Pharmaceutical Society of Australia

Guidelines for pharmacists administering medicines by injection

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Acknowledgements

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Contents

Introduction

Pharmacists provide accessible, patient-focused healthcare to consumers in a variety of settings. As a member of the healthcare team, pharmacists contribute expert medicines knowledge to the provision of patient care. The scope of practice for appropriately trained Australian pharmacists includes the administration of medicines by injection, enabling pharmacists to provide consumers greater choice in the delivery of their health care.

The Pharmaceutical Society of Australia (PSA) recognises the importance of continuity of care within the healthcare environment. Pharmacists administering medicines by injection do so in collaboration with the consumer, their family, carers, and other healthcare professionals.

Aim of the Guidelines

These Guidelines provide guidance and support to pharmacists who administer medicines by injection. Professional obligations and expectations are highlighted to support pharmacists in the administration of prescription and non-prescription medicines as a component of pharmacy practice. The Guidelines promote best practice and are intended to support pharmacists to undertake this role within the context of the consumer's needs, beliefs, preferences and expectations.

Scope of the Guidelines

The Guidelines are not intended to provide clinical information and do not constitute a definitive statement of correct procedure. It is the responsibility of individual pharmacists to use their professional judgment and to maintain the required skills and knowledge relevant to their area of practice.

The Guidelines describe practice expectations for the administration of medicine, in general, by injection. Guidelines specific to immunisation, are available **here**.

Pharmacists must meet relevant legislative requirements for the State or Territory in which they practise, the details of which may not be included in these Guidelines. Pharmacists should refer to the legislation detailing medicine administration by injection in their State or Territory or contact the relevant State or Territory Departments of Health for specific guidance on jurisdictional requirements. These Guidelines do not detail models of medicine supply or funding arrangements.

Terminology

TERM	DEFINITION
Administering medicine by injection	The act of giving a medicine to a person by injection, which may include some activity to prepare the medicine to be administered.
Authorised pharmacist	A registered pharmacist who meets all relevant requirements to administer medicines by injection.
Carer	Anyone responsible for, or taking part in, the provision of care for another person (including parents, guardians or care workers). Carers may be formal or informal. A care worker is a paid worker with a title such as carer, aboriginal health worker, assistant in nursing, personal care assistant, HACC (Home and Community Care) worker [1]
Collaborative practice agreement	A documented agreement between an approved prescriber and an authorised pharmacist (as defined in these Guidelines) that details the agreed service/s to be provided by the authorised pharmacist administering medicine/s by injection. Agreements may be for an individual consumer or defined group of consumers.
Competence	Possession by an individual of the required knowledge, skills and attributes sufficient to successfully and consistently perform a specific task or function to the desired standard. [2]
Competencies	The knowledge, skills and behaviours needed to adequately perform the function. [3]
Consumer	Members of the public who use, or are potential users, of healthcare services. The term 'consumer' may refer to patients, families, carers and other support people. [4]
Health literacy	The level of understanding people have about health and information, and how they apply that information to their lives, use it to make decisions and act on it. ***Individual health literacy*** is the skills, knowledge, motivation and capacity of a person to access, understand, appraise and apply information to make effective decisions about health and health care and take appropriate action. ***Health-literacy environment*** is the infrastructure, policies, processes, materials, people and relationships that make up the health system and have an impact on the way that people access, understand, appraise and apply health-related information and services. [5]
Medicine	Therapeutic goods that are represented to achieve, or are likely to achieve, their principal intended action by pharmacological, chemical, immunological or metabolic means in or on the body of a human. [6] In this document, the term 'medicine' or 'medicines' includes prescription medicines, non-prescription medicines and complementary health care products, irrespective of the administered route.
Medicine Administration Service	A service conducted by a pharmacist that includes the administration of prescription and non-prescription medicines, and provision of related patient care and management as a component of pharmacy practice.
Product familiarisation	The action or process of gaining knowledge and understanding of a product (medicine).
Scope of practice	A time sensitive, dynamic aspect of practice which indicates those professional activities that a pharmacist is educated, competent and authorised to perform and for which they are accountable. [2]

Background

Australian pharmacists practise according to established professional expectations applied to the practice context and the scope of practice for which they are appropriately trained.

Scope of practice

The scope of practice for Australian pharmacists is defined as 'time sensitive, dynamic aspect of practice which indicates those professional activities that a pharmacist is educated, competent and authorised to perform and for which they are accountable.'[2] The key components of practice scope therefore include the following elements:

- Required education, leading to proven *competence* (comprising knowledge, skills and behaviours).
- Professional *accountability* according to recognised standards and competencies.
- The *authority* to undertake specific tasks.

See Figure 1. Medicines administration by pharmacists in Australia: the essential components of practice scope.

Education and training

Pharmacists develop medicines-specific knowledge and skills during their formal academic training and continue to refine and enhance these in the practice environment. A detailed ***knowledge*** of all aspects of medicines use is a fundamental outcome of accredited undergraduate and pre-registration education and training. It is essential to ensure pharmacists are adequately prepared to undertake their role as medicines experts in the medicines management cycle (Figure 2),[7] where they have traditionally occupied the role of medicine provider.

The administration of medicines is, however, a role for which pharmacists are increasingly involved, as seen with the provision of vaccination services.

In addition to an adequate medicines-specific knowledge, demonstration of the technical competence required to administer medicines by injection is essential prior to pharmacists undertaking this role. For some pharmacists, acquisition of the specific ***skills*** required to administer medicines by injection forms part of the undergraduate and pre-registration program of study; for others, these skills are acquired by completing post-registration training programs.

In addition to the required knowledge and skills, pharmacists must develop, maintain and enhance ***behaviours*** important to practice. Attributes relevant to the administration of medicines by injection include compassion, empathy, and commitment to professional development and dedication to patient safety throughout the process.

Authority

The authority to administer medicines by injection is provided by jurisdictional legislation. As such, recognition of the pharmacist's role in medicines administration by injection may vary nationally. Pharmacists are responsible for ensuring they comply with relevant legislation, regardless of their competence to administer medicines by injection.

Accountability

Pharmacists remain accountable for all aspects of their professional practice, in accordance with nationally recognised competency standards,[2] further highlighted below.

