

Mapping of pharmacists' competency standards for the administration of vaccines

(September 2013)

Mapping of pharmacy profession resources (left column) to
the National guidelines for immunisation education for registered nurses and midwives at Topic level (right column)

National Competency Standards Framework for Pharmacists in Australia 2010	National guidelines for immunisation education for registered nurses and midwives 2001
Domain 1 Professional and ethical practice	
Standard 1.1 Practise legally	Topic 2.1: Legal aspects of immunisation Topic 2.2: Recognition and management of adverse events following immunisation Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain) Topic 2.5: Administration of vaccines
Standard 1.2 Practise to accepted standards	Topic 2.1: Legal aspects of immunisation
Standard 1.3 Deliver 'patient-centred' care	Topic 1.4: Immunisation: myths and realities Topic 2.5: Administration of vaccines Topic 2.6: Health promotion and resources for immunisation
Standard 1.4 Manage quality and safety	Topic 2.2: Recognition and management of adverse events following immunisation Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)
Standard 1.5 Maintain and extend professional competence	Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule Topic 2.6: Health promotion and resources for immunisation
Domain 2 Communication, collaboration and self-management	
Standard 2.1 Communicate effectively	Topic 1.4: Immunisation: myths and realities Topic 2.6: Health promotion and resources for immunisation
Domain 3 Leadership and management	
Standard 3.3 Manage pharmacy infrastructure and resources	Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)
Domain 4 Review and supply prescribed medicines	
Standard 4.1 Undertake initial prescription assessment	Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)
Standard 4.2 Consider the appropriateness of prescribed medicines	Topic 1.2: The immune system and vaccine and vaccine action Topic 2.2: Recognition and management of adverse events following immunisation Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule
Domain 6 Deliver primary and preventive health care	
Standard 6.1 Assess primary health care needs	Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule Topic 2.5: Administration of vaccines Topic 2.6: Health promotion and resources for immunisation
Standard 6.2 Deliver primary health care	Topic 2.2: Recognition and management of adverse events following immunisation Topic 2.5: Administration of vaccines

Standard 6.3 Contribute to public and preventive health	<p>Topic 1.1: Immunisation: a public health perspective</p> <p>Topic 1.2: The immune system and vaccine and vaccine action</p> <p>Topic 1.3: Epidemiology of vaccine preventable diseases</p> <p>Topic 1.4: Immunisation: myths and realities</p> <p>Topic 2.6: Health promotion and resources for immunisation</p>
Domain 7 Promote and contribute to optimal use of medicines	
Standard 7.3 Influence patterns of medicine use	<p>Topic 1.2: The immune system and vaccine and vaccine action</p> <p>Topic 1.3: Epidemiology of vaccine preventable diseases</p> <p>Topic 2.2: Recognition and management of adverse events following immunisation</p>
Domain 8 Critical analysis, research and education	
Standard 8.1 Retrieve, analyse and synthesise information	<p>Topic 2.5: Administration of vaccines</p> <p>Topic 2.6: Health promotion and resources for immunisation</p>
<i>Applied disciplines in the pharmacy curriculum</i>	
Pharmacology	Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule
Pharmacy practice	Topic 2.5: Administration of vaccines
<i>Enabling basic disciplines in the pharmacy curriculum</i>	
Anatomy	Broad relevance (not mapped to specific Topic)
Biochemistry	Broad relevance (not mapped to specific Topic)
Epidemiology	<p>Topic 1.1: Immunisation: a public health perspective</p> <p>Topic 1.3: Epidemiology of vaccine preventable diseases</p> <p>Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule</p>
Physiology	<p>Topic 1.1: Immunisation: a public health perspective</p> <p>Topic 1.2: The immune system and vaccine and vaccine action</p> <p>Topic 2.3: Vaccines used in the current Australian Standard Vaccination Schedule</p> <p>Topic 2.5: Administration of vaccines</p>
Social pharmacy	Broad relevance (not mapped to specific Topic)
Other resources	
Immunisation Handbook	<p>Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)</p> <p>Topic 2.5: Administration of vaccines</p>
APF-22	Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)
PSA guidelines	<p>Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)</p> <p>Topic 2.5: Administration of vaccines</p>
QCPP	Topic 2.4: Management, handling, storage and transportation of vaccines (the cold chain)

Mapping of the *Suggested learning outcomes (SLOs) in the National guidelines for immunisation education for registered nurses and midwives (the ‘Nurses’ Guidelines’) to pharmacists’ competency standards*

The mapped SLOs are shown in red text under Evidence Examples with corresponding labels from the Nurses’ Guidelines e.g. “2.5/3” refers to Topic 2.5 (Administration of vaccines), third SLO, in the Nurses’ Guidelines.

