/EN/Interventions/medrec/Pages/measurement.aspx</p> <p>Recommended reading:</p> <p>Greenwald JL, Halasyamani L et al <i>Making Inpatient Medication reconciliation Patient Centered, Clinically Relevant and Implementable: A Consensus Statement on Key Principles and Necessary First Steps</i>. Journal of Hospital Medicine 2010;5(8):477-485</p> <p>Massachusetts Coalition for the Prevention of Medical Errors. www.macoalition.org/reducing_medication_errors.shtml</p>



Standard 4

Criterion: Medication management processes

The clinical workforce is supported for the prescribing, dispensing, administering, storing, manufacturing, compounding and monitoring of medicines

Many of the risks associated with each part of the medication management cycle can be avoided using systems and processes that are designed to improve safety, and that are based on evidence from initiatives that have demonstrated significant benefit. These initiatives focus on addressing the common contributing factors in medication error which include:⁴⁵

- lack of knowledge of the medication
- lack of information about the patient
- slips and memory lapses
- transcription errors
- failure in communication
- lack of patient education
- poor medicines distribution practices.

Attention to the medicines that are widely recognised to be high-risk is also important to reducing the opportunity for error and patient harm.

Because of the complexity of medication management processes, solutions often rely on multidisciplinary collaboration, and on partnerships with patients and carers, to achieve the best possible medication treatment outcomes.

Safety initiatives related to medication management processes should focus on systems and standardisation to reduce unnecessary variation, coupled with judicious use of tools and resources that enhance knowledge and skills.

Many of the elements of the medication management cycle are suited to standardisation:

- Medication orders (standardised medication charts, terminology and abbreviations, use of guidelines, decision support tools)
- Medication administration (administration times, checking procedures)
- Documentation (medication lists, medication management plans, electronic medication management systems)
- Medication storage and distribution
- Labelling (Tall Man lettering, user-applied labelling of injectable medicines, fluids and lines, storage areas)
- Monitoring (risk assessment activities using validated tools, medication walk rounds).

The actions and implementation strategies described in this criterion aim at achieving safe and effective medicines use through:

- best use of information and decision support tools in clinical decision making
- compliance and safety in medicines distribution and storage systems
- targeting known risk areas (for example, high-risk medicines) and embedding systems and tools within the organisation to prevent error
- integration of systems and work practices that underpin safe medication management (standardisation, monitoring, risk assessment)
- using medication safety strategies and tools to create an environment for optimal communication of medicines information (medication management plans, treatment decisions).

Actions required	Implementation strategies
<p>4.9 Ensuring that current and accurate medicines information and decision support tools are readily available to the clinical workforce when making clinical decisions related to medicines use</p>	
<p>4.9.1 Information and decision support tools for medicines are available to the clinical workforce at the point of care</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement and maintain up-to-date clinical information and decision support tools that guide the workforce with responsibilities in providing safe and effective medication management <p>Organisations should ensure that decision support resources are available to the clinical workforce with medication management responsibilities.</p> <p>Access to relevant, up-to-date and accurate medicines reference information and decision support tools is essential at all stages of the medication management pathway. These resources assist in reducing medication errors. Clinical decision support includes any functionality or resource that provides guidance or incorporates knowledge to help clinicians make the most appropriate clinical decisions for patient care.</p> <p>The use of technology to deliver resources at the point of care (e.g. through smart phone apps, bedside/mobile computers, PDAs) can enhance clinical practice, provide work practice efficiencies and support workforce learning and patient education. Clinical decision support within electronic medicines management processes improves the quality and safety of medicines use by increasing guideline uptake and adherence. Implementing electronic clinical decision support is complex, and requires significant local support in appropriate governance structures, stakeholder agreement, education and training, staging and evaluation.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Review existing medicines information resources and other clinical decision support materials available to the clinical workforce to ensure content is: <ul style="list-style-type: none"> • current and consistent with evidence-based prescribing • accessible at the decision making points of clinical workflow • consistent with local organisational policies. <p>This could be undertaken by the medication safety governance group.</p> 2 Ensure that medicines information resources that are mandated by legislation are available and accessible. 3 Provide hard copies (current versions) or online access to standard medicines information reference materials in clinical areas where medicines are prescribed, dispensed or administered. These resources could include (but are not limited to): <ul style="list-style-type: none"> • <i>Australian Medicines Handbook (AMH)</i> • Therapeutic Guidelines • NPS Prescribing Practice Review • MIMS or similar publication • SHPA <i>Australian Injectable Drugs Handbook</i> or local injectable medicines administration guidelines • SHPA <i>Don't Rush to Crush Handbook</i> or local guidelines. 4 Make information available on how to contact medicines information services (local, state or national services).



Actions required	Implementation strategies
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<p>4.9 Ensuring that current and accurate medicines information and decision support tools are readily available to the clinical workforce when making clinical decisions related to medicines use</p>	<p>(continued)</p>
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(continued)

4.9.1 Information and decision support tools for medicines are available to the clinical workforce at the point of care

- 5 Provide clinical decision support to workforce at the decision making point within their practice area. This could include active alerts within electronic medicines management systems, and passive support available electronically or in hard copy. Examples of decision support resources include (but are not limited to):
 - formulary information, prescribing requirements and approval systems
 - policies, protocols and guidelines
 - dosing calculators
 - drug interaction databases
 - guidelines for safe administration of specific medicines (e.g. administering medicines via enteral tubes)
 - selection of treatment in specific clinical situations (e.g. appropriate choice of antimicrobial therapy)
 - authorised standing orders
 - medicines information reference texts
 - end-of-bed guidelines used in conjunction with medication charts
 - telephone-based medicines information and advice services.

 - 6 Include clinical decision support functionality when implementing electronic medicines management systems. Comprehensive guidance on electronic decision support can be found in *Electronic Medication Management Systems: A Guide to Safe Implementation 2nd edition* (see resources below).

 - 7 Implement electronic decision support tools as standalone modules when complete electronic medicines management systems are not in place, for example, antibiotic approval systems as a component of antimicrobial stewardship programs (see Standard 3).

 - 8 Promote the use of information sources and decision support tools using communication strategies such as newsletters, presentations, in service education sessions, awareness campaigns and desktop icons.

 - 9 Implement systems for maintaining resources, including:
 - procedures for electronic publishing and updates
 - communication and distribution of updates
 - distribution process and method for retrieval and rescinding of superseded information
 - electronic decision support tools.
- Outputs of improvement processes may include:**
- procedures, protocols, guidelines, medicines information tools that are accessible in clinical areas (electronic or hard copy)
 - current medicines reference texts (electronic or hard copy) available in clinical areas
 - availability of electronic decision support tools (e.g. medication dosing calculators, antibiotic approval systems)
 - decision support tools (passive and active) available in electronic medicines management systems
 - medicines information service records of number and types of enquiries and requests
 - costs of ongoing support for decision support resources (software licence, hardcopy subscription) incorporated into budget planning.

Actions required	Implementation strategies
<p>4.9 Ensuring that current and accurate medicines information and decision support tools are readily available to the clinical workforce when making clinical decisions related to medicines use (continued)</p>	
<p>(continued)</p> <p>4.9.1 Information and decision support tools for medicines are available to the clinical workforce at the point of care</p>	<p>Resources:</p> <p>Australian Commission on Safety and Quality in Health Care. <i>Electronic Medication Management Systems: A Guide to Safe Implementation 2nd edition</i>. www.safetyandquality.gov.au/wp-content/uploads/2011/01/EMMS-A-Guide-to-Safe-Implementation-2nd-Edition-web-version.pdf</p> <p>Australian Commission on Safety and Quality in Health Care. <i>Antimicrobial Stewardship in Australian Hospitals</i>, 2011. www.safetyandquality.gov.au/our-work/healthcare-associated-infection/antimicrobial-stewardship/book/</p> <p>Australian Medicines Handbook (AMH). www.amh.net.au</p> <p>Therapeutic Guidelines. www.tg.org.au</p> <p>SHPA <i>Australian Injectable Drugs Handbook</i> 5th edition 2011.</p> <p>SHPA <i>Don't Rush to Crush Handbook</i> First edition 2012.</p> <p>NPS: MedicineWise. <i>Guide to medicines information resources</i>. www.nps.org.au/health_professionals/guide_to_medicines_information_resources</p>
<p>4.9.2 The use of information and decision support tools is regularly reviewed</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Undertake regular review of the use and content of clinical information and decision support tools, to ensure that resources are current, and are endorsed for use within the organisation <p>Responsibility should be allocated for a process of review and endorsement of the content of decision support tools, taking into account the need for consistency with local organisational policies and with evidence-based prescribing. This medication safety governance group could be responsible for the process.</p> <p>In hospitals, the ongoing management of medicines information resources is a shared responsibility between the organisational committees and departments involved in the selection and use of information products (information technology, medical/pharmacy/nursing). In day procedure services, it is the responsibility of the medication safety governance group or management committee.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Review the appropriateness of resources for relevance and currency in parallel with changes to organisational policies and work practices, and emerging clinical evidence. 2 Audit the availability and currency of medicines information resources and other decision support tools in clinical areas. 3 Monitor the use of decision support tools within electronic medicines management systems e.g. overrides of active alerts for drug interactions, contraindications, patient allergy alerts in prescribing and dispensing systems. 4 Obtain clinician feedback about the content and usefulness of resources, using methods such as targeted surveys, discussion group, or existing communication infrastructure. This strategy should be multidisciplinary.



Actions required	Implementation strategies
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<p>4.9 Ensuring that current and accurate medicines information and decision support tools are readily available to the clinical workforce when making clinical decisions related to medicines use</p>	<p>(continued)</p>
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(continued)

4.9.2 The use of information and decision support tools is regularly reviewed

Outputs of improvement processes may include:

- agenda papers, minutes and/or reports of relevant committees responsible for developing and maintaining information resources and decision support tools
- risk assessment of medicines information, such as completion of *Medication Safety Self Assessment® in Australian Hospitals Key Element 2: Drug Information* (items 2.2-2.8, 2.12-2.15, 2.18, 2.31)
- observational audit or survey on the use and currency of decision support tools
- records of pharmacy and clinical workforce access to electronic medicines information systems (where available)
- reports on frequency and type of alert overrides in electronic prescribing, dispensing and administering systems
- reports of medication incidents, adverse events and near misses related to failure to use relevant decision support
- workforce feedback and suggestions on decision support tools
- reports on performance indicators for in-house medicines information services.

Resources:

Australian Commission on Safety and Quality in Health Care. *Electronic Medication Management Systems: A Guide to Safe Implementation 2nd edition* www.safetyandquality.gov.au/wp-content/uploads/2011/01/EMMS-A-Guide-to-Safe-Implementation-2nd-Edition-web-version.pdf

Clinical Excellence Commission, NSW Therapeutic Advisory Group Inc., ISMP. *Medication Safety Self Assessment® for Australian Hospitals*, 2007. www.mssa.cec.health.nsw.gov.au/MSSA_introduction.html

SHPA Standards of Practice for Drug Information Services. Section 10. Quality Improvement. Aust J Hosp Pharm 1998;29(3):171-6

4.9.3 Action is taken to improve the availability and effectiveness of information and decision support tools

Key task:

- **Take action to improve clinical information and decision support tools where a need is identified based on review (Action 4.9.2)**

Updating of policies, procedures, protocols and guidelines is central to the effective use of information and decision support. Version control of electronic resources and paper-based tools is essential to ensure that clinical decisions are based on current information.

Suggested strategies:

- 1 Base key strategies for improvement on issues identified through regular review (see Action 4.9.2).
- 2 Include information and decision support issues in the organisational medication safety risk register.
- 3 Include actions to address specific risks in the quality improvement plan.
- 4 Improve access to current medicines information resources and clinical decision support tools if identified as an issue by review or workforce.
- 5 Provide ongoing opportunity for clinicians to have input to content and selection of resources.