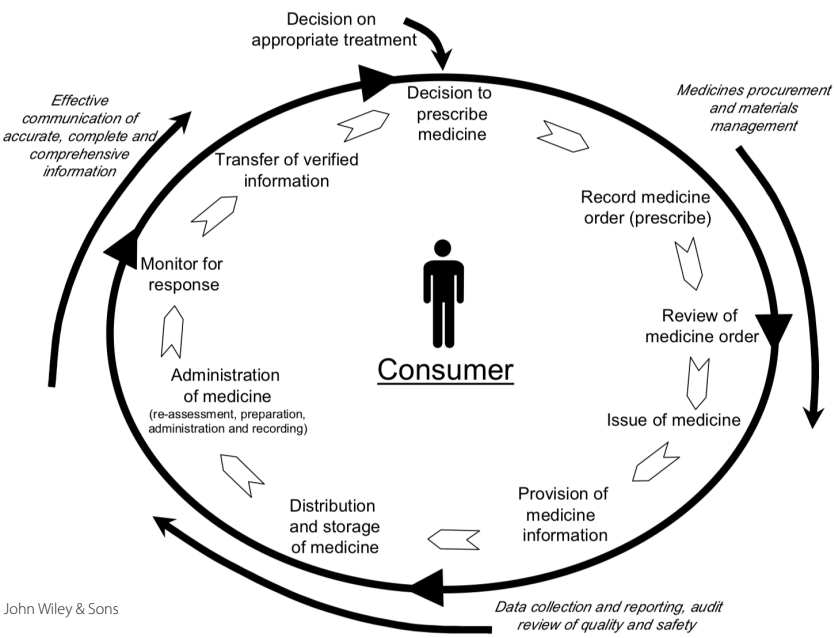
Pharmacists are also responsible for maintaining their knowledge and skills relevant to the practice context. In the context of medicines administration, this will include:

- maintenance of the knowledge of medicines administered by injection.
- maintenance of technical skills, such as injection techniques.
- awareness of relevant clinical guidelines, policies, procedures and legislation applicable to the provision of a Medicine Administration Service.
- recommendations for the management of adverse reactions associated with medicines administration by injection.

Figure 1. Medicines administration by pharmacists in Australia: the essential components of practice scope.

*The knowledge and skills required to administer medicines by injection are currently provided by some undergraduate and pre-registration programs of study and are also available in dedicated post-graduate programs.

Figure 2. Medicines management cycle showing the administration of medicines



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Reference: Stowasser[7]

Administering medicines by injection

Pharmacists must confirm their authorisation to administer medicines by injection and meet all specified resource and service provision requirements.

Pre-administration

Prior to administering medicines by injection, pharmacists are required to hold current registration with the Pharmacy Board of Australia and meet the following additional requirements.

Education and training

Professional Practice Standards (2017) Standard 2.3; National Competency Standards Framework (2016) Standards 1.1.4 & 1.4

To meet the requirements of an authorised pharmacist, a registered pharmacist must have successfully completed an accredited education and training program, and demonstrate the achievement of required technical competence relevant to the medicine/s to be administered by injection. In addition, supplementary knowledge specific to the medicine/s to be administered by injection may be required e.g. medicine with a significant adverse reaction potential and/or those for which an advanced level of knowledge is required. Pharmacists are responsible for ensuring competency in both technical administration and knowledge of the medicine/s to be injected.

Authorised pharmacists must maintain their competence through continuing professional development relevant to their practice context and jurisdictional requirements.

In addition, an authorised pharmacist must hold a current first-aid certificate (renewal required every 3 years), a cardiopulmonary resuscitation (CPR) certificate (renewal required every 12 months) and have successfully completed an approved and accredited anaphylaxis training program.

Legislation

National Competency Standards Framework (2016) Standard 1.3

Pharmacist administration of medicines by injection is subject to State and Territory legislation. Pharmacists are required to be familiar with the relevant legislation governing their jurisdiction and ensure they comply with all aspects. Administration of medicines by injection must not proceed unless all legislative requirements are met (Appendix 1 provides contact details for State and Territory health authorities).

Resources

Professional Practice Standards (2017) Standards 2.6, 2.7, 2.8 & 4.2; National Competency Standards Framework (2016) Standards 2.1.4; 4.4.3, 4.4.5, 4.5.2, 4.5.3, 4.6, 4.7.5 & 4.7.7

Resources such as equipment, policies, procedures and protocols, trained personnel, practice agreements (where relevant) and indemnity insurance are required to conduct a Medicine Administration Service.

Equipment

Appropriate equipment, consistent with relevant State or Territory legislation, is essential to the Medicine Administration Service. Pharmacists should be familiar with, and meet, the requirements relevant to their location.

The administration of medicines by injection must be undertaken in a private consultation area to ensure consumer privacy and confidentiality, while maintaining safety and comfort. The consultation area should be designed to provide:

- a comfortable space for the consumer to sit or lie during medicine administration.
- an adjacent area for the consumer to remain post-injection, as required.
- adequate room to accommodate the person receiving the medicine, a carer, the pharmacist delivering the medicine and required equipment.
- a efficient workflow.

The following equipment should be available whenever medicine is administered by injection:

In the consultation area:

- Bed and/or chair.
- Anaphylaxis response kit and protocol (further detailed ***below***).
- Personal protective equipment, including surgical masks, safety glasses and appropriate disposable coverings for the furniture.
- Hand washing facilities.
- Equipment for the disposal of sharps and medical waste that meets relevant Australian standards (further detailed ***below***).

Included in the Medicine Administration Service:

- Policy and procedure manual for the Medicine Administration Service (further detailed ***below***).
- Secure records management system that facilitates the documentation and storage of consumer information relevant to medicines administered by injection.
- Appropriate storage facilities for the medicines to be administered, including reliable refrigeration and non-refrigerated storage (as relevant to the service).
- Current health and medicines information.
- Scheduling and reminder service for appointments.

Emergency resources

Appropriate resources to respond to an emergency are required, specifically:

- Anaphylaxis response kit and protocol for use: Preparation details are provided in summary in Appendix 2, further details are available online in the Australian Immunisation Handbook[8] . The protocol should detail the steps required to respond to an emergency, be available at all times and be visible in the form of a laminated copy placed in clear view in the service delivery area. Further details are provided in Appendix 3.
- Trained staff: All staff working in the Medicine Administration Service should be trained to recognise the signs and symptoms of adverse reactions, including anaphylaxis and vasovagal syncope. Consideration should be given to the training of additional staff (whether administering medicines by injection or not) in first aid, cardiopulmonary resuscitation (CPR) and anaphylaxis management to assist the authorised pharmacist should the need arise. As a minimum, one additional staff member with current CPR, first aid and anaphylaxis management certification must be working in the Medicine Administration Service with the authorised pharmacist.
- Emergency response procedure: All staff working in the Medicine Administration Service should be trained in the emergency response procedure, including the location of the anaphylaxis response kit and protocol for use.
- Adrenaline: Access to an adequate quantity of adrenaline (ampoules or auto-injectors) according to relevant State or Territory requirements and the medicines administered during the service. Standard operating procedures should be in place to ensure adrenaline is immediately replaced after use and expiry dates are regularly checked.