Two new Performance Criteria have been added to the pharmacists’ competency standards – see under Standard 6.2, Element 4, labelled 2a and 3a.

This main section (including the pharmacy curriculum mapping on p. 17) shows those competencies considered necessary for vaccine administration by pharmacists, as mapped against the Nurses’ Guidelines. The complete original publication, *National Competency Standards Framework for Pharmacists in Australia 2010*, must be consulted for a broader perspective of professional pharmacy practice including other essential core competencies for pharmacists.

The blue shading from the original publication has been retained for reference and indicates those performance criteria which are considered to be applicable at entry-level to the profession (i.e. at initial registration).

Domain 1 Professional and ethical practice

Standard 1.1	Practise legally
Standard 1.2	Practise to accepted standards
Standard 1.3	Deliver ‘patient-centred’ care
Standard 1.4	Manage quality and safety
Standard 1.5	Maintain and extend professional competence

Standard 1.1 Practise legally

This Standard covers pharmacists’ application of and compliance with legislative requirements that impact on professional practice, the work environment and those other activities in the workplace, such as recruitment, staff management and workstation design, for which pharmacists may be responsible. It encompasses the requirement to practise in a manner that is consistent with codes, guidelines and standards that become part of the legislative environment for professional practice by virtue of their development and/or adoption by the registering authority (PBA).

Standard 1.1 Practise legally

Performance Criteria	Evidence Examples
Element 1 – Comply with statute law, guidelines, codes and standards	
1 Understands the requirements of statute law, professional guidelines, codes and standards that comprise the legislative environment for practice.	<ul style="list-style-type: none"> Ability to describe the key legislative instruments and their impact on professional practice and the delivery of pharmaceutical services and products. (2.1/1, 2.1/2)
2 Applies legislative requirements directly applicable to the provision of pharmacy services.	<ul style="list-style-type: none"> Ability to promptly access and correctly interpret the requirements of statute law in relation to specific situations (e.g. provision of medication management reviews in residential aged care homes (RACHs), vaccines on the national vaccination schedule, State/Territory variations to the Australian Standard Vaccination Schedule, vaccines subsidised by the PBS, the administration of vaccines, reporting on adverse events). (2.1/1, 2.1/2, 2.2/4, 2.3/3) Ability to describe how legislative requirements have influenced operational policies and procedures (e.g. skin penetration acts). (2.1/2) Ability to describe State/Territory resources for travel vaccine information and international schedules. (2.3/4) Ability to describe State/Territory system for: managing “cold chain” failure through faults in the storage, transportation or temperature monitoring of vaccines; auditing of vaccine wastage; auditing of cold chain monitoring). (2.4/4, 2.4/5)
5 Understands the issues relevant to maintaining workplace safety.	<ul style="list-style-type: none"> Ability to explain the key areas of responsibility under Occupational Health and Safety Legislation for maintaining a safe workplace. (2.5/2) Ability to describe features of the vaccination service work environment that may impact on workplace safety (e.g. sharps and waste management, work station design, equipment design and use, security systems). (2.5/2)
Element 2 – Respond to common law requirements	
1 Understands the pharmacist’s duty of care to consumers and other clients of the service.	<ul style="list-style-type: none"> Ability to recognise specific aspects of common law decisions (e.g. immunisation practice, particularly <i>Rogers v. Whitaker 1993</i> and subsequent cases). (2.1/4)