Actions required	Implementation strategies
4.9 Ensuring that current and accurate medicines information and decision support tools are readily available to the clinical workforce when making clinical decisions related to medicines use (continued)	

(continued)

4.9.3 Action is taken to improve the availability and effectiveness of information and decision support tools

6 Provide training for workforce on resources available and how to use them (see item 4.1).

7 Ensure that medicines information resources are included in the organisation's information technology planning.

8 Consider electronic decision support within the organisational strategy for electronic medicines management. This should align with national and local e-health objectives.

Outputs of improvement processes may include:

- risk register or log that includes actions to address identified risks
- agenda papers, meeting minutes and/or reports of relevant committees that detail completed improvement actions
- quality improvement plan includes actions to address issues identified in Action 4.9.2.
- improvement activities that have been implemented and evaluated to improve the availability and effectiveness of information and decision support tools
- version control on electronic resources and paper-based tools
- current copies/versions of medicines information are available in clinical areas
- communication material developed for the workforce.

Resources:

Australian Commission on Safety and Quality in Health Care. *Electronic Medication Management Systems: A Guide to Safe Implementation 2nd Edition*
www.safetyandquality.gov.au/wp-content/uploads/2011/01/EMMS-A-Guide-to-Safe-Implementation-2nd-Edition-web-version.pdf

Society of Hospital Pharmacists of Australia.
Australian Medicines Information Training Workbook. First edition, 2011.
www.shpa.org.au/scripts/cgiip.exe/WService=SHPA/ccms.r?PagelD=10204

4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer's directions, legislation, jurisdictional orders and operational directives	
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4.10.1 Risks associated with secure storage and safe distribution of medicines are regularly reviewed

Key task:

- **Establish a method for regular review and risk assessment of medicines storage and distribution across the organisation**

Health service organisations should implement processes and systems that ensure the safe and efficient storage and distribution of medicines, and that minimise wastage of these products. The organisational priority is to ensure that product integrity is maintained, and that distribution systems are responsive to clinical demand in order for medicines to be available for patient care in a timely manner. In hospitals with onsite pharmacy services, traditionally a combination of distributions systems has been used combining individual unit-of-use dispensing and imprest supply of medicines and intravenous fluids. In small rural hospitals, as in day surgery units, medicines may be supplied externally and an imprest system maintained. Increasingly hospitals are introducing automated systems for supplying medicines to wards and units. The type of drug distribution system used has the potential to significantly affect the incidence of medication errors.

The storage and management of anaesthetic medicines in operating theatres and procedure units carries particular risks and may need to be managed separately.



Actions required	Implementation strategies
<p>4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer’s directions, legislation, jurisdictional orders and operational directives (continued)</p>	

(continued)

4.10.1 Risks associated with secure storage and safe distribution of medicines are regularly reviewed

Note: In this section wards/units refers to all areas in the health service organisation where medicines are held for immediate use and includes wards, clinics, procedure units, operating rooms and diagnostic services.

Suggested strategies:

- 1 Review policies, procedures and/or protocols for safe distribution and storage of medicines to ensure they accord with legislative requirements, jurisdictional directives and professional guidelines. The storage and management of anaesthetic medicines pose particular risks and specific recommendations for their safe storage and management should be included in any policies, procedures and/or protocols.⁴⁶
- 2 Monitor compliance with legislative requirements for distribution and storage of medicines.
- 3 Monitor compliance with state and organisational policies and directives and professional guidelines.
- 4 Review security and levels of workforce access, and approval processes for access to medicines storage areas.
- 5 Undertake risk assessment of the systems in place for distribution and storage of medicines using standardised risk assessment tools⁹, and conducting observation audits and ‘walk rounds’.
- 6 Review incident reports for incidents associated with distribution and storage of medicines, including reports of incidents related to look-alike/ sound-alike errors.
- 7 Review the potential for increased risk of error when changes to product labelling, packaging or storage requirements are introduced as a result of changes to purchasing arrangements and contracts, product shortages, recalls or substitution.

Outputs of improvement processes may include:

- policies, procedures and/or protocols for safe distribution and storage of medicines
- completed risk assessment of system for distributing and storing medicines for example using *Medication Safety Self Assessment® in Australian Hospitals Key Element 4: Drug Labelling, Packaging and Nomenclature, Items 4.3, 4.10-4.11, 4.13-4.19 Key Element 5: Drug Standardisation, Storage and Distribution*
- risk registers that include actions identified to reduce risk
- registers of access assigned to workforce (e.g. keys, swipe cards)
- audit of compliance with policies, procedures, protocols and guidelines
- debriefing report from medication ‘walk rounds’
- review of reports of incidents associated with distribution and storage of medicines.

Resources:

SHPA Standards of Practice for the Distribution of Medicines in Australian Hospitals. *J Pharm Pract Res* 2006;36(2):143-9

ANZCA. PS 51 *Guidelines for the safe administration of injectable drugs in anaesthesia*, 2009. www.anzca.edu.au/resources/professional-documents/documents/professional-standards/professional-standards-51.html

Clinical Excellence Commission, NSW Therapeutic Advisory Group Inc. *Medication Safety Self Assessment® for Australian Hospitals*, 2007. www.mssa.cec.health.nsw.gov.au/MSSA_introduction.html

Actions required	Implementation strategies
<p>4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer's directions, legislation, jurisdictional orders and operational directives</p>	<p>(continued)</p>
<p>4.10.2 Action is taken to reduce the risks associated with storage and distribution of medicines</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Use the outcome of regular review (4.10.1) to identify specific risks, put solutions in place to reduce risk, and monitor the outcome and effectiveness of actions taken. <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Implement risk reduction strategies that make best use of technology, for example bar-coding within distribution processes. 2 Implement a screening process for new products and drug delivery devices that includes inspection of labelling and packaging to avoid look-alike labelling and packaging and for consistency with standards for error minimisation. 3 Incorporate medication safety considerations into the planning, design or refurbishment of hospital wards, operating rooms and departments. 4 Evaluate options for medicines distribution systems in hospitals (individual dispensing, bedside locked drawers, automated drug distribution systems), including use of technology that has been demonstrated to reduce risk. 5 Implement standardised labelling of storage areas, and physical separation of products (e.g. look-alike, sound-alike products) to reduce opportunity of medication selection error. 6 Use <i>National Tall Man lettering</i> in storage and labelling (see Resources below). 7 Undertake regular review of ward/unit stock lists to ensure that products and stock levels are aligned to the clinical needs of the ward/unit, and are modified in response to changing evidence related to factors influencing medicines safety. 8 Introduce inspection of ward/unit medicines storage areas by pharmacists or pharmacy technicians to ensure that products stocked are appropriate, areas are not overstocked, products are within expiry date, and medication safety strategies related to storage are being maintained. 9 Include medicines storage and distribution factors in organisational policies, procedures and/or protocols, for example: <ul style="list-style-type: none"> • procedure for alerting clinical workforce to product shortages, and advising of alternative therapy options • timely removal of discontinued patient-specific medicines from ward storage • repacking of medicines • management of product samples • after-hours access to medicines. 10 Highlight risks associated with the storage and distribution of medicines in patient safety orientation training for the workforce involved in the medication process, and in specific training programmes on drug preparation and administration. 11 Implement specific policies, procedures and/or protocols for storage, safe handling and disposal of Schedule 8 medicines, cytotoxic products and hazardous substances that align with legislative and jurisdictional requirements.



Actions required	Implementation strategies
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<p>4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer’s directions, legislation, jurisdictional orders and operational directives</p>	<p>(continued)</p>
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(continued)

4.10.2 Action is taken to reduce the risks associated with storage and distribution of medicines

- 12** Implement specific policies, procedures and/or protocols for storage, safe handling and disposal of anaesthetic agents in operating theatres and day procedure services.
 - 13** Consider the use of devices to increase safety of medicines distribution (e.g. closed system transfer devices for chemotherapy).
 - 14** Provide training programs for the workforce on safe handling of cytotoxic products and hazardous substances.
 - 15** Include awareness raising of risks associated with medicines storage and distribution in communiqués such as alerts and information bulletins.
 - 16** Implement processes and tracking systems that support effective management of products in the event of a product recall.
 - 17** Implement policies, procedures and/or protocols that support safe management of patients’ own medicines brought into hospital, including storage during admission, and review for appropriateness at discharge (refer also to Items 4.6 and 4.8).
 - 18** Review and update processes for medicines procurement and contract negotiation, including when risks related to product labelling, packaging or storage are identified, or new evidence on risks becomes available.
- Outputs of improvement processes may include:**
- policies, procedures and/or protocols for safe distribution and storage of medicines
 - risk register or log that includes actions to address identified risks
 - quality improvement plan includes actions to address issues identified
 - agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken
 - examples of improvement activities that have been implemented and evaluated
 - completed report for *Medication Safety Self-Assessment® for Australian Hospitals: Key Element 5 Drug Standardisation, storage and distribution*
 - use of *National Tall Man lettering* in electronic medicines management systems (pharmacy, prescribing), on shelving in pharmacies and ward storage areas, and inpatient labels to reduce errors from look-alike, sound-alike medicines names
 - audit of separation of products with similar packaging
 - use of barcode scanners in pharmacy departments when medicines are dispensed
 - inventory management reports
 - policies, procedures and protocols for management of product shortages and recalls
 - policies, procedures and protocols for management of patients’ own medicines brought into hospital
 - communication material such as memos, bulletins, brochures, fact sheets, posters related to risks associated with medicines storage and distribution developed for the workforce and patients and carers.
- Resources:**
- Australian Commission on Safety and Quality in Health Care (2012) – *Report on the National Round Table on Safer Naming, Labelling and Packaging of Medicines 24 May 2011*, ACSQHC, Sydney www.safetyandquality.gov.au/our-work/medication-safety/national-round-table-on-safer-naming-labelling-and-packaging-of-medicines/

Actions required	Implementation strategies
<p>4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer’s directions, legislation, jurisdictional orders and operational directives</p>	<p>(continued)</p>
<p>(continued)</p> <p>4.10.2 Action is taken to reduce the risks associated with storage and distribution of medicines</p>	<p>Council of Australian Therapeutic Advisory Groups. <i>Statement on the Use of Samples in Australian Public Hospitals</i>. www.catag.com.au</p> <p>NSW Health Policy Directive. <i>Medication Handling in NSW Public Hospitals</i> PD2007_077, October 2007. www.health.nsw.gov.au/policies/pd/2007/PD2007_077.html</p> <p>SHPA. Standards of Practice for the Distribution of Medicines in Australian Hospitals. <i>J Pharm Pract Res</i> 2006;35(1):44-52.</p> <p><i>National Tall Man Lettering List</i>. www.safetyandquality.gov.au/wp-content/uploads/2012/02/National-Tall-Man-Lettering-Report-and-final-list1.pdf</p> <p>SHPA Standards of Practice for the Safe Handling of Cytotoxic Drugs in Pharmacy Departments. August 2004, <i>J Pharm Pract Res</i> 2005; 35(1): 44-52.</p> <p>SHPA Standards of Practice for the Transportation of Cytotoxic Drugs from Pharmacy Departments. August 2007, <i>J Pharm Pract Res</i> 2007; 37 (3): 234-5.</p>
<p>4.10.3 The storage of temperature-sensitive medicines is monitored</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement monitoring systems and equipment that continuously maintain the integrity of temperature-sensitive medicines products <p>Health service organisations should ensure that temperature-sensitive medicines are stored according to the manufacturers’ recommendations, using equipment allocated solely for pharmaceutical products, and fitted with temperature recording devices. Additional storage, monitoring and reporting requirements that apply to specific products should be adhered to, for example clinical trial medicines that may require monitoring and recording of relative humidity.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Conduct regular audits of temperature control of storage facilities, including room temperature, refrigeration and frozen storage. 2 Implement regular testing and maintenance schedules for temperature alarms and temperature recording devices. 3 Implement procedures and/or protocols for transport/transfer of temperature-sensitive medicines between storage areas. 4 Conduct workforce orientation and training on cold chain management and action to take in the event of cold chain failure. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and/or protocols on monitoring of temperature in refrigerators and freezers used to store medicines and vaccines throughout the facility • record of daily checks, temperature reading devices and scheduled maintenance of the medicines and vaccines refrigerators • record of review of alarm settings, performance testing and associated response processes to activated alarms • procedure for management of breach of cold chain, including patient notification system where relevant • risk register or issues log that includes actions to address identified risks • records of attendance at workforce training sessions.