Policies, procedures and protocols

Professional Practice Standards (2017) Standards 2.4, 2.5, 2.6, 2.7, 2.8, 3.11, 3.12, 3.13, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10 & 14.12; National Competency Standards Framework (2016) Standards 1.3.3, 1.3.4, 1.6 & 2.1.3

Prior to administering medicines by injection, develop policies and procedures consistent with the purpose of the Medicine Administration Service. The Medication Safety Standard provides useful information to guide the development of relevant policies and procedures that support medication safety, including the safe administration and monitoring of medicines.[9]

Pharmacists involved in the administration of medicines by injection should be aware of the policies and procedures relevant to the service.

The Medicine Administration Service policies and procedures should include:

- clearly defined aim or purpose of the service.
- service description or flow chart that describes the service.
- clearly defined descriptions of the roles and responsibilities of all personnel involved in the delivery of the service.
- details of the education and training successfully completed by personnel involved in the delivery of the service.

- details of the financial cost to the consumer for engaging with the service.
- responsibilities for service maintenance.

Policies:

- Waste management, including the removal of sharps and medical waste from the premises.
- Documentation and secure storage of consumer records (with consumer consent) consistent with confidentiality requirements. Records must be stored for a period of 7 years.
- Routine review and response to service feedback.
- Management of enquiries and complaints about the service, including those received from consumers and other healthcare professionals.
- Cold chain management, including purpose-built storage facilities that have a secure power storage capacity and restricted access, and routine temperature monitoring.
- Additional requirements specific to the administration of medicines by injection during a pandemic or natural disaster.
- Maintenance of access to, and currency of, relevant health information for consumers and healthcare professionals.
- Service audit and routine quality assurance.

Procedures:

- Obtain and document informed consumer consent for the medicine/s to be administered by injection.
- Detect, report, review and respond to incidents and deviations from the service policies and procedures, including incidents that constitute 'near misses' i.e. errors within the system that may have resulted in harm but were identified and managed without harm occurring.
- Detect, manage and report adverse reactions to medicines administered by injection.
- Refer consumers for appropriate medical advice and care when they experience an adverse reaction following medicines administration.
- Provide appropriate post-injection monitoring for the consumer according to the specific properties of the medicine/s administered. This may include the requirement for the consumer to remain in the premises for a period of time after receiving the medicine/s and may also include follow-up undertaken at a later date.
- Document medicine/s administered by injection, including the creation and maintenance of consumer records and the addition of details to the consumer's electronic health record where appropriate.
- Routine review of adrenaline stock levels and expiry dates to ensure adequate availability.
- Development and update of relevant forms and templates (e.g. consumer consent record).
- Maintenance of the service and associated documentation (e.g. access, storage, security, backups).
- Routine maintenance of the Medicine Administration Service including (as necessary) information resources, furniture, equipment for storing and administering medicines, and facilities for ***sharps and clinical waste disposal***.

Protocols:

- Response to medical emergencies following the administration of medicines by injection, including the management of anaphylaxis, the use of emergency response equipment, and the roles and responsibilities of pharmacy staff and the authorised pharmacist (further detailed in Appendix 3).
- Work health and safety protocol with specific reference to minimising the risk of needle stick injury, exposure to blood and bodily fluids, and the transmission of infectious diseases, including a process for post-exposure prophylaxis.

Personnel

Professional Practice Standards (2017) Standards 2.3, 2.6 & 2.7; National Competency Standards Framework (2016) Standards 4.1.2 & 4.2.1

Personnel, including the authorised pharmacists and supporting staff should be adequately trained and aware of their responsibilities within the service team and be familiar with the Medicine Administration Service policies and procedures. Only appropriately trained staff can conduct the Medicine Administration Service. The role of the authorised pharmacist should be understood by all staff.

To respond appropriately to adverse medicine outcomes, it is a requirement that one additional staff member who holds current CPR, first aid and anaphylaxis management certification is present to support the authorised pharmacist at all times.

All staff should understand their role in responding to an emergency and the equipment and procedures relevant to the management of emergencies and adverse reactions (See Emergency resources). Staff should also be familiar with the scheduling system and service policies and procedures relevant to the management of consumer enquiries and complaints, the secure management of health records and the maintenance of consumer privacy. The principles of cultural safety should be understood and respected by all staff.

Service agreement

Where the administration of medicines by injection is undertaken by an authorised pharmacist according to a collaborative practice agreement or service agreement, full details of the agreement should be agreed, understood and documented by all parties prior to the commencement of the service.

Professional insurance

Both the authorised pharmacist and the practice site should by covered by current professional indemnity insurance that includes the injection of medicines within the defined practice scope. Professional indemnity insurance does not negate the need for a pharmacy, or relevant site, to be included in the insurance policy.

Refer to Appendix 4: Pre-administration checklist

Consultation and administration

Professional Practice Standards (2017) Standards 1, 3 & 14; National Competency Standards Framework (2016) Standards 1.5, 3.1 & 3.2.1

During the patient consultation and administration of the medicine, pharmacists must provide ethical, evidence-based care. They must assess the consumer's clinical need before administration of the medicine and adopt appropriate safeguards.

Consumer's clinical need

Professional Practice Standards (2017) Standards 1.1, 1.3, 1.5, 1.7, 1.8, 3.5, 3.6, 14.5 & 14.6; National Competency Standards Framework (2016) Standards 1.5, 2.1 & 3.1

The Professional Practice Standards[10] and National Competency Standards[2] describe the need for comprehensive understanding of the consumer's clinical needs prior to the administration of a medicine. In particular, the authorised pharmacist should:

- where relevant, review the prescription or medication order to confirm the medicine and route of administration. Ensure legislative requirements are met by the prescription or medication order.
- where relevant, review current collaborative practice agreements or service agreements between the authorised pharmacist and another healthcare professional. Ensure the medicine, dose, frequency, route of administration and, where applicable, consumer details are specifically included in the agreement. Where doubt exists, the healthcare professional named in the agreement should be contacted *before* proceeding.
- ensure appropriate product familiarisation with the medicine, including:
  - indication, contraindications and cautions.
  - approved routes of administration and relevant formulations, including any preparation required prior to administration.
  - dose, frequency and expected duration of medicine use.
  - possible adverse effects and how these can be recognised and managed.
  - possible drug-drug or drug-patient interactions and how these can be recognised and managed.
- review and understand the consumer's clinical needs, including:
  - past and current medical history
  - reconcile current and past conditions with current medicines and explore inconsistencies
  - previously administered doses of the medicine to be injected, and any relevant issues associated with the administration such as adverse reactions and/or barriers to adherence
  - current symptoms (if relevant)
  - previous allergies and adverse reactions.
- confirm the appropriateness of the medicine for the consumer, considering both medicine and consumer-specific factors.
- understand the route of administration and ensure competent to administer via this route.
- seek advice before proceeding if the details of the medicine, the administration process or the consumer's need for the medicine are unclear or raises concerns.