Standard 1.1 Practise legally

Performance Criteria	Evidence Examples
Element 3 – Respect and protect the consumer’s right to privacy and confidentiality	
1 Considers the impact of privacy legislation on professional practice.	<ul style="list-style-type: none"> Ability to describe the key features of relevant Federal and State/Territory privacy legislation impacting on professional pharmacy practice (e.g. disclosure, consent to collect, requests for own health records). (2.1/3) Ability to outline State/Territory legislation relating to consent to treatment. (2.1/3) Ability to describe State/Territory-specific resources for obtaining valid consent. (2.1/5)
Element 4 – Support and assist consumer consent	
1 Accepts the importance of gaining consumer consent.	<ul style="list-style-type: none"> Ability to explain the importance of the consent process (including the impact of the <i>Rogers v. Whitaker</i> decision) as the means by which consumers exert autonomy and grant or withhold permission. (2.1/4)
2 Understands the nature of consumer consent.	<ul style="list-style-type: none"> Ability to describe the essential elements of valid consent (e.g. capacity to consent, clear and accurate explanation, confirming the consumer understands, absence of coercion, explicit statement of right to decline). (2.1/5) Ability to describe additional components of valid consent (e.g. comparison of effects of diseases and vaccines). (2.1/5)
3 Obtains consumer consent as required for professional services, including those where personal health information will be collated and shared with other health professionals.	<ul style="list-style-type: none"> Ability to describe services or situations where consent is required (e.g. Home Medicines Reviews (HMRs) and Residential Medication Management Reviews, administration of vaccines). (2.1/6)

Standard 1.2 Practise to accepted standards

This Standard is concerned with the responsibility pharmacists have to behave in a manner that upholds the good standing of the profession. It also encompassed their accountability for the quality of the services provided and the outcomes achieved.

Standard 1.2 Practise to accepted standards

Performance Criteria	Evidence Examples
Element 1 – Demonstrate personal and professional integrity	
3 Understands pharmacists are accountable for the services provided and the associated outcomes.	<ul style="list-style-type: none"> Ability to accept responsibility for the actions and decisions taken in the course of professional practice (e.g. provision of a vaccination service) and the associated outcomes (direct and indirect). (2.1/7, 2.1/8)

Standard 1.3 Deliver ‘patient-centred’ care

This Standard is concerned with the responsibility pharmacists have to deliver professional services according to the needs of consumers, taking account of the consumer’s rights and expectations.

Standard 1.3 Deliver ‘patient-centred’ care

Performance Criteria	Evidence Examples
Element 1 – Maintain primary focus on the consumer	
4 Recognises and respects the values, beliefs, personal characteristics, and cultural and linguistic diversity of consumers.	<ul style="list-style-type: none"> Ability to explain the issue of individual rights in relation to choosing not to immunise. (1.4/3)

Standard 1.3 Deliver 'patient-centred' care

Performance Criteria	Evidence Examples
5 Understands the impact on practice of a culturally diverse consumer population.	<ul style="list-style-type: none"> Ability to explain the need to target immunisation to certain groups e.g. people from non-English speaking backgrounds, Aboriginal and Torres Strait Islander people, working parents, remote and isolated families. (2.6/6) Ability to discuss ways in which the pharmacist's cultural and linguistic background influences the assumptions made about consumer needs and the delivery of services and advice. (2.5/4)
Element 2 – Address consumer needs	
3 Adapts service delivery, as far as practicable, to satisfy the needs of consumers.	<ul style="list-style-type: none"> Ability to explore personal beliefs regarding immunisation and relate them to scientific evidence. (1.4/3) Ability to describe the role of valid consent procedures in dealing with anti-immunisation perspectives. (1.4/3)
4 Encourages consumers to seek and use information relevant to their health needs.	<ul style="list-style-type: none"> Ability to support consumers to make therapeutic and lifestyle decisions that are consistent with achieving good or improved health (e.g. interpreting CMI's, encouraging modification of risk factors, uptake of immunisation). (1.4/4)

Standard 1.4 Manage quality and safety

This Standard is concerned with the responsibility pharmacists have to protect consumers from harm by managing and responding to the risk inherent in medication management systems. This includes the responsibility they share with other health professionals to act in the best interests of consumers and display probity and openness in their dealings with them.

Standard 1.4 Manage quality and safety

Performance Criteria	Evidence Examples
Element 1 – Protect and enhance consumer safety	
2 Understands the potential sources of error in professional service delivery and their likely consequences.	<ul style="list-style-type: none"> Ability to identify vaccines affected by exposure to light, or those which are affected by extremes of cold and heat. (2.4/2, 2.4/3) Ability to describe the relationship between efficacy of vaccines and maintaining recommended temperature range for storage and transportation of vaccines. (2.4/4) Ability to describe WHO cold chain recommendations and guidelines and their role in the national immunisation program in Australia. (2.4/1) Ability to describe current NHMRC recommendations for the storage, transportation and temperature monitoring of vaccines used in the national immunisation program. (2.4/1)
3 Ensures appropriate professional services documentation is completed for identifying and managing risks to consumers.	<ul style="list-style-type: none"> Ability to describe documentation that should be completed to protect consumer safety (e.g. management of adverse events). (2.2/5) Ability to maintain relevant, accurate and up-to-date records including the management of any adverse events. (2.2/5)
Element 2 – Respond to identified risk	
2 Accepts responsibility for reporting and following up medication incidents.	<ul style="list-style-type: none"> Ability to describe the reporting and follow-up processes in use (e.g. reporting to ADRAC on incidents reported by consumers or following administration of a vaccine). (2.2/4)