Actions required	Implementation strategies
<p>4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer’s directions, legislation, jurisdictional orders and operational directives (continued)</p>	
<p>(continued)</p> <p>4.10.3 The storage of temperature-sensitive medicines is monitored</p>	<p>Resources:</p> <p><i>Australian Immunisation Handbook</i> 9th edition, 2008. www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-home</p> <p><i>National Vaccine Storage Guidelines: Strive for 5</i> Version 1, 2005. www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/provider-store</p>
<p>4.10.4 A system that is consistent with legislative and jurisdictional requirements for the disposal of unused, unwanted or expired medications is in place</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement policies, procedures and work practices for the disposal of unused, unwanted or expired medicines, that assign responsibility and accountability and ensure compliance with legislative and jurisdictional requirements <p>Organisations should take steps to ensure that medicines used within the organisation meet the required standards for product integrity, and that expired medicines cannot be inadvertently distributed, dispensed or administered. Factors that compromise product quality can result in avoidable adverse events, patient harm and treatment failure.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Implement work practices and distribution systems that minimise wastage of medicines, for example considering quantities of medicines issued, regular checking of expiry dates of stock and other inventory management practices including stock rotation. 2 Implement policies, procedures and/or protocols for disposal of unused, unwanted or expired medications that are consistent with legislative and jurisdictional requirements. 3 Implement specific policies, procedures and/or protocols for safe handling and disposal of Schedule 8 medicines, cytotoxic products and hazardous substances that accord with legislative and jurisdictional requirements. 4 Obtain patient consent for disposal of patients’ own medicines brought into hospital that are not prescribed or required at discharge. 5 Implement work practices and systems that ensure security of medicines undergoing disposal, and handling only by authorised workforce. 6 Include specific requirements for disposal of medicines in organisational waste management policies and contracts. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and/or protocols on the disposal of unused, unwanted or expired medicines that align with legislative and jurisdictional requirements including Schedule 8 medicines, chemotherapy and hazardous substances • education resources developed on disposal of unused, unwanted or expired medications • records of attendance at training of the workforce.

Actions required	Implementation strategies
4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer's directions, legislation, jurisdictional orders and operational directives (continued)	
<p>4.10.5 The system for disposal of unused, unwanted or expired medications is regularly monitored</p>	<p>Key task:</p> <ul style="list-style-type: none"> Put processes in place to monitor the system for disposal of unused, unwanted or expired medications <p>Regular monitoring of disposal of unused, unwanted or expired medications assists in identifying the potential for, and actual unauthorised, diversion of medicines. It also indicates areas to target for improvement in efficiency and/or risk minimisation through modifications to distribution systems and storage.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> Report and investigate incidents related to unwanted or expired medicines. Review usage patterns of medicine products to ensure that distribution systems are operating efficiently and are modified appropriately. Monitor the volume and type of products returned to pharmacy from ward areas. Engage a review by an agency external to the health service organisation to assess compliance with legislative and jurisdictional requirements (e.g. audit by state or territory drugs and poisons unit). <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> completed risk assessment of system for disposing medicines in the organisation risk register or log that includes actions to address identified risks audit of compliance with policies, procedures and/or protocols records of item, quantity and cost of expired medicines sent for disposal performance indicator reports on unused and expired medicines.
<p>4.10.6 Action is taken to increase compliance with the system for storage, distribution and disposal of medications</p>	<p>Key task:</p> <ul style="list-style-type: none"> Implement changes to medicines distribution and storage systems based on the outcome of monitoring undertaken for Action 4.10.5 <p>Note: This Action should be read in conjunction with Action 4.10.2.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> Implement the recommendations arising from results of monitoring, reviews, incident reports, adverse events and near misses. Include causes of medication error and prevention strategies in the context of medicines storage and distribution in workforce training programs and in service education sessions on medication safety. Conduct workforce training programs and in service education sessions on the correct disposal of medicines, including Schedule 8 medicines, cytotoxic products and hazardous substances. Use team meetings and written or electronic notices to promote awareness of medication errors that can result from unsafe medicines storage and distribution.



Actions required	Implementation strategies
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<p>4.10 Ensuring that medicines are distributed and stored securely, safely and in accordance with the manufacturer’s directions, legislation, jurisdictional orders and operational directives</p>	<p>(continued)</p>
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(continued)

4.10.6 Action is taken to increase compliance with the system for storage, distribution and disposal of medications

Outputs of improvement processes may include:

- policies and procedures for safe handling and disposal of S8 medicines, cytotoxic products and hazardous substances that align with legislative and jurisdictional requirements
- risk register or log that includes actions to address identified risks
- quality improvement plan includes actions to address issues identified
- agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken
- examples of improvement activities that have been implemented and evaluated
- communication material developed for the workforce and/or patients
- education resources and records of attendance by workforce at training on safe storage and disposal of medicines.

Resources:

See Action 4.10.2

<p>4.11 Identifying high-risk medicines in the organisation and ensuring they are stored, prescribed, dispensed and administered safely</p>
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4.11.1 The risks for storing, prescribing, dispensing and administration of high-risk medicines are regularly reviewed

Key task:

- **Undertake an assessment of high-risk medicines management within the organisation, and put systems in place to minimise the risk of error**

Organisations should adopt a multidisciplinary, structured approach to identifying potential risks related to high-risk medicines, and develop a framework for improvement strategies. This may include formal audit, incident analysis, risk assessment tools, drug usage evaluation programs, collaborative projects and benchmarking activities. Governance arrangements for medication management and medication safety should include specific responsibility for risk assessment and management of high-risk medicines (see Action 4.1.1).

Suggested strategies:

- 1** Include monitoring and review activities for high-risk medicines in the routine business of the medication safety governance group. This could include:
 - monitoring and analysis of incident reports and logs
 - monitoring of published literature and medication safety web sites/bulletins
 - assessment of local situations in relation to alerts, advisories and reports
 - oversight of risk assessments and audits, for example NIMC audit, *Medication Safety Self Assessments*[®] (antithrombotic therapy, oncology), indicators for quality use of medicines
 - ensuring that recommendations from alerts, incident reports and audits are actioned.
- 2** Establish a list of high-risk medicines specific to the organisation, and related policies, procedures and protocols, and update regularly.
- 3** Review work practices related to high-risk medicines.

Actions required	Implementation strategies
4.11 Identifying high-risk medicines in the organisation and ensuring they are stored, prescribed, dispensed and administered safely (continued)	
<p>(continued)</p> <p>4.11.1 The risks for storing, prescribing, dispensing and administration of high-risk medicines are regularly reviewed</p>	<p>4 Incorporate factors that contribute to safer use of high-risk medicines, or that decrease opportunity for error, when considering:</p> <ul style="list-style-type: none"> • listing new medicines on the formulary • contract specification and procurement processes • availability of medications (prescribing restrictions, review of ward imprest lists and stock levels) • design, layout and labelling of dispensary, ward stock rooms/cupboards • selection of drug distribution system (individual dispensing, bedside locked drawers, automated drug distribution systems) • alerts in electronic medicines management systems. <p>5 Undertake audit and risk assessment of high-risk medicines using validated tools such as:</p> <ul style="list-style-type: none"> • <i>Medication Safety Self Assessment® for Australian Hospitals</i> • <i>Medication Safety Self Assessment® for Antithrombotic Therapy in Australian Hospitals</i> • <i>International Medication Safety Self Assessment® for Oncology</i> • <i>NSW TAG Indicators for Quality Use of Medicines in Australian Hospitals.</i> <p>6 Audit to demonstrate that improvements and changes have been sustained e.g. following action taken to implement recommendations from alerts (see also Action 4.5.1).</p> <p>7 Implement a mechanism for the workforce to provide feedback and suggestions for improvements to the management of high-risk medicines, for example through workforce surveys and feedback intranet pages.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • medication safety governance group terms of reference include risk management responsibility, and agendas and minutes indicate continuing activity in reviewing risks • list of high-risk medicines relevant to the organisation, as a subset of medicines used in the organisation, available to clinical workforce • policies, procedures and/or protocols for storing, prescribing, dispensing, administering and monitoring high-risk medicines • guidelines for prescribing, dispensing, administering and monitoring specific high-risk medicines such as anticoagulants, chemotherapy, opioids and insulin are available to the clinical workforce (see also Item 4.9). • completed risk assessment of high-risk medicines management. This could include: <ul style="list-style-type: none"> – <i>Medication Safety Self Assessment® for Australian Hospitals</i> – <i>Medication Safety Self Assessment® for Antithrombotic Therapy in Australian Hospitals</i> – <i>International Medication Safety Self Assessment® for Oncology</i> • risk register or log that includes actions to address identified risks from high-risk medicines • quality improvement plan that includes actions to address issues identified • use of audits of indicators e.g. <i>Indicators for Quality Use of Medicines in Australian Hospitals</i> – Indicators 1.3, 1.4, 1.5, 2.3, 3.6 4.1, 4.2, 5.4 6.1, or jurisdictional indicators



Actions required	Implementation strategies
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<p>4.11 Identifying high-risk medicines in the organisation and ensuring they are stored, prescribed, dispensed and administered safely</p>	<p>(continued)</p>
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(continued)

4.11.1 The risks for storing, prescribing, dispensing and administration of high-risk medicines are regularly reviewed

- audits of compliance with:
 - policies, procedures and/or protocols for storing, prescribing, dispensing, administering and monitoring specific high-risk medicines such as anticoagulants, chemotherapy, opioids and insulin
 - recommendations from national alerts on high-risk medicines (potassium chloride, vincristine)
 - specific storage requirements for high-risk medicines such as concentrated injectables (potassium, electrolytes) and opioids
 - procedures for labelling injectable medicines, fluids and lines
 - report from review of medication incident reports, near misses data and adverse events associated with high-risk medicines
 - information on actions to be taken in response to medication incidents, adverse events and near misses available in the pharmacy and clinical areas
 - physical security that restricts access to high-risk medicines
 - feedback reports to clinicians on medication errors and interventions.
- Resources:**
- Australian Commission on Safety and Quality in Health Care. Medication safety alerts. www.safetyandquality.gov.au/our-work/medication-safety/medication-alerts/
- NSW Clinical Excellence Commission. High-risk Medicines Program. www.cec.health.nsw.gov.au/programs/high-risk-medicines
- NSW Health High-risk Medicines Management Policy Directive PD2012-003. www.health.nsw.gov.au/policies/pd/2012/pdf/PD2012_003.pdf
- NSW Therapeutic Advisory Group. *Indicators for Quality Use of Medicines in Australian Hospitals*, 2007. www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf
- National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines*. www.safetyandquality.gov.au/our-work/medication-safety/user-applied-labelling/
- Institute for Safe Medication Practices. www.ismp.org
- National Patient Safety Agency. NHS. Medication Safety. www.nrls.npsa.nhs.uk/resources/patient-safety-topics/medication-safety/
- Global patient safety alerts. www.globalpatientsafetyalerts.com/English/ContributingOrganizations/Pages/default.aspx
- State/territory patient safety sites:**
- NSW Ministry of Health. Safety Alert Broadcast System. www.health.nsw.gov.au/quality/sabs/index.asp
- Queensland Government. Patient Safety and Quality Improvement Service. www.health.qld.gov.au/psq/default.asp
- SA Health. Medication Safety. www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/safety+and+quality/medication+safety
- Victorian Government Health Information. Quality Use Of Medicines. www.health.vic.gov.au/clinrisk/publications/riskwatch.htm
- Western Australian Department of Health. Office of Safety and Quality in Health Care. Patient Safety Alerts. www.safetyandquality.health.wa.gov.au/home/patient_news.cfm