After determining the consumer's clinical need, discuss the medicine/s (including risks and benefits), administration process and relevant costs with the consumer. Respond appropriately to any questions or concerns the consumer and/or their carer raises.

Obtain and document the consumer's informed consent to receive the medicine/s according to legislative requirements and practice policy.

For medicines that require multiple doses, agree with the consumer about the goals of treatment, taking into consideration their expectations, beliefs and preferences. Agreed goals should be documented and reviewed periodically, according to the expected duration of treatment and the specific details of the medicine/s. The outcomes of treatment should be measured using appropriate indicators to inform the review.

Where the administration of a medicine is outside the pharmacist's scope of practice, concerns exist regarding the appropriateness of the medicine according to the consumer's needs or where administration of the medicine would contravene expected professional practice, the reasons for refusing to administer the medicine/s should be discussed with the consumer and the prescriber. Where appropriate, the consumer should be referred to another healthcare professional or their prescriber.

Administration of medicines

National Competency Standards Framework (2016) Standards 1.4.1, 3.2.1, 3.2.4 & 4.2.1

Pharmacists play an important role in facilitating efficient and timely consumer access to medicines. Administering medicines by injection may contribute to this role.

When administering medicine/s by injection:

- practise according to level of competence
- understand the role of the pharmacist in administering medicines by injection and recognise the boundaries of the role
- communicate the role of the pharmacist in administering medicines by injection with the consumer and ensure they understand the boundaries of the role
- communicate and collaborate with other healthcare professionals to ensure they understand the pharmacist's role in administering medicine by injection and the opportunities that exist to utilise the pharmacist's unique knowledge and skills for the benefit of the consumer

- recognise and respond appropriately in situations where administration of a medicine is outside personal competence, recognised professional scope or contravenes expected professional practice.

Appropriate safeguards

When administering medicines by injection, the authorised pharmacist should:

- use the appropriate medicines administration technique, consistent with the pharmacist's level of competence
- observe safety practices, including those relating to the Australian Guideline for the Prevention and Control of Infection in Healthcare[12]
- where possible, the medicine and dose should be checked independently by another pharmacist prior to administration[11]
- review and implement additional safeguards, such as those relevant to pharmacy practice in the presence of communicable diseases (e.g. COVID-19):
  - *Guiding principles for maintaining immunisation services during the COVID-19 pandemic* (Australian Government Department of Health)
  - *Medicines Management COVID-19* (Australian Commission on Safety and Quality in Health Care)
  - *Guidelines for pharmacists and pharmacy technicians in community pharmacies during the COVID-19 response* (Centers for Disease Control and Prevention)
  - *Disinfecting your facility* (Centers for Disease Control and Prevention)
- observe consumer confidentiality and privacy
- ensure the tasks of dispensing and administration remain separate and are afforded due focus. Authorised pharmacists should not engage (or maintain responsibility for) other tasks while administering medicines, including dispensing.

The Australian Guidelines for Prevention and Control of Infection in Healthcare provide a detailed guide for infection control and the management of sharp waste and clinical waste.[12]

Infection control

Standard precautions for infection control include:

- use of effective hand hygiene before and after touching a patient or undertaking a procedure. Hand hygiene should also be undertaken after touching a patient's surroundings, before putting on gloves and after the removal of gloves
- use of appropriate personal protective equipment
- safe use and disposal of sharps (further information below).
- routine environmental cleaning
- reprocessing of reusable medical equipment and instruments.
- respiratory hygiene and cough etiquette
- use of aseptic technique where relevant
- effective waste management (further information below)
- appropriate handling of linen.

Sharps and clinical waste management

Healthcare facilities must comply with relevant State or Territory legislation and regulations pertaining to the management of clinical waste (see Appendix 5). After use, place needles, single-use syringes, scalpel blades and other sharp items in an appropriate, clearly labelled, puncture and leak proof container that conforms with Australian Standards.[12]

Place sharps containers:

- at the point of use; where this is not possible, containers should be located as close as practical to the consultation area
- at an accessible height for the authorised pharmacist but out of reach of children and others to reduce the risk of the container being accessed
- in a secure position or mounted to a wall to prevent tipping. *The Australian Guidelines for the Prevent and Control of Infection in Healthcare* suggest placement of the container a minimum of 1300 mm off the ground
- if wall mounted, separated from general waste bins to prevent incorrect disposal.

Waste management

General principles of handling waste include:

- use standard precautions to prevent exposure to blood and bodily substances when handling waste
- wash hands following the handling of waste
- segregate clinical waste at the point of generation
- waste should be contained in an appropriate container, identified by colour and label and disposed of according to the service waste management policy.

Documentation

Professional Practice Standards (2017) Standards 1.5, 3.12 & 14.7; National Competency Standards Framework (2016) Standard 3.3.3

Appropriate documentation of the consultation is important to ensure a complete record of the medicine/s administered is included in the consumer's health record.

Where possible (and consent has been provided), the details of administered medicine/s should be included in the consumer's electronic health record.

Record the following information electronically for the consumer:

- Date, time and route of medicine/s administered.
- Complete details of the medicine/s administered, including:
  - active ingredient/generic name of the medicine
  - brand
  - strength
  - proportion of dose administered (if relevant)
  - number of doses administered
  - batch number

- expiry
- site of administration.

- Full name of the authorised pharmacist
- Due date for the next dose (if relevant)
- Consumer contact details
- Details of consumer's regular general practitioner and/or treating healthcare professional (if relevant)
- Monitoring undertaken immediately post-administration
- Relevant ongoing monitoring to be undertaken, when, how and by whom
- Details of the review of previously administered doses, if relevant, including: adverse reactions and how these were managed; evidence that expected outcome/s have been achieved; the review process including whether the consumer presented personally for review or if this was undertaken using telehealth services.

Post-administration

Professional Practice Standards (2017) Standards 3 & 8; National Competency Standards Framework (2016) Standards 3.2 & 3.3

An essential component of care is monitoring the outcome of implemented interventions. After administering medicines, pharmacists are required to ensure consumers are provided due care and any adverse events are detected, managed and reported according to the appropriate policies and procedures.

Monitoring

Professional Practice Standards (2017) Standards 3.10 & 8.11; National Competency Standards Framework (2016) Standard 3.3

Consider the pharmacokinetic profile of the medicine and the expected pharmacological effect/s when determining appropriate monitoring. Ensure monitoring is consistent with the product licence, formulation, type, therapeutic and toxicological profile of the injected medicine.