Standard 1.5 Maintain and extend professional competence

This Standard is concerned with pharmacists' understanding and acceptance of the concept of life-long learning and their commitment to continuous learning and professional development as a means of advancing their practice and professional role in the community.

Standard 1.5 Maintain and extend professional competence

Performance Criteria	Evidence Examples
Element 1 – Accept the importance of life-long learning	
1 Understands the concept of life-long learning for pharmacists.	<ul style="list-style-type: none">• Ability to discuss life-long learning (continuous striving to gain knowledge and maintain competence) in the context of career development and the pharmacist's professional role in delivering health care services. (2.3/1, 2.3/6)
3 Understands the expectations of the registering authority and professional associations in relation to maintenance of competence and ongoing professional development.	<ul style="list-style-type: none">• Ability to explain the importance of updating theoretical knowledge regularly to maintain national standards. (2.6/5)
Element 2 – Undertake self-directed learning	
4 Applies learning to improve performance and/or extend professional practice.	<ul style="list-style-type: none">• Ability to regularly update theoretical knowledge to maintain national standards. (2.6/8)

Domain 2 Communication, collaboration and self-management

Standard 2.1 Communicate effectively

This Standard addresses the ability of pharmacists to communicate effectively in English so that the recipient of the communication receives the intended message. It also covers circumstances where communication style must be adapted to work through situations arising in daily practice where divergent views must be addressed to reach a position that is acceptable to the parties concerned.

Standard 2.1 Communicate effectively

Performance Criteria	Evidence Examples
Element 1 – Adopt sound principles for communication	
4 Recognises barriers to effective communication must be addressed.	<ul style="list-style-type: none"> • Ability to describe barriers to effective communication (e.g. emotional status (distress, anger or aggression), culture, values and beliefs (e.g. anti-immunisation perspectives), sensory impairment (hearing or vision), disabilities (mental or physical), personality conflict, socioeconomic or educational status, communication through a third party). (1.4/4) • Ability to demonstrate or describe strategies and/or resources to address barriers to effective communication (e.g. revised communication pathways, tools for third party communication, presentation of facts about immunisation simply and succinctly). (1.4/4)
Element 2 – Adapt communication for cultural and linguistic diversity	
2 Recognises the special communication needs of consumers and/or carers with different cultural and linguistic backgrounds.	<ul style="list-style-type: none"> • Ability to demonstrate sensitivity to the needs, values, beliefs (e.g. anti-immunisation views) and cultural backgrounds of others. (1.4/4)
3 Responds, as far as practicable, to the needs of those from diverse cultural and linguistic backgrounds.	<ul style="list-style-type: none"> • Ability to explain the need to recognise cultural differences of communities, through appropriate community consultation, as related to immunisation. (2.6/7)
Element 4 – Apply communication skills in negotiation	
2 Recognises the importance of research and preparation in the negotiation process.	<ul style="list-style-type: none"> • Ability to identify and describe relevant information (e.g. myths and facts about immunisation) which will be necessary for a successful negotiation. (1.4/4)
3 Understands the importance of finding a position that satisfies the objectives of each party to the negotiation.	<ul style="list-style-type: none"> • Ability to describe the benefits of a negotiated outcome. (1.4/4)
4 Addresses circumstances requiring a negotiated outcome.	<ul style="list-style-type: none"> • Ability to be assertive and use supportive and persuasive communication to achieve a desired outcome. (1.4/4) • Ability to describe or demonstrate an appropriate negotiation strategy for a particular situation (e.g. to counter myths and promote vaccine coverage). (1.4/4)

Domain 3 Leadership and management

Standard 3.3 Manage pharmacy infrastructure and resources

This Standard covers the responsibilities pharmacists have for acquiring and managing products and equipment. It encompasses the requirement to ensure equipment is systematically maintained according to an established schedule and that effective, efficient and safe stock handling practices are observed.