Actions required	Implementation strategies
4.11 Identifying high-risk medicines in the organisation and ensuring they are stored, prescribed, dispensed and administered safely (continued)	
<p>4.11.2 Action is taken to reduce the risks of storing, prescribing, dispensing and administering high-risk medicines</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Use the outcome of regular review (Action 4.11.1) to identify potential for error, put solutions in place to reduce risk, and monitor the outcome and effectiveness of actions taken <p>Certain medicines have a high-risk of causing serious injury or death if not used correctly. Errors with these medicines may not be more common but the results may be devastating. Examples of high-risk drugs include anticoagulants, chemotherapy, concentrated electrolytes (e.g. potassium, magnesium), insulin, opioids (narcotics) and neuromuscular blocking agents.⁹ Risk minimisation for high-risk medicine requires an organisation-wide approach that encompasses all elements of the medication cycle. Organisations should action the outcome of risk assessments, and adopt evidence-based strategies that reduce risk of error and harm from this group of medicines.</p> <p>Note: You should read this section in conjunction with Action 4.5.2.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Develop and implement specific policies, procedures, protocols or guidelines for safe purchasing, storing, prescribing, dispensing, compounding, manufacturing and administering of high-risk medicines including injectable anaesthetic agents, chemotherapy, anticoagulants, opioids, concentrated electrolytes (e.g. potassium, magnesium) and insulin. 2 Investigate incidents involving high-risk medicines and use the recommendations from these to make system changes that include risk-minimisation strategies. 3 Prepare and communicate a list of high-risk medicines based on use within the organisation. 4 Implement authorisation processes for access to medicines storage areas, appropriate to individual roles within the organisation and consistent with legislative requirements. 5 Standardise medication ordering through medication charts. Implement the <i>National Inpatient Medication Chart (NIMC)</i>, and related specialist and ancillary charts in hospitals and the private hospital day surgery NIMC in day procedure services. 6 Develop and/or implement materials to support medication safety strategies, for example: <ul style="list-style-type: none"> • prescribing guidelines for high-risk medicines available at the end of the bed, or electronic form accessible from clinical work stations • guidelines for safe administration of high-risk medicines • specific medication charts. 7 Implement standardisation of work practices and products: <ul style="list-style-type: none"> • remove concentrated electrolyte injectables from ward stock areas • use pre-mixed solutions or preloaded syringes for injectable high-risk medicines wherever available (e.g. Therapeutic Goods Administration registered products, compounded product sourced from a licensed manufacturer or other aseptic compounding unit) • use standardised single concentrations of infusions of high-risk medicines • implement recommendations from national safety alerts – potassium, vincristine (see Action 4.5.2) and state/territory alerts/directives where applicable • standardise dosing protocols



Actions required	Implementation strategies
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<p>4.11 Identifying high-risk medicines in the organisation and ensuring they are stored, prescribed, dispensed and administered safely</p>	<p>(continued)</p>
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<p>(continued)</p> <p>4.11.2 Action is taken to reduce the risks of storing, prescribing, dispensing and administering high-risk medicines</p>	<p>7 (continued)</p> <ul style="list-style-type: none"> standardise medication checking procedures for high-risk medicines. <p>8 Use Tall Man lettering for high-risk medicines on the <i>National Tall Man Lettering List</i> in electronic systems for ordering, dispensing and administering medicines and drug libraries in electronic infusion pumps (e.g. ‘smart pumps’) and on shelving in medicines storage areas in pharmacy and wards, operating theatres.</p> <p>9 Implement the <i>National Recommendations for User-applied Labelling of Injectable Medicines, Fluids and Lines</i> for preparing and administering injectable medicines: www.safetyandquality.gov.au/our-work/medication-safety/user-applied-labelling/</p> <p>10 Consider using infusion pumps with safety software (‘smart pumps’) and medicine libraries to infuse high-risk drugs.</p> <p>11 Use devices (oral dispensers) for measuring and administering oral liquid doses to avoid wrong route errors.</p> <p>12 Include high-risk medicines and risk awareness components for medication management in workforce orientation and education programs on medication safety. This could include competency assessments (see Action 4.1.1).</p> <p>13 Promote medication safety awareness of high-risk medicines through memos, newsletters, posters, presentations, in-service education sessions, awareness campaigns and screen savers.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> policies, procedures, protocols or guidelines for prescribing, dispensing, compounding, manufacturing, administering and monitoring specific high risks medicines such as anticoagulants, chemotherapy, concentrated electrolytes (potassium, magnesium), opioids and insulin that are available to the clinical workforce agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken completion of <i>Medication Safety Self Assessment® for Australian Hospitals</i>, items 2.5-2.7 risk register or log that includes actions to address identified risks quality improvement plan includes actions to address issues identified improvement activities that have been implemented and evaluated educational material developed for the workforce and/or patients and carers records of workforce attending in service training on high-risk medicines and results of competency assessments standardising high-risk medicine products such as: <ul style="list-style-type: none"> premixed solutions or preloaded syringes for injectable high risk medicines standardised single concentrations of infusions of high risk medicines policies on security levels to restrict access to high-risk medicines list of high-risk medicines relevant to the organisation available to clinical workforce report of annual NIMC audit results relating to high risk medicines. Actions identified included in quality improvement plan audit of compliance with procedures for labelling injectable medicines, fluids and lines medication safety issues included in organisational risk register with documented outcome from implementing recommendations and solutions
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Actions required	Implementation strategies
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4.11 Identifying high-risk medicines in the organisation and ensuring they are stored, prescribed, dispensed and administered safely	(continued)
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(continued)

4.11.2 Action is taken to reduce the risks of storing, prescribing, dispensing and administering high-risk medicines

- regular distribution of communication material such as fact sheets, newsletters, email broadcasts to workforce on high-risk medicines
- improvement activities for reducing the risks related to high-risk medicines that have been implemented and evaluated
- actions identified following investigation of medication incidents involving high-risk medicines.

Resources:

Carrington C, Stone L, Koczwara B, Searle C, J S, Stevenson B, et al. The Clinical Oncological Society of Australia (COSA) *Guidelines for the safe prescribing, dispensing and administration of cancer chemotherapy*. Asia Pac J Oncol 2010;6(3):220-237. www.ncbi.nlm.nih.gov/pubmed/20887505

SHPA Standards of Practice for the Safe Handling of Cytotoxic Drugs in Pharmacy Departments. August 2004, J Pharm Pract Res 2005; 35(1): 44-52

SHPA Guidelines for Medicines Prepared in Australian Hospital Pharmacy Departments. 2010 June 2010, J Pharm Pract Res 2010; 40 (2): 133-43

International Society of Oncology Pharmacy Practitioners. *Standards of Practice: Safe Handling of Cytotoxics 2007*

ANZCA. PS 51 – *Guidelines for the safe administration of injectable drugs in anaesthesia*, Australian and New Zealand College of Anaesthetists, 2009. www.anzca.edu.au/resources/professional-documents/documents/professional-standards/professional-standards-51.html

Clinical Excellence Commission, NSW Therapeutic Assessment Group Inc., ISMP. *Medication Safety Self Assessment® for Australian Hospitals*, 2007.

Clinical Excellence Commission, NSW Therapeutic Assessment Group Inc., ISMP. *Medication Safety Self Assessment® for Antithrombotic Therapy in Australian Hospitals*, 2007.

ISMP Canada. *International Medication Safety Self Assessment® for Oncology*, 2012. www.cec.health.nsw.gov.au/programs/mssa

NSW TAG. *Indicators for Quality Use of Medicines in Australian Hospitals* Version 1, 2007. www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf

NSW Ministry of Health. *High-Risk Medicines Management H11/17135*, January 2012. www.health.nsw.gov.au/policies/pd/2012/pdf/PD2012_003.pdf

Further reading:

Pharmaceutical Inspection Convention/Pharmaceutical Inspection Co-operation Scheme. *PIC/S Guide to Good Practices for the Preparation of Medicinal Products in Healthcare Establishments*, 2008.

Institute for Safe Medication Practices. www.ismp.org

Cohen M. *Medication Errors* (2nd Edition), 2006.

American Hospital Association, Health Research and Educational Trust, ISMP. *Pathways for Medication Safety – Leading a Strategic Planning Effort*, 2002. www.medpathways.info/medpathways/tools/tools.html

Department of Health (UK). *Building a Safer NHS for Patients – Improving Medication Safety*, 2004. www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4084961.pdf

NHS National Patient Safety Agency. *Safety in Doses – Improving the Use of Medicines in the NHS*, 2009.



Standard 4

Criterion: Continuity of medication management

The clinician provides a complete list of a patient's medicines to the receiving clinician and patient when handing over care or changing medicines

This criterion and each of the actions should be considered in relation to Standard 6: Clinical Handover and the information detailed in Criterion Documentation of patient information, Items 4.6-4.8.

Transfer of patients between healthcare providers, health service organisations, and units within health service organisations, provides opportunity for medication errors if the communication of the patient's medicines information is incomplete or inaccurate. More than 50% of medication errors occur at transitions of care, and up to one third for these errors has the potential to cause harm.^{32 47} Omitting one or more drugs from a patient's discharge summary exposes patients to 2.31 times the usual risk of re-admission to hospital.⁴⁸ Medical, nursing and pharmacy practitioners all have a role and shared responsibility to ensure that continuity of medication management is maintained and accurate and complete medicines information is communicated whenever care is transferred.

Continuity of medication management needs to occur at the boundaries of care delivery, including:

- point of entry to health service organisation (refer from Item 4.6 to 4.8), for example GP referral or ambulance transfer to emergency department, elective surgery assessment at pre-admission clinic
- within a clinical unit, for example at shift and roster term changeover
- within an organisation, for example transfer from emergency care or high dependency units to general care, from inpatient ward to clinical service department such as medical imaging and procedure units
- from acute care to rehabilitation, ambulatory care or community care providers on discharge from the health service organisation.

The provision of medicines information should be a routine part of the clinical handover process. A structured approach should be taken to standardising handover procedures that includes communicating an accurate and current list of patient medicines and any recent changes to the receiving clinician and, on discharge, to patients and carers.

Appropriate education and provision of information to patients about their medicines is essential to encourage safe and effective medication use. This may include the supply of a medication list (or profile), education about the medicines and any changes, and consumer medicines information (CMI). The APAC *Guiding principles to achieve continuity in medication management* outline the type of information and resources that should be provided to patients. Patients' medicines lists provided on discharge from the organisation should be prepared in partnership with the patient or their carer. Benefits of partnering with patients include improved adherence to treatment regimens and better patient outcomes.

Systems for providing lists of current medicines may be paper-based or electronic. Electronic solutions can introduce specific risks which should be understood and addressed prior to implementation. Health service organisations can improve continuity of care by introducing electronic medication management systems or electronic discharge referral systems. However they must be aware that implementation of these systems is complex and requires significant implementation planning if they are to be introduced safely, and the opportunity for new medication errors avoided. The resources *Electronic Medication Management Systems: A Guide to Safe Implementation 2nd edition* and *Safety and Quality Evaluation of Electronic Discharge Summary Systems* provide valuable guidance for the development of electronic solutions. Whether paper-based or electronic, the communications need to be timely.

For patients admitted to day procedure services, and where regular medicines are not reviewed as part of the procedure, there is no requirement to produce a comprehensive list of medicines. However, systems are required to ensure that information about new medicines to be taken post-discharge, and any changes made to the patient's current therapy, is provided to the receiving clinician and the patient and carer.