In some instances, effective monitoring may require the consumer to remain in the premises for a defined period of time e.g. immunisation. For other medicines, monitoring may be required some time post-administration e.g. via telehealth services.

Discuss with the consumer the need for monitoring and ensure they understand post-administration monitoring requirements, including how, when and with whom monitoring will take place.

Where monitoring is required immediately post-administration, provide an appropriate area for the consumer to remain during the period of monitoring. Ensure appropriate seating close to the consultation area is available and the consumer is comfortable.

Ensure the consumer and/or carer understands their right to report the occurrence of adverse reactions. Provide access to the Therapeutic Goods Administration (*www.tga.gov.au/reporting-problems*).

Document the details of monitoring provided according to the service policies and procedures.

Review the outcomes of medicines administered, including:

- consumer's experience with the medicine/s, including both positive and adverse responses
- presence of barriers to adherence with adjunctive therapy and whether this may have impacted the outcome of administered medicine/s
- whether the schedule has been adhered to and the impact this may have had on the outcome of therapy. Where deviations from the original plan have occurred, identify the reasons for this and discuss with the consumer and/or carer potential solutions.
- usefulness of a comprehensive medicines review (e.g. Medication Management Review) to contribute to the consumer's understanding of their medicines, in general, and the administered medicine/s in particular.
- need to liaise with another healthcare professional to support the consumer to achieve agreed goals. For example, where collaborative practice agreements exist, consider the need to modify the plan in consultation with other healthcare professional.

Adverse reactions

The authorised pharmacist (and, where possible, supporting staff) should be familiar with the signs and symptoms of adverse reactions associated with the medicine/s.

Closely monitor the consumer after medicine/s administration to ensure possible adverse reactions are detected early.

In the event of an adverse reaction:

- initiate appropriate management according to the medicine and the response
- administer appropriate first aid consistent with the pharmacist's scope of practice and expertise and refer the consumer to emergency services/other appropriate healthcare professional/s as appropriate
- discuss the details of immediate care provided with the consumer and/or carer the adverse reaction. Ensure the consumer understands the nature of the reaction and implications for future use of the medicine
- where an allergic reaction has occurred, discuss the management strategies to prevent further reactions and the possible use of an alert identifier with the consumer
- report adverse reactions (*www.tga.gov.au/reporting-problems*) as soon as practical after the event and provide additional information, if relevant, after any subsequent reviews
- record details of adverse reaction detection and management according to the Medication Administration Service policies and procedures.

- when the consumer is reviewed at a later time, ensure the consultation specifically addresses the occurrence of adverse reactions according to the medicine/s administered. Where an adverse reaction has occurred, ensure appropriate management has been provided.
- in the event of a consumer seeking advice at a later date regarding a delayed adverse reaction, recognise when the reaction occurs in relation to the previously administered medicine and discuss both the reaction and management with the consumer.
- where an adverse or allergic reaction has occurred, comprehensively document the details of the event, including the medicine, reaction and date in all relevant records (consistent with consumer consent) e.g. My Health Record, practice/hospital records.
- communicate details of the reaction to relevant healthcare professionals e.g. consumer's general practitioner.

Consumer support

Professional Practice Standards (2017) Standards 1.9, 6.2, 6.3, 6.4, 6.5, 7.2, 7.3, 8.8, 9.10 & 14.8; National Competency Standards Framework (2017) Standard 2.1, 3.1, 3.2 & 3.6

Support the consumer's understanding of their health and the medicine/s administered by providing information according to their needs. Provide the following information to the consumer:

- indication for the medicine in the context of the consumer's specific needs and goals.
- for repeated doses, the frequency and expected duration of administration.
- details of relevant therapeutic goals and how they will be measured e.g. follow-up investigations (when and how), the need for review by another healthcare professional (when and who).
- details of any applicable follow-up appointments, including when to return and what to do if an earlier appointment is required or the appointment requires rescheduling.
- possible delayed adverse reactions that may present after administration, how to manage, when to seek further advice and from whom
- when and how to renew collaborative practice agreements, if relevant.

Where it is likely the consumer may need non-pharmacological support post medicine administration (e.g. to treat pain at the injection site), provide advice regarding appropriate management. Indicate how long they should expect to experience the symptom/s and when to seek advice should symptoms persist. Where appropriate and available, supplement verbal information provided to the consumer with written information to support understanding.

Communication

Professional Practice Standards (2017) Standards 1, 6, 7, 8, 9 & 14; National Competency Standards Framework (2016) Standards 2.1, 2.2, 2.3 & 3.2.5

Consistent with the expectations of collaborative care,[2,10] pharmacists should provide effective communication with both the consumer and healthcare team regarding medicines administered and reviewed.

Relevant and useful information

Professional Practice Standards (2017) Standards 6.2, 6.3, 6.4, 7.5, 7.6, 8.8, 9.2, 9.7, 9.10, 14.8, 14.9 & 14.10; National Competency Standards Framework (2016) Standards 2.3, 3.2.5 & 3.2.6

When communicating with the consumer:

- provide information that is sensitive to the consumer's personal beliefs, values, cultural requirements and healthcare expectations
- consider the consumer's health literacy and tailor the information accordingly
- assist the consumer to manage their health and wellbeing by discussing how the medicine fits within their therapeutic management strategy, including co-existing medicines, and how they can contribute to the management of their health
- provide advice regarding relevant support organisations that may contribute to the consumer's understanding of the medicine and their health
- consider the need to communicate with other members of the consumer's support network, e.g. carers, family members
- clarify expectations post-administration, including the need for follow-up (when, where, by whom) and subsequent doses (if relevant)
- where possible, ensure the consumer understands the information you have provided by asking them to summarise it for you.

When communicating with other members of the healthcare team, provide information via secure means to those who would benefit from being informed of the medicines administered. For prescribed medicines, details should be communicated to the prescriber. Where applicable, include details in the consumer's electronic health record.

Communicate to members of the healthcare team, as relevant to the consumer including:

- details of medicine/s administered, including the active ingredient/ generic name of the medicine, dose and route
- where an adverse reaction has been identified, the details of the reaction and first aid provided (if relevant). Where known, the outcomes of the reaction
- details of follow-up appointments arranged
- missed doses (if relevant) and the plan to resolve
- details of identified barriers to medicines administration and whether these have been resolved in consultation with the consumer (and if so, the plan for addressing issues)

- need for a modification to the medicine identified by monitoring e.g. does alteration or review of the need for medicine
- where collaborative practice agreements exist, details of the consultation according to the requirements of the agreement. When the agreement requires renewal, communicate this in a timely manner to ensure continuity of care
- support understanding of the medicine/s within the healthcare team by providing specific and current medicines information.

In all cases, the information provided should be documented, including recommended actions and requirements for further follow-up.