Standard 3.3 Manage pharmacy infrastructure and resources

Performance Criteria	Evidence Examples
Element 2 – Manage products and equipment	
1 Establishes and maintains policies and procedures for the stock management and equipment maintenance.	<ul style="list-style-type: none">• Ability to develop clear and comprehensive policies for stock management (including responsible management of vaccines at pharmacy level) and equipment maintenance. (2.4/6)

Domain 4 Review and supply prescribed medicines

Standard 4.1	Undertake initial prescription assessment
Standard 4.2	Consider the appropriateness of prescribed medicines

Standard 4.1 Undertake initial prescription assessment

This Standard is concerned with the processes pharmacists use to undertake initial assessment of a prescription. Much of this initial activity will relate to ensuring the prescription complies with legal and professional requirements and that the intended treatment is clear.

Standard 4.1 Undertake initial prescription assessment

Performance Criteria	Evidence Examples
Element 3 – Confirm availability of medicines	
1 Establishes any special circumstances or supply arrangements impacting on availability of the prescribed medicine.	<ul style="list-style-type: none"> • Ability to determine cost of individual vaccines, acceptable levels of wastage and mechanisms to improve efficacy. (2.4/5, 2.4/6) • Ability to apply the WHO formula for calculating doses needed in order to reduce wastage. (2.4/5, 2.4/6)
2 Identifies suitable products held in stock or available from a supplier.	<ul style="list-style-type: none"> • Ability to use authoritative reference sources and supplier catalogues to clarify required product (e.g. including travel vaccines and special products such as rabies vaccines) and its availability. (2.3/4, 2.3/5)

Standard 4.2 Consider the appropriateness of prescribed medicines

This Standard is concerned with the ability of pharmacists to integrate and apply clinical and pharmacological information in an assessment of the appropriateness and safety of a medication and/or the medication dosing regimen. This involves the acquisition of relevant clinical information and the use of professional judgement to determine whether prescribed medicines may be safely and effectively introduced into the current medication treatment regimen.

Standard 4.2 Consider the appropriateness of prescribed medicines

Performance Criteria	Evidence Examples
Element 2 – Review the prescribed medicines	
1 Understands the therapeutic use(s) or pharmacological rationale for use of prescribed medicines.	<ul style="list-style-type: none"> • Ability to describe the therapeutic uses, contraindications and precautions, and/or pharmacology of prescribed medicines (e.g. all vaccines on the recommended schedule; other special vaccines), or to readily access this information. (2.3/1) • Ability to describe the relationship between the immune system and vaccine action (e.g. normal physiological immune function interaction with specific vaccines for example live attenuated vaccines; relationship between the immune system and construction of vaccination schedules with respect to number of doses, timing, spacing of booster doses; interchangeability of vaccines). (1.2/2, 2.3/3) • Ability to explain why the particular medicines are likely to have been prescribed for a specific consumer (e.g. vaccines for special groups). (2.3/2)
2 Considers consumer, drug and dosage form factors likely to impact on the efficacy or safety of treatment.	<ul style="list-style-type: none"> • Ability to describe the types of consumer factors (e.g. medical conditions/disease states, age, weight, allergies, pregnancy and lactation, contraindications, precautions, vaccination history), drug factors (e.g. bioavailability, pharmacokinetics, efficacy, toxicity) and formulation factors (e.g. use of preservatives, stability, sterility) that are likely to impact on efficacy and safety of treatment. (2.3/1, 2.3/3)

Standard 4.2 Consider the appropriateness of prescribed medicines

Performance Criteria	Evidence Examples
4 Identifies factors likely to adversely affect adherence to the intended treatment.	<ul style="list-style-type: none">• Ability to describe consumer or lifestyle factors or features of the prescribed medicines that are likely to adversely impact on adherence (e.g. language, literacy and numeracy skills, manual dexterity, vision, racial, religious and cultural background, dosing regimen, side-effect profile (including previous experience of an adverse outcome) and cost). (2.2/5)
5 Uses professional judgement to determine whether any changes in prescribed medicines are warranted to promote enhanced safety and/or efficacy.	<ul style="list-style-type: none">• Ability to describe variations to the recommended schedule, including details of using catch-up immunisation. (2.3/3)

Domain 6 Deliver primary and preventive health care

Standard 6.1	Assess primary health care needs
Standard 6.2	Deliver primary health care
Standard 6.3	Contribute to public and preventive health

Standard 6.1 Assess primary health care needs

This Standard addresses the responsibility pharmacists have to assess the symptoms or conditions for which assistance is sought, form a view about their potential seriousness and make a sound professional judgement about the course of action most likely to be of benefit to the consumer. This may include collaboration with or onward referral to another health professional.