Actions required:	Implementation strategies:
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4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers	
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4.12.1 A system is in use that generates and distributes a current and comprehensive list of medicines and explanation of changes in medicines

Key task:

- **Implement and maintain a system that supports clinicians to maintain and generate accurate and comprehensive medicines lists when transferring care**

Medicines lists are used in different settings and produced in a range of different formats. For example:

- a list of medicines currently prescribed and an explanation of changes included in the discharge summary for the patient’s general practitioner
- a list of current medicines and medicines issues when handing over care at shift change or between wards
- a list of medicines and instructions for their use provided to the patient at discharge from a health service organisation.

Note: For patients admitted to day procedure services where regular medicines are not reviewed as part of the procedure, there is no requirement to provide a comprehensive list of medicines.

Suggested strategies:

- 1 Develop and implement a policy, procedures and/or protocols for clinical handover and patient transfers that includes:
 - requirement for inclusion of current medicines in transfer information; and
 - roles, responsibilities and accountabilities of the clinical workforce in the process.
- 2 Introduce a system for recording and generating a record of patients’ current medicines (medicines list) in a standard format that includes the core elements of medicines information (name, dose, route, frequency, indication and duration of therapy) and changes to therapy.
- 3 Provide access to the system from all settings within the organisation. This reduces the risk of miscommunication and medication errors as the patient moves through the service. It also improves the quality of medicines information accompanying the patient between healthcare settings.

The system may be paper-based (e.g. the medicines list section in a manually prepared discharge summary) or electronic. While paper-based systems may fulfil these requirements, they provide greater opportunity for error and can be resource-intensive.
- 4 To enable continuity of supply and access to medicines, introduce work practices and service delivery models that link the production of medicines lists with prescribing processes and medication supply systems.
- 5 Introduce the practice of reconciling medicines when care is transferred. This is particularly important on discharge and will help ensure that discrepancies between current orders (on the NIMC), the admission history, and prescriptions written on discharge are resolved and documented prior to finalisation of the discharge medicines list.
- 6 Implement a process to ensure any changes made to medicines as a result of medication reconciliation, prescription review and dispensing that result in adjustment to the medicines are documented in the discharge summary. Consistency between the medicines list, discharge summary and the patient clinical record will minimise the risk of errors in continuity of management.



Actions required:	Implementation strategies:
4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers	
(continued)	

(continued)

4.12.1 A system is in use that generates and distributes a current and comprehensive list of medicines and explanation of changes in medicines

- 7** Where they exist, link the system for recording the list of medicines to the organisation's electronic discharge summary system and patient identification system (if a comprehensive integrated electronic medication management system is not in place).
- 8** Introduce processes for adding the discharge summary with medicines list to the personally controlled electronic health record (PCEHR) when patients are discharged.
- 9** Consider use of other specific-purpose medication list tools at different transition or handover points. For example the national *Medication Management Plan* (or equivalent form) can be used along with the current NIMC as a communication tool at shift changeover or internal transfer.
- 10** Provide training for clinicians in the use of the system. This may include a multidisciplinary educational program, training on effective clinical handover (Standard 6), the principles of continuity of medication management, and the construction of an accurate, comprehensive list of medicines for clinicians and patients.
- 11** Monitor the use of the system. This could include monitoring the timeliness of information provision, quality of the content, and measuring and evaluating the use of medication lists (see Action 4.12.4).

Outputs of improvement processes may include:

- organisation wide policies, procedures and protocols for clinical handover and patient transfers that:
 - include medication management and require the generation of a comprehensive list of medicines with reasons for any changes for clinicians and patients or carers
 - define the expected standard of practice
 - assign responsibilities for generation and distribution of medicines lists
 - require reconciliation of medicines lists with current medication orders and the admission medication history
- patient clinical records that contain a medicines list and explanation of changes used at handover of care such as transfer or discharge
- handover tools incorporating medicines lists
- audits of discharge summaries containing a list of current medicines and reasons for any changes to therapy
- medicines lists provided to patients on discharge
- education and training program on use of system used to generate the medicines list.

See also outputs noted for Action 4.12.4.

Resources:

Australian Pharmaceutical Advisory Council. *Guiding principles to achieve continuity in medication management*, July 2005. [www.health.gov.au/internet/main/publishing.nsf/content/4182D79CFB23CA2CA25738E001B94C2/\\$File/guiding.pdf](http://www.health.gov.au/internet/main/publishing.nsf/content/4182D79CFB23CA2CA25738E001B94C2/$File/guiding.pdf)

Government of South Australia/SA Health. *Continuity in Medication Management – a Handbook for South Australian Hospitals*, November 2010. www.sahealth.sa.gov.au/wps/wcm/connect/e055bd8044fd8fc2aff7efcfa5ded0ab/Pharmaceutical+Reform+Handbook+V7_Print+version.pdf?MOD=AJPERES&CACHEID=e055bd8044fd8fc2aff7efcfa5ded0ab&CACHE=NONE

WA Department of Health Office of Safety and Quality. *Pharmaceutical Review Policy*. www.safetyandquality.health.wa.gov.au/docs/medication_safety/Pharmaceutical_Review_Policy.pdf

Actions required:	Implementation strategies:
<p>4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers</p> <p style="text-align: right;">(continued)</p>	
<p>(continued)</p> <p>4.12.1 A system is in use that generates and distributes a current and comprehensive list of medicines and explanation of changes in medicines</p>	<p>Australian Commission on Safety and Quality in Health Care. <i>Electronic Medication Management Systems: A Guide to Safe Implementation 2nd edition</i>. www.safetyandquality.gov.au/wp-content/uploads/2011/01/EMMS-A-Guide-to-Safe-Implementation-2nd-Edition-web-version.pdf</p> <p>Australian Commission on Safety and Quality in Health Care. <i>Safety and quality evaluation of electronic discharge summary systems</i> www.safetyandquality.gov.au/our-work/clinical-communications/clinical-handover/safety-and-quality-evaluation-of-electronic-discharge-summary-systems/</p> <p>Australian Commission on Safety and Quality in Health Care <i>Implementation Toolkit for Clinical Handover Improvement</i>, September 2011. www.safetyandquality.gov.au/our-work/clinical-communications/clinical-handover/implementation-toolkit-for-clinical-handover-improvement-and-resource-portal/</p> <p>National <i>Medication Management Plan</i> and implementation resources www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/nmmp/</p> <p>National <i>Inpatient Medication Chart</i> and implementation resources www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/nimc/</p> <p>Society of Hospital Pharmacists of Australia <i>Standard of Practice for Provision of Medication Reconciliation</i>. J Pharm Pract Res 2007;37(3):231-3</p>
<p>4.12.2 A current and comprehensive list of medicines is provided to the patient and/or carer when concluding an episode of care</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Implement a process to provide accurate and comprehensive medicines lists to patients when discharged <p>For patients admitted to day procedure services, such as day surgery units, and where regular medicines are not reviewed as part of the procedure, there is no requirement to provide patients with a current and comprehensive list of medicines. However patients and/or carers must be informed about any new medicines to be taken post-discharge and any changes that have been made to their current therapy.</p> <p>Suggested strategies:</p> <p><i>Hospitals</i></p> <ol style="list-style-type: none"> 1 Implement a policy that requires a complete and accurate discharge medication list and information about any changes to medicines to be provided to patients at discharge. The policy should outline who is responsible for preparing the lists and patients who should receive a list. For example patients over 65 years of age, taking multiple medicines, with changes to their medicines during the admission, suspected of non-adherence or taking high-risk medicines. 2 The medicines list may be handwritten or generated electronically from a discrete module, the pharmacy information system or electronic medication management system. The list should be dated and include active ingredient and brand name of the medicines; reason for use; dose, route, administration schedule and duration of therapy; any changes to medicines taken prior to admission, and contact details for follow up information. (Templates of patient medicines lists are available in English and other languages from NPS: MedicineWise. www.nps.org.au/consumers/tools_and_tips/medicines_list/brochures/medicines_list). Examples of hand written and electronic lists can be found in <i>Continuity in Medication Management: A Handbook for South Australian Hospitals</i>. (See 4.12.1 Resources)



Actions required: **Implementation strategies:**

4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers
(continued)

(continued)
4.12.2 A current and comprehensive list of medicines is provided to the patient and/or carer when concluding an episode of care

- 3** Implement a process whereby the list is developed from the record of medication prescribed and dispensed for discharge after the medicines have been reviewed and reconciled. (See also criterion on Documentation of patient information, Action 4.8.2.) Consistency between the medicines list, discharge summary and the patient clinical record will minimise the risk of errors in continuity of management.
- 4** Introduce work practices that encourage workforce to prepare the list in partnership with the patient or their carer taking into consideration their usual routine for managing their medicines, and any specific requirements to manage their medicines and assist with adherence.
- 5** Introduce work practices that enable timely production of medicines lists so that the list can be provided to the patient at the time of transfer/discharge. Such practices could include multidisciplinary planning for transfer or discharge.
- 6** Institute practices whereby a clinician (usually a pharmacist) provides the medicines list to the patient and carer and discusses with the patient and carer their current medicines, any changes made to their medicines, the purpose and use of the list, and other relevant written materials provided (such as consumer medicines information (CMI) for new medicines).
- 7** Encourage patients to keep a current list of their medicines and take to their healthcare professionals each visit and when they go into hospital. Lists can be manual or electronic (e.g. smartphone app available from NPS MedicineWise). This could be done through use of brochures, posters, or inclusion in patient information handbook.
- 8** Implement procedures for transferring the medicines list and discharge summary information to patient's Patient Controlled Electronic Health Record, where this functionality is available through electronic systems.

Day procedure services

- 1** Implement a policy whereby patients and carers are informed about any medicines they are required to take post discharge and any changes made to their regular medicines.

When medicines are supplied by the service, such as by pre-packed medicines, patients should be counselled on how to take the medicines, and written information provided such as consumer medicines information. When the patient is provided with a prescription to be dispensed in a community pharmacy, they should be informed about what the medicines is for, how often it is to be taken/used and for how long. Consumer medicines information should be provided by the dispensing pharmacist. When appropriate, consumer medicines information can be provided by day procedure services.
- 2** When changes have been made to a patient's current therapy they must be informed about the changes and, if they have a medicines list, the medicines list is updated to reflect the changes.

Outputs of improvement processes may include:

- discharge planning framework, work unit protocols or guidelines that include the roles, responsibilities and accountabilities of the workforce
- policy, procedures and/or protocols on provision of medicines lists to patients and carers
- documented record that a medicines list has been provided to the patient and carer

Actions required:	Implementation strategies:
<p>4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers</p> <p style="text-align: right;">(continued)</p>	
<p>(continued)</p> <p>4.12.2 A current and comprehensive list of medicines is provided to the patient and/or carer when concluding an episode of care</p>	<ul style="list-style-type: none"> • reports on number of patients provided with a medicines list on discharge. This could be generated through the pharmacy information system • examples of medicines lists provided to patients on discharge. <p>Resources:</p> <p>See Action 4.12.1</p> <p>Medication reconciliation consumer resources. www.safetyandquality.gov.au/our-work/medication-safety/</p> <p>NPS MedicineWise. Medicines List. www.nps.org.au/consumers/tools_and_tips/medicines_list</p>
<p>4.12.3 A current comprehensive list of medicines is provided to the receiving clinician during clinical handover</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Incorporate medication management and the use of medicines lists into clinical handover procedures where transfer of care occurs <p>Suggested strategies:</p> <p><i>Hospitals</i></p> <ol style="list-style-type: none"> 1 Include medication management, and the communication of an accurate and comprehensive list of medicines, in clinical handover procedures. This will assist ongoing care and decision making and reduce opportunities for medication errors (refer also to Standard 6). 2 Include key elements relating to medication in clinical handover such as identifying high-risk patients, identifying high-risk medications and noting priorities for maintenance of treatment and achieving patient treatment goals. <p><i>On discharge to community</i></p> <ol style="list-style-type: none"> 3 Institute work practices which require an accurate record of the patient's medicines to be taken on discharge. This must be generated and supplied to the patient's nominated community care providers such as the patient's general practitioner, community pharmacy, residential care provider or other healthcare provider. 4 Implement processes which provide the medicines information in a standard format (discharge summary, either paper or electronic) and that includes the core elements of medicines information (name, dose, frequency, indication and duration of therapy) and an explanation of any changes made to therapy during the episode of care. The information should include clear instructions for ongoing care and follow up requirements where relevant (such as who is responsible for ongoing management of specific medicines (e.g. warfarin), medicines to be reviewed, specific monitoring requirements, duration for time-limited courses of treatment, and requirement for a home medicines review or a dose administration aid). 5 Introduce processes to validate the content and accuracy of the list of medicines in the discharge summary with the medicines dispensed on discharge. Any changes made to discharge medicines as a result of prescription review and medication reconciliation that result in changes to the medicines list, should be documented in the discharge summary. Consistency between the medicines list provided to the



Actions required: **Implementation strategies:**

4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers (continued)

(continued)

4.12.3 A current comprehensive list of medicines is provided to the receiving clinician during clinical handover

5 (continued)

patient, the medicines list in the discharge summary and the patient clinical record will minimise the risk of subsequent error in continuity of medication management.