Communication format

Professional Practice Standards (2017) Standards 6.2, 6.3 & 6.5

When communicating with the consumer:

- provide information in a format that respects their health literacy
- consider the need for information to be provided in multiple formats e.g. written information in conjunction with verbal
- add details to the consumer's electronic health record, where applicable.

When communicating with other members of the healthcare team:

- observe the requirements of collaborative practice agreements, if relevant
- consider the need for a verbal conversation, particularly where unresolved issues have been identified
- add details to the consumer's electronic health record, where applicable.

Communication techniques

National Competency Standards Framework (2016) Standards 1.3 & 2.3

When communicating with the consumer:

- provide information in an empathetic and compassionate manner
- listen actively and address any concerns they have that may impact their ability to understand the information you provide
- give the consumer time to consider the information you have provided and respond accordingly.

When communicating with other healthcare professionals, ensure details provided are accurate, succinct and provided in a timely manner. Respect the consumer's privacy and confidentiality.

Service review and quality assurance

Professional Practice Standards (2017) Standards 1, 9 & 13; National Competency Standards Framework (2016) Standards 1.6, 2.1.3, 3.5 & 4.4.2

Quality assurance processes ensure that the Medicine Administration Service provided offers care consistent with consumer needs and professional obligations.

The Medication Administration Service should be routinely reviewed to ensure policies and procedures remain contemporary. Feedback relevant to the service and compliance with service policies, procedures, and protocols should be reviewed. Any modifications to State and Territory standards and legislation should be considered and used to inform service policies and procedures.

To determine if the Medicine Administration Service meets the consumer's needs:

- encourage consumers who have used the service to provide feedback
- encourage other members of the healthcare team who have engaged with the service to provide feedback.
- routinely review feedback and respond accordingly, consistent with service policy.

Adverse reactions and events, including 'near misses' should be regularly reviewed. Service adjustments should be made according to the findings of the review in order to improve the service and maintain the safety of consumers who use the service. Any changes to the services should be communicated to other members of the healthcare team.

Staff involved in the provision of the service should maintain their own personal practice consistent with established standards, including those that relate to:

- ethical practice
- demonstrated personal competence, including the ability to recognise deficiencies and take steps to address
- maintaining accountability for professional services, including the ability to admit error and manage appropriately
- appropriate referral of consumers where required services are outside the pharmacist's scope of practice or competence
- provision of collaborative care, including recognition of, and respect for, the role of other healthcare professionals who also care for the consumer
- promotion of Quality Use of Medicines
- practice provision that reflects the best available evidence.

Conclusion

The administration of medicines by injection presents pharmacists with an opportunity to expand their contribution to consumer care by providing efficient and timely access to medicines. Working within the healthcare team, pharmacists are able to use their medicines expertise to provide a Medicine Administration Service combined with medicines-specific education and monitoring consistent with consumer needs.

Appendix 1: State and Territory Government Drugs and Poisons Legislation

STATE	RELEVANT LEGISLATION
Australian Capital Territory	Medicines, Poisons and Therapeutic Goods Act 2008: www.legislation.act.gov.au Medicines, Poisons and Therapeutic Goods Regulation 2008: www.legislation.act.gov.au
New South Wales	Poisons and Therapeutic Goods Act 1966: www.legislation.nsw.gov.au Poisons and Therapeutic Goods Regulation 2008: www.legislation.nsw.gov.au
Northern Territory	Medicines, Poisons and Therapeutic Goods Act 2014 https://legislation.nt.gov.au/ Medicines, Poisons and Therapeutic Goods Regulations 2014: https://legislation.nt.gov.au/
Queensland	Health (Drugs and Poisons) Regulation 1996: www.legislation.qld.gov.au/view/pdf/2017-10-01/sl-1996-0414 Public Health Regulation 2005: www.legislation.qld.gov.au
South Australia	Controlled Substances Act 1984: www.legislation.sa.gov.au Controlled Substances (Poisons) Regulations 2011: www.legislation.sa.gov.au
Tasmania	Poisons Act 1971: www.thelaw.tas.gov.au Poisons Regulations 2008: www.thelaw.tas.gov.au
Victoria	Drugs, Poisons and Controlled Substances Act 1981: www2.health.vic.gov.au Drugs, Poisons and Controlled Substances Regulations 2006: www2.health.vic.gov.au
Western Australia	Medicines and Poisons Act 2014: www.legislation.wa.gov.au Medicines and Poisons Regulations 2016: www.legislation.wa.gov.au

Appendix 2: Preparing an anaphylaxis response kit

This response kit is in the Australian Immunisation Handbook,[8] and is relevant to the response to any episode of anaphylaxis. In addition to the contents described below, adrenaline auto-injectors (6 x Adrenaline 1:1000) should be included and used according to State/ Territory legislation.

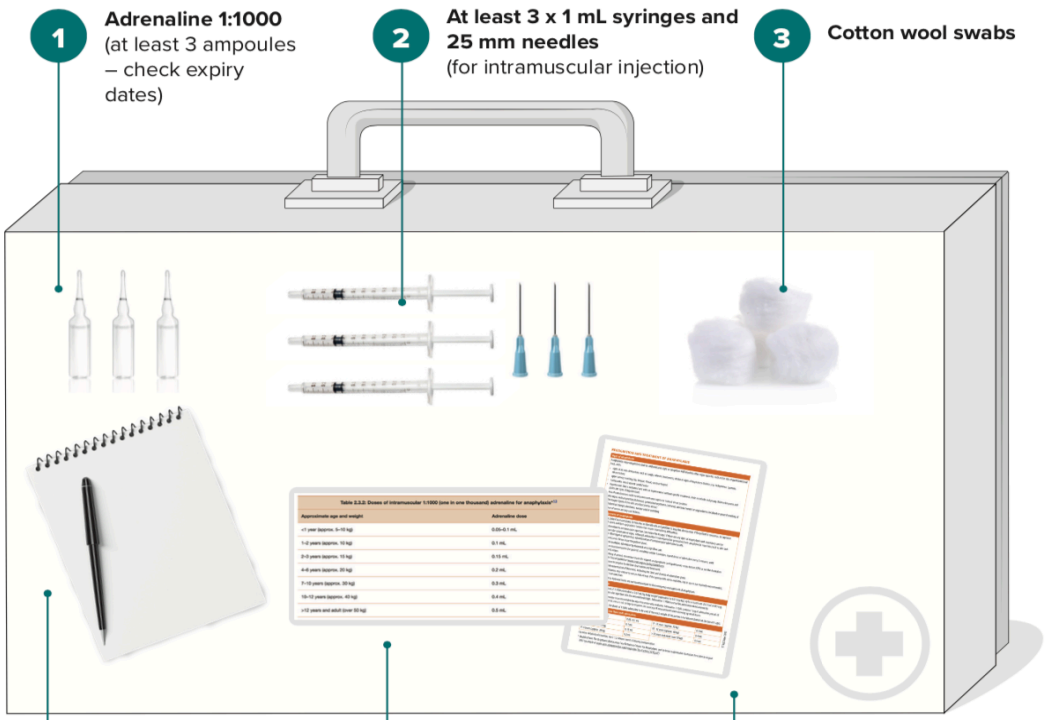
Australian Government
Department of Health

Australian **Immunisation** Handbook

Preparing an anaphylaxis response kit

! Before each vaccination session, check that you have the protocols, equipment and medicines to manage anaphylaxis.