Standard 6.1 Assess primary health care needs

Performance Criteria	Evidence Examples
Element 1 – Elicit relevant clinical information	
1 Undertakes consultation with the consumer/carer in a manner that protects their privacy and confidentiality.	<ul style="list-style-type: none"> Ability to elicit or gather information to confirm vaccination status of the consumer. (2.5/4)
2 Uses the consumer medication record where this is available to confirm health information relevant to the presenting condition/symptoms.	<ul style="list-style-type: none"> Ability to manage consumers with inadequate or no written immunisation records. (2.3/6)
4 Maintains a network with individuals and organisations that are able to provide complementary input in the provision of primary health care services.	<ul style="list-style-type: none"> Ability to describe the complementary roles or expertise of the contacts in their primary health care network including other vaccine providers. (2.6/2)
Element 2 – Identify management options	
3 Identifies possible medicinal and non-medicinal treatment strategies or options.	<ul style="list-style-type: none"> Ability to identify and utilise all clinical encounters to assess vaccination status and, when indicated, vaccinate children. (2.5/4)

Standard 6.2 Deliver primary health care

This Standard covers the activities pharmacists undertake to respond to the identified primary health care needs of consumers consistent with the role of a pharmacist. This includes the direct delivery of treatment of minor ailments and the provision of evidence-based advice and recommendations for medicinal treatment. It may also include non-medicinal interventions, such as advice on the use and care of medical aids, devices and equipment or a recommendation against treatment.

Standard 6.2 Deliver primary health care

Performance Criteria	Evidence Examples
Element 2 – Promote safe and effective use of medicines and health care products	
2 Provides advice about the selected/recommended medicine or health care product, using written consumer information resources as required for further clarification.	<ul style="list-style-type: none"> Ability to explain, in terms appropriate for informing the consumer, about the medicine (e.g. vaccine) and its use, the expected outcomes and actions to take should these outcomes not be achieved (e.g. including use of verbal and take-home advice regarding the incidence of common, moderate and severe adverse events and their management). (2.2/1, 2.2/3, 2.2/5) Ability to use written information resources (e.g. cautionary and advisory labels, equipment instruction leaflets) to clarify or reinforce advice provided. (2.2/1, 2.2/3, 2.2/5)

Standard 6.2 Deliver primary health care

Performance Criteria	Evidence Examples
5 Undertakes follow-up of consumers where indicated to monitor progress and/or outcomes.	<ul style="list-style-type: none"> Ability to discuss criteria by which consumers may be selected for follow-up (e.g. anxiety and/or poor capacity to understand medicines or dosing information, further information to be provided or referral to a medical practitioner, post-vaccination). (2.2/3)
Element 4 – Provide direct care consistent with the role of a pharmacist	
2a (New) Administers a medicine.	<ul style="list-style-type: none"> Ability to describe all aspects of national recommendations relating to administration of vaccines (e.g. sites, route, needle gauge/length, angle of insertion and speed of administration). (2.5/1) Ability to demonstrate injection technique which is consistent with national recommendations (e.g. for sites, route, needle gauge/length, angle of insertion and speed of administration). (2.5/4)
3a (New) Applies appropriate measures in response to an adverse event following administration of a medicine.	<ul style="list-style-type: none"> Ability to describe (e.g. statistical likelihood and clinical symptoms), recognise and treat a mild or moderate adverse event following administration of a vaccine. (2.2/1, 2.2/2, 2.2/3, 2.2/5) Ability to describe statistical likelihood, and recognise signs and symptoms of severe adverse events following vaccination. (2.2/1, 2.2/2, 2.2/5) Ability to describe requirements in the clinical setting for treatment of adverse events after immunisation (particularly anaphylaxis). (2.2/3) Ability to demonstrate clinical management of anaphylaxis. (2.2/3, 2.2/5) Ability to describe future management of consumers who have experienced an adverse event to vaccines. (2.2/3, 2.2/5)
Element 5 – Manage records for primary health care services	
1 Ensures primary health care services, including progress and/or outcomes, are recorded accurately in the consumer medication record consistent with legislative requirements and professional standards and conventions.	<ul style="list-style-type: none"> Ability to describe a system of documentation that captures details of the primary health care service (e.g. immunisation service) provided, including advice, recommendations, actions and interventions and progress or health outcomes achieved. (2.5/3)