Timeliness of information is essential for clinical handover at discharge and when ongoing care is transferred to an external clinician.

6 Implement systems to transfer medicines list electronically and other discharge information to the patient’s general practitioner and community pharmacy.

7 Incorporate the process of obtaining informed consent for transfer of medicines information to general practitioners and community pharmacists into standard work practices. This will minimise delays in handover.

8 Implement procedures for transferring the medicines list and discharge summary information to the Patient Controlled Electronic Health Record when this functionality is available through electronic systems.

Transfer to another institution

9 Implement a standard procedure for transferring a list of current medicines and reasons for any medication changes when transferring patients to other institutions. This could take the form of an electronic transfer summary or a copy of the current NIMC and *Medication Management Plan* (or equivalent record).

Transfer to residential care facilities

The clinical handover may also require additional documentation to be provided in specific situations such as residential care facilities.

In addition to supplying the medicines list in the discharge summary, health service organisations may consider introducing an interim medication chart for patients transferring to residential care facilities, to ensure continuity of administration of medication.

www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/national-interim-residential-medication-administration-chart/

Day procedure services

1 Implement a policy of providing discharge summaries to receiving clinicians which include new medicines prescribed on discharge, any changes made to regular medicines and reasons for these changes, and who is responsible for any specific monitoring requirements (e.g. warfarin management). The information should be provided in a standard format.

Outputs of improvement processes may include:

- example of discharge summaries that show a current list of medicines including reasons for changes
- audit of patient clinical records to identify the proportion of transfer/discharge summaries that contain a current comprehensive list of medicines, medication therapy changes and explanations for changes when medicines changed during the episode of care
- use of indicators e.g. indicator 5.3 in *Indicators for Quality Use of Medicines in Australian Hospitals* or jurisdictional indicators

Actions required:	Implementation strategies:
<p>4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers</p> <p style="text-align: right;">(continued)</p>	
<p>(continued)</p> <p>4.12.3 A current comprehensive list of medicines is provided to the receiving clinician during clinical handover</p>	<ul style="list-style-type: none"> • use of relevant indicators from <i>Appendix G: Potential Safety and Quality Measures: Electronic Discharge Summary Systems: Self Evaluation Toolkit</i> www.safetyandquality.gov.au/wp-content/uploads/2011/01/EMMS-A-Guide-to-Safe-Implementation-2nd-Edition-web-version.pdf • audit of medicines lists and information provided electronically that have been stored in the Personally Controlled Electronic Health Record. <p>Resources:</p> <p>See Item 4.12.1.</p>
<p>4.12.4 Action is taken to increase the proportion of patients and receiving clinicians that are provided with a current comprehensive list of medicines during clinical handover</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Regularly monitor the organisation’s performance in communicating accurate and current medicines information using indicators and quality improvement measures, and take action to address any issues identified <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Include monitoring the performance of the provision of medication lists in the health service organisation’s quality improvement plan and governance framework. 2 Conduct audits, or obtain data from electronic systems used to generate medication lists, to report on quality indicators that can be used to drive practice improvement. For example, the continuity of care indicators in <i>Indicators for Quality Use of Medicines in Australian Hospitals</i>. 3 Conduct and report on audits of: <ul style="list-style-type: none"> • clinical handover incidents related to inaccurate medicines lists • discharge summaries with inaccurate or incomplete medicines information • medicines information provided electronically that has been stored in the Personally Controlled Electronic Health Record. 4 Identify actions to improve areas of poor performance and include in the quality improvement plan. 5 Obtain feedback from clinicians and/or patients on the quality, clarity and timeliness of medicines lists. 6 Participate in collaborative projects with community providers and Medicare Locals to improve the system including service enhancements. <p>Note: For patients admitted to day procedure services where regular medicines are not reviewed as part of the procedure, there is no requirement to provide a comprehensive list of medicines.</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • agenda papers, meeting minutes and/or reports of relevant committees that detail improvement actions taken • completed audits using relevant indicators, such as: <ul style="list-style-type: none"> – <i>Indicators for Quality Use of Medicines in Australian Hospitals</i>: Indicator Set: Continuity of Care 5.1-5.7



Actions required: **Implementation strategies:**

4.12 Ensuring a current comprehensive list of medicines, and the reason(s) for any change, is provided to the receiving clinician and the patient during clinical handovers
(continued)

(continued)

4.12.4 Action is taken to increase the proportion of patients and receiving clinicians that are provided with a current comprehensive list of medicines during clinical handover

- *Continuity in Medication Management: A Handbook for South Australian Hospitals* November 2010. Appendix 3: SA APAC Key Performance Indicators
 - Results of *Medication Safety Self Assessment® for Australian Hospitals* – (Key Element 2: Drug Information, and Key Element 3: Communication of Drug Orders and other Drug Information) and actions identified to address any issues identified
 - quality improvement plan includes actions to address issues identified
 - audit of information provided electronically stored in the Personally Controlled Electronic Health Record
 - examples of improvement activities that have been implemented and evaluated
 - communication material developed for the workforce and patients and carers.
- Resources:**
See Action 4.12.1
- NSW Therapeutic Advisory Group. *Indicators for Quality Use of Medicines in Australian Hospitals*. Indicator Set: Continuity of Care 5.1-5.7.
www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf
- SA Health. *Continuity in Medication Management – a Handbook for South Australian Hospitals* November 2010. Appendix 3: SA APAC Key Performance Indicators.
www.sahealth.sa.gov.au/wps/wcm/connect/e055bd8044fd8fc2aff7efcfa5ded0ab/Pharmaceutical+Reform+Handbook+V7_Print+version.pdf?MOD=AJPERES&CACHEID=e055bd8044fd8fc2aff7efcfa5ded0ab
- WA Department of Health – Office of Safety and Quality: *Pharmaceutical Review Policy*, March 2007.
www.safetyandquality.health.wa.gov.au/medication/pharmaceutical_review.cfm
- Policy:*
- [Pharmaceutical Review Policy](#)
 - [Pharmaceutical Review Policy \(Operational Directive 0039/07\)](#)
- Auditing:*
- [Process of Pharmaceutical Review Baseline Audit Report \(September 2008\)](#)
 - [2010 Audit Resources](#)
 - [Process of Pharmaceutical Review Follow-up Audit Report \(November 2011\)](#)
- SQuIRe Plus Guide: Medication Reconciliation Audit Tool*, January 2012.
www.safetyandquality.health.wa.gov.au/docs/squire/Medication_Reconciliation_Audit_Tool_Guidelines.pdf
- WA Medication Safety Group. *High-risk Settings – Transition of Care*.
www.watag.org.au/wamsg/high-risk-settings.cfm
- SHPA *Standards of Practice for the Provision of Medication Reconciliation*.
www.shpa.org.au/lib/pdf/practice_standards/med_reconciliation_ro.pdf
- SHPA *Quick Guide Facilitating discharge and transfer*.
www.shpa.org.au/lib/pdf/practice_standards/QG-discharge_transfer_ro.pdf
- SHPA *Quick Guide Medication Reconciliation*.
www.shpa.org.au/lib/pdf/practice_standards/QG-Medication_reconciliation_ro.pdf
- National Patient Safety Agency (UK). *Technical patient safety solutions for medicines reconciliation on admission of adults to hospital*, 2007.
www.nice.org.uk/nicemedia/pdf/PSG001Guidance.pdf



Standard 4

Criterion: Communicating with patients and carers

The clinical workforce informs patients about their options, risks and responsibilities for an agreed medication management plan

Within the medication management cycle there are multiple points where communication and focused engagement with the patient and/or their carer can contribute positively to achieving the best treatment outcome.

Appropriate education and the provision of written medicines information to patients and carers is a multidisciplinary responsibility that supports the patient to make informed choices about their medicines, and to achieve adherence with agreed treatments. This may include a discussion about treatment options and the risks and benefits of different treatments using written consumer medicines information (CMI) to help inform the patient when new medicines are being considered. Or, on discharge from hospital, the supply of a medicines list (or profile) along with verbal and written information about any new medicines and a clear explanation of any changes to medicines taken prior to admission.

When provided with quality information and education about medicines many patients are able to:

- participate in decision making, taking into account the options, benefits and risks of the proposed treatment
- assist in the reconciliation of medicines and prevention of errors by identifying medication-related problems
- alert the healthcare team to suspected adverse reactions.

Reported evidence indicates that patient adherence with prescribed medication is typically around 30–50%.⁴⁹ Strategies that concentrate on improving adherence are more likely to succeed through a collaborative partnership approach with the patient. Effective communication is particularly important at times where there is a higher risk of medication error. For example:

- on admission, to achieve accurate reconciliation of medicines
- during an episode of care, when
 - planning treatment to establish an agreed medication management plan
 - making changes to medication to implement an agreed plan
 - the patient's condition changes necessitating changes to medication e.g. patient experiences difficulty swallowing

- at discharge, to ensure the patient understands:
 - how to take their medicines correctly and safely
 - the changes that have been made to medicines, to avoid confusion with medicines taken prior to admission
 - specific factors that can result in medication errors post discharge, such as different brand names, duration of treatment, ongoing access to medicines, follow up requirements (monitoring tests), storage, need for dose administration aid
 - how to access medication-related resources after discharge.

To assist clinicians communicate with patients, clinical practice areas need to be equipped with up-to-date resources that can be used to provide timely information to patients to support discussion, planning and decision making. The range of resources available should meet the needs of patients with specific requirements, for example, multilingual versions of written information, access to an interpreter for culturally and linguistically diverse patients.

Establishing and documenting a medication management plan creates a reference point for decision making, and becomes an important communication tool for members of the healthcare team and the patient. The plan should be available in the patient's clinical record – this may be as clinical notes, or preferably within a standard form.

In addition to medication-specific information, providing guidance to patients on questions to ask healthcare providers about medicines, and ensuring there is an opportunity for clarifying information and advice, can improve the patient experience and health outcomes, and potentially avert errors.

Giving patients the opportunity to provide feedback about the medicines information they receive, provides the organisation with the opportunity to implement improvements where deficiencies are identified.



Actions required:

Implementation strategies:

4.13 The clinical workforce informing patients and carers about medication treatment options, benefits and associated risks

4.13.1 The clinical workforce provides patients with patient specific medicine information, including medication treatment options, benefits and associated risks

Key task:

- **Implement systems that support the provision of patient specific medicines information when medication treatment options are discussed**

Patients and carers should be provided with sufficient information about treatment options for them to make informed choices about their medicines, and to achieve adherence with agreed treatment plans. Information should be provided in a form that can be used and understood. The benefits and associated risks of any medicines should be discussed and patient-specific written information such as consumer medicines information used to help inform the patient about the medicine.