Your anaphylaxis response kit should contain:



Keep an anaphylaxis response kit on hand at all times.
Check contents regularly to ensure they are up to date and not expired.

See the Australian Immunisation Handbook for more details.

Appendix 3: Anaphylaxis response protocol

This protocol is in the Australian Immunisation Handbook,[8] and is relevant to the response to any episode of anaphylaxis.

ANAPHYLAXIS RESPONSE PROTOCOL

SIGNS OF ANAPHYLAXIS

Anaphylaxis causes respiratory and/or cardiovascular signs or symptoms *AND* involves other organ systems, such as the skin or gastrointestinal tract. Signs include:

- signs of airway obstruction, such as cough, wheeze, hoarseness, stridor or signs or respiratory distress
- upper airway swelling (lip, tongue, throat, uvula or larynx)
- tachycardia, weak/absent carotid pulse
- hypotension that is sustained and with no improvement without specific treatment (Note: in infants and young children, limpness and pallor are signs of hypotension)
- loss of consciousness with no improvement once supine or in head-down position
- skin signs, such as pruritus (itchiness), generalised erythema (redness), urticaria (weals) or angioedema (localised or general swelling of the deeper layers of the skin or subcutaneous tissue)
- abdominal cramps, diarrhoea, nausea and/or vomiting
- sense of severe anxiety and distress.

DIFFERENTIATING BETWEEN ANAPHYLAXIS AND A VASOVAGAL EPISODE
(adapted from the *Australian Immunisation Handbookt)*

	ANAPHYLAXIS	VASOVAGAL EPISODE
ONSET	Usually within 15 minutes but can occur within hours of vaccine administration	Immediate usually within minutes of, or during, vaccine administration
RESPIRATORY	• Cough, wheeze, hoarseness, stridor, or signs of respiratory distress (e.g. tachypnoea, cyanosis, rib recession) • Upper airway swelling (lip, tongue, throat, uvula or larynx)	• Normal respiration; may be shallow, but not laboured
CARDIOVASCULAR	• Tachycardia, weak/absent carotid pulse • Hypotension—sustained and no improvement without specific treatment (Note: in infants and young children, limpness and pallor are signs of hypotension) • Loss of consciousness—no improvement once supine or in head-down position	• Bradycardia, weak/absent peripheral pulse, strong carotid pulse • Hypotension—usually transient and corrects in supine position • Loss of consciousness—improves once supine or in head-down position
SKIN	• Pruritus, generalised skin erythema, urticaria (weals) or angioedema (localised or general swelling of the deeper layers of the skin or subcutaneous tissues)	• Generalised pallor, cool clammy skin
GASTRO-INTESTINAL	• Abdominal cramps, diarrhoea, nausea and/or vomiting	• Nausea/vomiting
NEUROLOGICAL	• Sense of severe anxiety and distress	• Feels faint, light-headed

MANAGEMENT OF ANAPHYLAXIS

- If patient is unconscious, place them on their left side and position to keep the airway clear.
- If patient is conscious, place them supine in head-down and feet-up position (unless this results in breathing difficulties).
- If any respiratory and/or cardiovascular symptoms or signs of anaphylaxis, give adrenaline by IM injection into the anterolateral thigh (see *Adrenaline use below*). Note: Adrenaline is not required for generalised non-anaphylactic reaction (such as skin rash or angioedema). If in doubt, IM adrenaline should be given. No serious or permanent harm is likely to occur from mistakenly administering adrenaline to an individual who is not experiencing anaphylaxis.
- Call for assistance. Never leave the patient alone.
- If oxygen is available, administer by facemask at a high flow rate.
- If there is no improvement in the patient's condition within 5 minutes, repeat doses of adrenaline every 5 minutes until improvement.
- Check breathing; if absent, commence basic life support or appropriate cardiopulmonary resuscitation (CPR) (See Australian Resuscitation Council guideline).
- In all cases, transfer the person to hospital for further observation and treatment.
- Complete full documentation of the event, including the time and dose(s) of adrenaline given.

ADRENALINE USE

- The recommended dose of 1:1000 adrenaline is 0.01 mL/kg body weight (equivalent to 0.01 mg/kg up to a maximum of 0.5 mL) given by deep intramuscular injection into the thigh (not the deltoid region).
- Adrenaline 1:1000 must not be administered intravenously.
- The dose of 1:1000 (one in one thousand) adrenaline may be repeated every 5 minutes, as necessary, until there is clinical improvement.

DOSES OF 1:1000 (ONE TO ONE THOUSAND) ADRENALINE

AGE	DOSES OF ADRENALINE 1:1000 *(one to one thousand)*
Less than 1 year (approx. 5–10 kg)	0.05–0.1 mL
1–2 years (approx. 10 kg)	0.1 mL
2–3 years (approx. 15 kg)	0.15 mL
4–6 years (approx. 20 kg)	0.2 mL
7–10 years (approx. 30 kg)	0.3 mL
10–12 years (approx. 40 kg)	0.4 mL
> 12 years and adult (over 50 kg)	0.5 mL

The person who will administer adrenaline is the immuniser. If it is not possible,..... will administer adrenaline.

The person who will call the ambulance is .....

The person who will meet and direct the paramedics to the consumer is .....

They should meet the paramedics at .....

The person who will provide clinical handover to the paramedics is the immuniser. If this is not possible, ...will provide the clinical handover.

The person who will record the details of treatment provided, including time and dose of adrenaline administered, is .....

The person who will report the adverse event following immunisation to the relevant State or Territory health authorities is the immuniser and/or .....

Appendix 4: Pre-administration checklist

Complete ***prior*** to administering medicines by injection.