Standard 6.3 Contribute to public and preventive health

This Standard covers health promotion activities undertaken by pharmacists to prevent illness and support early detection and intervention for diseases commonly encountered in the Australian community (e.g. asthma, diabetes, arthritis and kidney and heart disease). It encompasses work undertaken with consumers to manage risk factors for disease and with government, consumers/carers, medical practitioners and other members of the health care team to improve consumers' health.

Standard 6.3 Contribute to public and preventive health

Performance Criteria	Evidence Examples
Element 1 – Understand public health issues	
1 Understands public health priorities and the basis of action for prevention and early detection initiatives.	<ul style="list-style-type: none"> • Ability to describe the aims of an immunisation program (e.g. concepts of control, elimination and eradication of vaccine preventable diseases). (1.1/1) • Ability to provide information on vaccine preventable diseases (e.g. signs and symptoms, occurrence, mode of transmission and control). (1.1/1) • Ability to state the concept of population/community immunity as compared to individual immunity. (1.1/4) • Ability to discuss the basis for the public health education strategies/campaigns directed at disease prevention (e.g. immunisation for prevention of childhood diseases, prevention of chlamydia and other sexually transmissible diseases, needle and syringe exchange program and the prevention of hepatitis B and C, concepts of herd immunity). (1.1/4) • Ability to outline international and national population health coverage, perspectives and strategies of immunisation (e.g. WHO Expanded Program on Immunisation, NHMRC National Immunisation Strategy, PBS-subsidised vaccines). (1.1/2, 1.3/2) • Ability to discuss the implications of immunisation globally (e.g. impact of international travel on transmission of avian influenza). (1.1/1)
2 Understands and promotes the role of pharmacists in health promotion.	<ul style="list-style-type: none"> • Ability to describe the importance of the public health perspective to individual practice. (1.1/3) • Ability to demonstrate importance of maintaining the NHMRC Australian Standard Vaccination Schedule (e.g. encourage the community to maintain the recommended vaccination schedule in order to maximise individual and community protection). (1.2/3)
4 Understands the health infrastructure that exists for providing preventive health information and advice.	<ul style="list-style-type: none"> • Ability to describe and access local and national promotional resources for immunisation. (2.6/1, 2.6/8)
Element 2 – Promote the health of consumers	
1 Participates in evidence-based public health campaigns, including health screening programs, consistent with the role a pharmacist.	<ul style="list-style-type: none"> • Ability to state some common arguments against, or myths about, immunisation. (1.4/1) • Ability to describe differences in interpretation of ‘knowledge’ (i.e. scientific compared with ‘alternative’ knowledge). (1.4/1) • Ability to counter or respond to arguments against immunisation from a basis of scientific knowledge. (1.4/2) • Ability to describe the role of the media in presenting immunisation information to the public. (1.4/2) • Ability to explain information provided by the media to the consumer in a scientifically valid and consumer friendly manner. (1.4/2)
3 Initiates or collaborates in the systematic planning and implementation of health promotion strategies.	<ul style="list-style-type: none"> • Ability to utilise national and local databases (e.g. Australian Childhood Immunisation Register) to develop strategies for improving immunisation uptake. (2.6/3) • Ability to initiate strategies to promote immunisation locally (e.g. working with service groups, or meeting with key community people). (2.6/4) • Ability to implement health promotion strategies which recognise cultural differences of communities (e.g. through incorporation of appropriate community consultation) in relation to immunisation. (2.6/8)

Domain 7 Promote and contribute to optimal use of medicines

Standard 7.3 Influence patterns of medicine use

This Standard addresses the role pharmacists have for promoting the quality, cost-effective and safe use of medicines within institutions or in the community as a whole. It focuses on the responsibility pharmacists have to be informed about patterns of medicine use on a system-wide or population based level and to positively influence those patterns to improve the care consumers receive.