Providing medicines information is a multidisciplinary responsibility.

Read this section in conjunction with *Standard 2: Partnering with Consumers* and Standard 4: Action 4.12.2

Suggested strategies:

- 1 Include in policies, procedures, protocols or guidelines the requirement to:
 - provide medicines information to patients and carers as part of the clinical consultation, using written information (e.g. consumer medicines information) where relevant to help inform the patient about any new medicine
 - document in the clinical record that patients and carers have been informed about the medicine.
- 2 Identify written information resources that are suitable to provide to patients and carers, and make these accessible in clinical areas. Resources may include:
 - consumer medicines information
 - supplementary consumer information and resources such as brochures or fact sheets for specific medications, for example anticoagulants, chemotherapy, or for specific disease states.
- 3 Refer patients and carers to education programs that include medication information, for example cardiac rehabilitation programs, chemotherapy education sessions for oncology and/or haematology patients and carers.
- 4 Develop patient information materials to address a specific need, and have these endorsed by the organisation's medication safety governance group.
- 5 Provide a package to patients and carers on discharge that contains relevant medicine information such as consumer medicines information, a medicines list with active ingredient name and brand name(s) of each medicine and explanations of any changes, a Medication Management (Action) Plan, and information about future supply of the medicine (not relevant to day procedure services).
- 6 Review policies governing patient consent to include specific situations that require patients to provide informed consent in relation to medication treatment (for example, Special Access Scheme medicines, off-label use of medicines).
- 7 Include a section on medicines in patient information brochures about general health service organisation's care and services, and patient charter documents to inform them that medication treatment options will be discussed and information provided about medicines prescribed.
- 8 Evaluate provision of medicines information to patients and carers through audit of clinical records and provide feedback to clinical workforce.

Actions required:	Implementation strategies:
<p>4.13 The clinical workforce informing patients and carers about medication treatment options, benefits and associated risks</p> <p>(continued)</p> <p>4.13.1 The clinical workforce provides patients with patient specific medicine information, including medication treatment options, benefits and associated risks</p>	<p>(continued)</p> <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • policies, procedures and/or protocols that define the roles, responsibilities and accountabilities of the clinical workforce in informing patients and carers about medication treatment options, benefits and associated risks • patients' clinical record that shows patient-specific information was provided to patients and carers • records of patient education provided such as information on chemotherapy to oncology and/or haematology patients and carers • results of audits to evaluate the provision of medicines information and feedback provided to clinical workforce • patient and carer education material such as brochures, fact sheets, posters, links to trusted web sites • completed <i>Medication Safety Self Assessment® for Australian Hospitals</i>: Key Element 9: Patient Education • use of indicators such as indicators 5.4, 5.5, 5.6 <i>Indicators for Quality Use of Medicines in Australian Hospitals</i> or jurisdictional indicators. <p>Resources:</p> <p>Australian Pharmaceutical Advisory Council. <i>Guiding Principles to achieve continuity in medication management July 2005</i>. Principles 6 and 7. www.health.gov.au/internet/main/publishing.nsf/content/4182D79CFCB23CA2CA25738E001B94C2/\$File/guiding.pdf</p> <p>Clinical Excellence Commission, NSW Therapeutic Advisory Group Inc., ISMP <i>Medication Safety Self Assessment® for Australian Hospitals, 2007</i>. www.cec.health.nsw.gov.au/programs/mssa</p> <p>WA Health Consumers' Council. <i>Patient First Guide</i>, March 2012. www.health.wa.gov.au/docreg/education/population/OA004305_patient_first_book.pdf</p> <p>NSW Therapeutic Advisory Group. <i>Indicators for Quality Use of Medicines in Australian Hospitals, 2007</i>. www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf</p> <p>SA Health. <i>Continuity in Medication Management – a Handbook for South Australian Hospitals</i>, November 2010. www.sahealth.sa.gov.au/wps/wcm/connect/e055bd8044fd8fc2aff7efcfa5ded0ab/Pharmaceutical+Reform+Handbook+V7_Print+version.pdf?MOD=AJPERES&CACHEID=e055bd8044fd8fc2aff7efcfa5ded0ab&CACHE=NONE</p> <p>Agency for Healthcare Research and Quality. <i>Engaging Patients and Families in the Quality and Safety of Hospital Care</i>, June 2012. www.ahrq.gov/qual/engagingptfam.htm</p>
<p>4.13.2 Information that is designed for distribution to patients is readily available to the clinical workforce</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Maintain up-to-date medicines information tools and resources that can be accessed by the clinical workforce at the point of care to generate materials for patients <p>The availability of up-to-date resources in clinical practice areas enables timely provision of information to patients and carers to support discussion, planning and decision making.</p> <p>Suggested strategies:</p> <ol style="list-style-type: none"> 1 Provide access to patient information in clinical areas (see Action 4.13.1).



Actions required:	Implementation strategies:
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4.13 The clinical workforce informing patients and carers about medication treatment options, benefits and associated risks	(continued)
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<p><i>(continued)</i></p> <p>4.13.2 Information that is designed for distribution to patients is readily available to the clinical workforce</p>	<ol style="list-style-type: none"> 2 Promote the use of patient information resources to the clinical workforce using communication strategies such as newsletters, presentations, inservice education sessions, awareness campaigns. 3 Implement systems for maintaining resources, including: <ul style="list-style-type: none"> • procedures for electronic publishing and updates • communication and distribution of updates • distribution process and method for retrieval and rescinding of superseded information. 4 Evaluate content and usefulness of resources by obtaining feedback from clinicians. 5 Audit clinical records to assess that medicines information has been provided to patients and carers and that this has been documented. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> • materials used in patient and carer education such as brochures, fact sheets, posters, links to trusted web sites • patient-specific medicines information, including consumer medicines information, is available in the workplace electronically or in hard copy • patients' clinical record that documents the provision of patient-specific medicines information such as consumer medicines information • patient survey information on the provision of information on high-risk medicines such as warfarin, diabetes medicines, cardiac medicines • audit of NIMC of patients on warfarin documented as receiving warfarin booklet/information • survey of clinical workforce about the content and use of patient medicines information resources.
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4.14 Developing a medication management plan in partnership with patients and carers

<p>4.14.1 An agreed medication management plan is documented and available in the patient's clinical record</p>	<p>Key task:</p> <ul style="list-style-type: none"> • Undertake assessment of the patient's risks for medication management misadventure • Use the assessment to develop a medication management (action) plan that establishes treatment goals and specifies evidence-based actions required to achieve medication management goals <p>Plans for medication management should be developed in consultation and partnership with patients and carers. Refer also to <i>Standard 2: Partnering with Consumers</i>. Documenting the medication management (action) plan provides a reference point for decision making, and is an important communication tool for members of the healthcare team and the patient. Not all patients will require a medication management plan.</p> <p>Note: This medication management plan does not refer to the National <i>Medication Management Plan</i> (MMP) used to record patient histories and medication reconciliation. It aligns with the Medication Action Plan described in the APAC <i>Guiding principles to achieve continuity in medication management</i>.⁸</p> <p>This action is not a requirement for day surgery services. However patients attending day procedure units, such as renal dialysis services or chemotherapy clinics, should be provided with a medication management plan.</p>
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Actions required:	Implementation strategies:
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4.14 Developing a medication management plan in partnership with patients and carers (continued)	
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(continued)

4.14.1 An agreed medication management plan is documented and available in the patient's clinical record

Suggested strategies:

- 1 Standardise documentation of the medication management (action) plan, for example using an authorised template that includes:
 - medication treatment goals
 - patient-specific factors, such as ability to self-administer medication, need for support services to assist with medication, appropriateness of dose forms, strategies to maximise adherence with treatment

Much of this information can be gathered from the information recorded in the medication risk assessment section of the MMP on admission and used to formulate the plan

 - actions to address issues identified.
- 2 Implement policies, procedures or guidelines that define who is responsible for creating the plan, modifying the plan and when it should be reviewed.
- 3 Ensure that the plan is communicated to the patient, and with the patient's consent to other relevant healthcare professionals, including the plan for medicines to be continued post discharge (see Action 4.12.2).
- 4 Implement procedures for transferring the medication management (action) plan to the Patient Controlled Electronic Health Record when this functionality is available through electronic systems.
- 5 Use the medication management (action) plan in conjunction with other medicines information records such as patients' medicines lists provided on discharge, discharge summaries to achieve consistency of information and continuity of care (refer to Continuity of medication management criterion).
- 6 Retain a copy of the plan in the patient's medical record.

Outputs of improvement processes may include:

- policy, procedures, and/or protocols are in place for creating and documenting a medication management (action) plan
- audit of patient clinical records relating to patients with a completed medication management (action) plan
- patient clinical records that show written information was provided on new medicines and medicines to be continued by the patient post discharge.

Resources:

Australian Pharmaceutical Advisory Council. *Guiding Principles to achieve continuity in medication management*, July 2005.
[www.health.gov.au/internet/main/publishing.nsf/content/4182D79CFCB23CA2CA25738E001B94C2/\\$File/guiding.pdf](http://www.health.gov.au/internet/main/publishing.nsf/content/4182D79CFCB23CA2CA25738E001B94C2/$File/guiding.pdf)

National Medication Management Plan and implementation resources.
www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/nmmp/

SHPA Standards of Practice for Clinical Pharmacy. *J Pharm Pract Res* 2005; 35 (2): 122-46



Actions required:

Implementation strategies:

4.15 Providing current medicines information to patients in a format that meets their needs whenever new medicines are prescribed and dispensed

4.15.1 Information on medicines is provided to patients and carers in a format that is understood and meaningful

Key task:

- **Identify medicines information resources that are in a form that can be used and understood, and use to inform patients and carers about new medicines and/or changes to their medicines.**

Patients and carers need to be provided with information in a form they understand and can use if they are to use their medicines safely and effectively.

Note: Read this section in conjunction with Standard 2, and Action 1.18.3.

Suggested strategies:

- 1 Strategies may include those covering Actions 4.12.2 and 4.13.1.
- 2 Develop policies governing the provision of information in situations where communication with the patient may not be possible, due to the acuteness of their condition, or where an interpreter may be required to assist.
- 3 Provide access to interpreters where patients cannot communicate in English whenever medicines are discussed and information provided, including counselling on discharge.
- 4 Provide patients and carers with a list of medicines to be taken when discharged that includes information about changes to medicines taken prior to admission prepared in a format that is easy to follow (see Action 4.12.2).
- 5 Provide medicines information and medicines lists to culturally and linguistically diverse patients in their own language if available. **Note:** the NPS provides copies of their Medicines List and other medicines information in several languages (see Resources).
- 6 Audit clinical records to assess that medicines information has been provided to patients and carers for new medicines and changes to medicines, and that this has been documented in the clinical record.
- 7 Provide a mechanism for patients to give feedback about the medicines information they receive during an episode of care.
- 8 Seek feedback on medicines information resources, for example, include questions about medicines information in patient experience surveys.

Outputs of improvement processes may include:

- patient clinical records that show patient and carer information was provided for any changes to medicines during the episode of care
- records of consumer medicines information provided
- results of patient experience survey on medicines information provided, and feedback provided to workforce
- patient and carer education programs are provided on medication such as cardiac rehabilitation programs, chemotherapy education sessions for oncology and/or haematology patients and carers
- records of patients and carers attendance at education sessions.

Resources:

See Action 4.12.2.