ITEM		DETAIL	COMPLETED (Y/N)
Authority to administer medicines by injection	**Education and training**	Authorised pharmacists must have: • current registration with Pharmacy Board of Australia • evidence of successful completion of an accredited education and training relevant to the intended service/injection • product familiarisation of the medicine/s to be injected, including completion of additional relevant training • current first aid certificate • current cardiopulmonary (CPR) certificate • evidence of successful completion of an appropriate anaphylaxis training program • evidence of current competence demonstrated through the completion of required relevant Continuing Professional Development.	
	Legislation	Pharmacists must be permitted and authorised to administer medicines according to applicable State and Territory legislation.	
Facilities and equipment	**Establish a private consultation area**	The consultation area is required to meet the following requirements: • area is sufficient to accommodate the consumer (both sitting and lying), their carer if appropriate, and the authorised pharmacist, as well as all equipment required to administer medicines • provides appropriate space and furnishings to allow consumers to sit or lie to receive treatment as necessary • allows for space, surfaces and equipment to respond to any adverse events and medical emergencies as necessary • contains hand washing facilities • contains a chair and/or bed • contains an anaphylaxis response kit (with current date) and prominent protocol for use (refer Appendix 3) • contains personal protective equipment • provides equipment for the appropriate disposal of sharps and medical waste consistent with Australian standards.	
	Adequate seating adjacent to the area where the pharmacist is administering medicine/s by injection for consumers and their carers who are advised to remain in the general area for a period of time following medicine administration by injection.		
	Appropriate equipment for storing and administering medicines (e.g. a reliable and stable refrigerator with adequate capacity to store medicines appropriately, if required).		
Personnel	Ensure adequate staff are available to support the authorised pharmacist. Ensure supporting staff are aware of the service policy and procedure manual and understand emergency response equipment and protocols. Ensure all staff understand their roles and responsibilities when a pharmacist is administering medicine by injection including: • their role in emergency response procedures • the roles and responsibilities of the authorised pharmacist • how to arrange appointments, refer consumer queries and manage consumer complaints • policies and procedures for collecting consumer healthcare information, including those who identify as having Aboriginal or Torres Strait Islander heritage • privacy legislation • relevant aspects of cultural safety.		

ITEM	DETAIL	COMPLETED (Y/N)
Policy and procedures manual	Develop a policies and procedures manual that includes: • aim or purpose of the Medication Administration Service • service description and/or flow chart • defined roles and responsibilities for staff involved in the service • details of education & training completed by staff • details of the financial cost to the consumer for the service • responsibilities for service maintenance Policies • Waste management • Secure storage of consumer records • Routine review and response to service feedback • Management of enquiries and complaints about the service • Cold chain management • Administration of medicines by injection in special situations e.g. COVID-19 • maintenance of access to, and currency of, health information • Service audit and routine quality assurance Procedures • Obtain and document consumer consent • Detect, report, review and respond to incidents including 'near misses' • Detect, manage and report adverse medicines reactions • Refer consumers for medical care when experiencing an adverse reaction following medicine administration • Post-injection monitoring • Document medicines administered by injection • Routine review of adrenaline stock • Maintain the service and documentation (including information technology maintenance) • Maintenance of the consultation area. Protocols • Responding to medical emergencies • Work health and safety protocol with specific reference to minimising the risk of injury during medicine administration by injection (e.g. needle stick injury, exposure to blood and bodily fluids and the transmission of infectious diseases) is developed and practised. Protocols and procedures should be consistent with the *Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019)*	
System	Systems that support the documentation and secure storage of consumer records relevant to medicine/s administered by injection (with consumer consent)	
	Current, relevant health information for consumers, their families, and carers	
	Develop a medicine administration by injection booking and reminder service	
Practice Agreement	Where relevant, ensure relevant collaborative practice and/or service agreements are current, documented, signed and understood by all parties.	
Professional indemnity insurance	Both the facility and authorised pharmacist are covered by current insurance, that is appropriate for the administration of medicines by injection.	

Appendix 5: State and Territory legislation for waste management

STATE	RELEVANT LEGISLATION
Australian Capital Territory	www.legislation.act.gov.au/a/1990-5/
New South Wales	www.legislation.nsw.gov.au/view/whole/html/inforce/current/act-1997-156#sch.1
Northern Territory	https://legislation.nt.gov.au/Legislation/WASTE-MANAGEMENT-AND-POLLUTION-CONTROL-ACT-1998
Queensland	https://www.legislation.qld.gov.au/view/pdf/inforce/2001-01-02/sl-2000-0178
South Australia	https://www.legislation.sa.gov.au/LZ/C/A/ENVIRONMENT%20PROTECTION%20ACT%201993/CURRENT/1993.76.AUTH.PDF
Tasmania	https://epa.tas.gov.au/policy/acts-regulations/empca/waste-management-regulations
Victoria	https://www2.health.vic.gov.au/hospitals-and-health-services/planning-infrastructure/sustainability/waste/clinical-related-waste
Western Australia	https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_1387_homepage.html

References

1. Australian Pharmaceutical Advisory Council. Guiding principles to achieve continuity in medication management 2005. At: https://www1.health.gov.au/internet/main/publishing.nsf/650f3eec0dfb990fca25692100069854/eea5b39aa0a63f18ca257bf0001dae08/$FILE/Guiding-principles-to-achieve-continuity-in-medication-management.pdf
2. Pharmaceutical Society of Australia. National Competency Standards Framework for Pharmacists in Australia. 2016.
3. NPS: Better choices.Better health. Competencies required to prescribe medicines: putting quality use of medicines into practice. Sydney National Prescribing Service Limited.; 2012.
4. Australian Commission on Safety and Quality in Health Care. Consumers, the health system and health literacy: Taking action to improve safety and quality. Consultation paper. Sydney; 2013.
5. Australian Commission on Safety and Quality in Health Care. Health Literacy 2019. At: www.safetyandquality.gov.au/our-work/patient-and-consumer-centred-care/health-literacy.
6. Australian Government Department of Health Therapeutic Goods Administration. Acronyms and glossary. At: www.tga.gov.au/acronyms-glossary#summary-m.
7. Stowasser D, Allinson YM, O'Leary KM. Understanding the medicines management pathway. J Pharm Pract Res. 2004;34(4):293-6.
8. Australian Government Department of Health. Preparing an anaphylaxis response kit 2018. At: https://immunisationhandbook.health.gov.au/resources/publications/preparing-an-anaphylaxis-response-kit
9. Australian Commission on Safety and Quality in Health Care. Medication Safety Standard 2019. At: www.safetyandquality.gov.au/our-work/medication-safety
10. Pharmaceutical Society of Australia. Professional Practice Standards. Version 5. 2017. At: www.psa.org.au/practice-support-industry/professional-practice-standards/
11. Australian Commission on Safety and Quality in Health Care. Evidence briefings on interventions to improve medication safety. Double-checking medication administration 2013. At: www.safetyandquality.gov.au/sites/default/files/migrated/Evidence-briefings-on-interventions-to-improve-medication-safety-Double-checking-medication-administration-PDF-888KB.pdf
12. National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare 2019. At: www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019lo

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