Actions required:	Implementation strategies:
4.15 Providing current medicines information to patients in a format that meets their needs whenever new medicines are prescribed and dispensed (continued)	
<p>(continued)</p> <p>4.15.1 Information on medicines is provided to patients and carers in a format that is understood and meaningful</p>	<p>NPS MedicineWise. <i>Medicines information for everyone</i>. www.nps.org.au/consumers</p> <p>NPS MedicineWise. Medicines List. www.nps.org.au/consumers/tools_and_tips/medicines_list</p> <p>WA Health Consumers' Council: Patient First Guide, March 2012. www.health.wa.gov.au/docreg/education/population/OA004305_patient_first_book.pdf</p> <p>SHPA Standards of Practice for the Provision of Consumer Product Information by Pharmacists in Hospitals. <i>J Pharm Pract Res</i> 2007; 37 (1): 56-8</p> <p>Institute of Safe Medication Practices Consumer web site. www.ismp.org/consumers/default.asp and www.consumermedsafety.org</p>
<p>4.15.2 Action is taken in response to patient feedback to improve medicines information distributed by the health service organisation to patients</p>	<p>Key task:</p> <ul style="list-style-type: none"> Based on feedback received from patients (Action 4.15.1), develop and/or modify medicines information resources and work practices to better meet patient needs <p>Suggested strategies:</p> <ol style="list-style-type: none"> Use reports from strategies undertaken in Action 4.15.1 to modify and/or develop, or improve access to, medicines information materials, and have these endorsed by the medication safety governance group. Review complaints and compliments received, and medication incident reports related to patient understanding of medicines information, to identify opportunities for improvement. Provide patients and carers with a contact to access additional information and/or discuss any concerns about their medication management plan and medicines information. Include consumer representation on membership of relevant committees. <p>Outputs of improvement processes may include:</p> <ul style="list-style-type: none"> relevant documentation from committees that detail improvement actions taken examples of improvement activities that have been implemented and evaluated to improve access to, and quality of, medicines information provided to patients and carers communication material developed for workforce and patients and carers. <p>Resources:</p> <p>Australian Pharmaceutical Advisory Council. <i>Guiding Principles to achieve continuity in medication management</i>, July 2005. www.health.gov.au/internet/main/publishing.nsf/content/4182D79CFCB23CA2CA25738E001B94C2/\$File/guiding.pdf</p> <p>SA Health. <i>Continuity in Medication Management: A Handbook for South Australian Hospitals</i>, November 2010.</p> <p>WA Health Office of Safety and Quality in Healthcare. <i>Pharmaceutical Review Policy</i>, March 2007.</p> <p>WA Health Consumers' Council. <i>Patient First Guide</i>, March 2012. www.health.wa.gov.au/docreg/education/population/OA004305_patient_first_book.pdf</p> <p>SHPA Standards of Practice for the Provision of Consumer Medicines Information by Pharmacists in Hospitals. <i>J Pharm Pract Res</i> 2007; 37 (1): 56-8</p>

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27. World Health Organization. *Improving Medication Safety. WHO Patient Safety Curriculum Guide: Multiprofessional Edition*. 2011.
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Appendix: Links to resources

International organisations

Agency for Healthcare Research and Quality
www.ahrq.gov

Canadian Patient Safety Institute
www.patientsafetyinstitute.ca

Health Quality and Safety Commission New Zealand
www.hqsc.govt.nz

Institute for Healthcare Improvement
www.ihl.org

National Patient Safety Agency
www.npsa.nhs.uk

National Institute for Health and Clinical Excellence
www.nice.org.uk

Patient Safety First
www.patientsafetyfirst.nhs.uk

Picker Institute
www.pickerinstitute.org

International medication safety organisations

Institute for Safe Medication Practices (USA)
www.ismp.org/

Institute for Safe Medication Practices Canada
www.ismp-canada.org/

Health Quality and Safety Commission New Zealand – Medication Safety
www.hqsc.govt.nz/our-programmes/medication-safety/

UK National Patient Safety Agency – Medication Safety
www.nrls.npsa.nhs.uk/resources/patient-safety-topics/medication-safety/

National organisations

Advisory Committee on the Safety of Medicines
www.tga.gov.au/about/committees-acsom.htm

Australian Commission on Safety and Quality in Healthcare
www.safetyandquality.gov.au

Council of Australian Therapeutic Advisory Groups
www.catag.com.au/

Commonwealth Department of Health and Ageing
www.health.gov.au

National E-Health Transition Authority
www.nehta.gov.au/

NPS MedicineWise
www.nps.org.au

Pharmaceutical Society of Australia
www.psa.org.au/

Society of Hospital Pharmacists of Australia
www.shpa.org.au

Therapeutic Goods Administration
www.tga.gov.au/

Women's Healthcare and Children's Healthcare Australasia
www.wcha.asn.au/

State and territory organisations

ACT Health
www.health.act.gov.au

NSW Department of Health
www.health.nsw.gov.au

NSW Clinical Excellence Commission
www.cec.health.nsw.gov.au

Northern Territory Department of Health and Families
www.health.nt.gov.au

Queensland Health
www.health.qld.gov.au

Patient Safety and Quality Improvement Service
www.health.qld.gov.au/chi/psq/

SA Health
www.sahealth.sa.gov.au

Department of Health and Human Services Tasmania
www.dhhs.tas.gov.au

Department of Health Victoria
www.health.vic.gov.au

Victorian Quality Council
www.health.vic.gov.au/qualitycouncil/index.htm

Western Australian Department of Health
www.health.wa.gov.au

Office of Quality and Safety Western Australian Department of Health
www.safetyandquality.health.wa.gov.au



State and territory medication safety committees/sites

New South Wales Clinical Excellence Commission Medication Safety

<http://www.cec.health.nsw.gov.au/programs/medication-safety>

Victorian Health Department Quality Use of Medicines
www.health.vic.gov.au/qum/index.htm

Western Australian Department of Health Medication Safety
www.safetyandquality.health.wa.gov.au/medication/index.cfm

South Australian Health Medication Safety
www.sahealth.sa.gov.au/medicationsafety

State and territory therapeutic advisory groups

NSW Therapeutic Advisory Group
www.ciap.health.nsw.gov.au/nswtag/

Victorian Therapeutic Advisory
www.victag.org.au/

Western Australian Therapeutic Advisory Group
www.watag.org.au/home/

Change improvement

Australian Resource Centre for Healthcare Innovations
www.archi.net.au/resources/moc/making-change

Institute for Healthcare Improvement:
Register at www.ihl.org (free), and then log in so that you can access resources on the IHI website

- Change improvement white paper
- Engaging physicians in quality improvement

National Health and Medical Research Council, barriers to using evidence
www.nhmrc.gov.au/nics/materials-and-resources/materials-and-resources-subject/-subject-barriers-using-evidence

National Health and Medical Research Council, implementing guidelines
www.nhmrc.gov.au/nics/materials-and-resources/materials-and-resources-subject/-subject-guideline-implementation

Clinical governance

National Health Service (UK), Patient involvement and public accountability: a report from the NHS future forum
www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_127544.pdf

Queensland Health, Clinical governance resources
www.health.qld.gov.au/psq/governance/webpages/gov_frame.asp

Victorian Healthcare Association, Clinical governance resources
www.vha.org.au/clinicalgovernanceresources.html
www.vha.org.au/clinicalgovernance.html

Victorian Quality Council, Clinical governance guides, resources and tools
www.health.vic.gov.au/qualitycouncil/pub/improve/index.htm#_Clinical_governance
www.health.vic.gov.au/qualitycouncil/downloads/clingov_clin.pdf
www.health.vic.gov.au/qualitycouncil/downloads/clingov_exec.pdf

Audit, indicators and assessment tools

Canadian Patient Safety Institute. Safer Healthcare Now! Medication reconciliation Measures
www.saferhealthcarenow.ca/EN/Interventions/medrec/Pages/measurement.aspx

Clinical Excellence Commission, NSW Therapeutic Advisory Group Inc. Medication Safety Self Assessment[®] for Australian Hospitals, 2007
https://mssa.cec.health.nsw.gov.au/MSSA_introduction.html

Clinical Excellence Commission, NSW Therapeutic Advisory Group Inc Medication Safety Self Assessment[®] for Antithrombotic Therapy in Australian Hospitals
http://mssa.cec.health.nsw.gov.au/at2/MSSAT_introduction.html

Continuity in Medication Management: A Handbook for South Australian Hospitals November 2010. Appendix 3: SA APAC Key Performance Indicators.
www.sahealth.sa.gov.au/wps/wcm/connect/e055bd8044fd8fc2aff7efcfa5ded0ab/Pharmaceutical+Reform+Handbook+V7_Print+version.pdf?MOD=AJPERES&CACHEID=e055bd8044fd8fc2aff7efcfa5ded0ab

Institute for Healthcare Improvement Failure Modes and Effects Analysis Template
www.ihl.org/knowledge/Pages/Tools/FailureModesandEffectsAnalysisTool.aspx

ISMP Canada: International Medication Safety Self Assessment for Oncology 2012
www.cec.health.nsw.gov.au/programs/mssa

NSW Therapeutic Advisory Group. Indicators for Quality Use of Medicines in Australian Hospitals
www.ciap.health.nsw.gov.au/nswtag/documents/publications/QUMIndicators/Manual0408.pdf

Appendix: Links to resources (continued)

SQIRe Plus Guide: Medication Reconciliation Audit Tool January 2012

www.safetyandquality.health.wa.gov.au/docs/squire/Medication_Reconciliation_Audit_Tool_Guidelines.pdf

Trigger systems

Institute for Healthcare Improvement:

IHI *Global Trigger Tool for Measuring Adverse Events*
Register at www.ihl.org (free), then log in so that you can access resources freely on the IHI web site.

Education resources

National Medication Management Plan Flash training tool with audio voice over

www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/nmmp/

National Inpatient Medication Chart on line training course

www.nps.org.au/health_professionals/online_learning/NIMC

Australian Commission on Safety and Quality in Health Care, NPS MedicineWise *Antimicrobial modules*

www.nps.org.au/health_professionals/online_learning

NPS MedicineWise, *National Prescribing Curriculum on line training*

www.nps.org.au/health_professionals/online_learning/national_prescribing_curriculum

NPS MedicineWise, NSW Therapeutic Advisory Group *Medication Safety e-Learning Modules*

www.nps.org.au/health_professionals/online_learning/medication_safety

NPS MedicineWise, *Quality use of medicines on line training courses*

www.nps.org.au/health_professionals/online_learning/qum

World Health Organization. *Improving Medication Safety. WHO Patient Safety Curriculum Guide: Multiprofessional Edition*, 2011.

http://whqlibdoc.who.int/publications/2011/9789241501958_eng.pdf

Patient and carer tools and resources

Medication reconciliation consumer resources

www.safetyandquality.gov.au/our-work/medication-safety/

Institute of Safe Medication Practices Consumer web site

www.ismp.org/consumers/default.asp and www.consumermedsafety.org

NPS MedicineWise. Medicines information for consumers

www.nps.org.au/consumers

WA Health Consumers' Council: Patient First Guide (March 2012)

www.health.wa.gov.au/docreg/education/population/OA004305_patient_first_book.pdf

Patient-centred communication

Agency for Healthcare Research and Quality, Engaging Patients and Families in the Quality and Safety of Hospital Care

www.ahrq.gov/qual/engagingptfam.htm

Australian Commission on Safety and Quality in Health Care, *Patient-centred care: improving quality and safety through partnerships with patients and consumers*

www.safetyandquality.gov.au

Clinical Excellence Commission, *Partnering with patients program*

www.cec.health.nsw.gov.au/programs/partnering-with-patients#overview

Planetree and Picker Institute, Patient-Centered Care Improvement Guide

www.patient-centeredcare.org/inside/practical.html#common

Joint Commission, Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care

www.jointcommission.org/assets/1/6/ARoadmapforHospitalsfinalversion727.pdf

Joint Commission, resources related to effective communication

www.jointcommission.org/assets/1/6/EffectiveCommunicationResourcesforHCOsrevised.pdf

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