Standard 7.3 Influence patterns of medicine use

Performance Criteria	Evidence Examples
Element 1 – Understand the basis for investigating patterns of medicine use	
1 Understands the importance of promoting adherence to established criteria/standards for medicine use.	<ul style="list-style-type: none"> Ability to describe the importance of individuals and the community to maintain the recommended vaccination schedule. (1.2/3)
Element 2 – Review patterns of medicine use	
1 Develops an awareness of patterns of medicine use in their area of practice or in selected consumer populations.	<ul style="list-style-type: none"> Ability to describe prescribing trends or protocols and/or patterns of medicine use in their area of practice (e.g. vaccine coverage in the local area) or in selected consumer populations (e.g. vaccine coverage of children). (1.3/1)
Element 3 – Promote improvement in patterns of medicine use	
1 Contributes to information on the frequency and nature of ADRs associated with medicine use.	<ul style="list-style-type: none"> Ability to describe and/or use formal ADR reporting systems (e.g. institutional reporting systems or report to the ACSOM). (2.2/4)
2 Selects intervention strategies likely to be effective in modifying patterns of medicine use.	<ul style="list-style-type: none"> Ability to describe the importance of applying epidemiological data and information to the provision of an immunisation service. (1.3/3) Ability to discuss feedback mechanisms to vaccine providers on disease surveillance and vaccine coverage data. (1.3/4)

Domain 8 Critical analysis, research and education

Standard 8.1 Retrieve, analyse and synthesise information

This Standard is concerned with the ability of pharmacists to access, analyse, interpret and synthesise clinical information and apply their professional judgement to formulate an objective and balanced written or verbal response. This activity may be undertaken as part of their own practice, to support research activities or in response to a formal request for information.

Standard 8.1 Retrieve, analyse and synthesise information

Performance Criteria	Evidence Examples
Element 1 – Manage information resources and systems	
4 Develops a medicines and health information contact network.	<ul style="list-style-type: none">Ability to describe the role/uses of information network contacts (e.g. poisons and drug information centres, community support organisations, government departments and agencies, pharmacists within an area of practice, pharmaceutical companies, medical specialists, other vaccine providers). (2.6/2)
Element 3 – Review and analyse information	
3 Understands and interprets the retrieved information.	<ul style="list-style-type: none">Ability to explain research which justifies changes to injection technique (e.g. see the Australian Immunisation Handbook, 10th edition, 2013, sections 2.2.5–2.2.9). (2.5/4)

Mapping of relevant *Suggested learning outcomes* (SLOs) in the *National guidelines for immunisation education for registered nurses and midwives* (the ‘Nurses’ Guidelines’) to *Applied and Enabling Basic Disciplines in the Pharmacy Curriculum* (Appendix 3 in the pharmacists’ competency standards publication)

The mapping of relevant SLOs is shown in yellow highlights and in red text. Numbering in parentheses refers to the SLOs in the Nurses’ Guidelines. For example 1.1/5 refers to the fifth SLO listed under Topic 1.1. Anatomy, biochemistry and social pharmacy have broad relevance but have not been mapped to any specific SLOs in the Nurses’ Guidelines.

Applied disciplines

Pharmacology — the interactions of drugs and medicinal substances at a cellular or molecular level to produce changes in the activity of the organism (host tissues or infectious organisms).

- Information about vaccines in the recommended schedule including indications for use, dosage and frequency, contraindications. (2.3/1)
- Basic knowledge of travel vaccines and special vaccines (e.g. rabies). (2.3/4, 2.3/5)

Pharmacy practice — the integration of the above disciplines with knowledge of disease states and pharmacotherapy, QUM, safety and risk management, health economics, health promotion and disease prevention, pharmacoepidemiology, the place of the pharmacy profession in the health care system, the standards of professional conduct, the ethics of the profession of pharmacy, the law relating to pharmacy, and the management of human, fiscal and time resources.

- Best practice medication management (e.g. the ‘6 drug rights’ or the ‘6 Rs’). (2.5/4)
- Physics (angles, depths and fluid under pressure). (2.5/1)

Enabling basic disciplines

Anatomy, biology and microbiology — the structure of organisms, particularly human, knowledge of living organisms and microscopic forms of life, and their vital processes.

Biochemistry — the chemistry of chemical compounds and processes in organisms.

Epidemiology — the incidence, distribution and control of disease in a population.

- Current information on epidemiology of vaccine preventable diseases (e.g. data from the Australian Childhood Immunisation Register, surveys conducted by the ABS). (1.1/2)
- Epidemiology of vaccine preventable diseases and vaccine coverage (e.g. at national and state/territory levels; different populations). (1.3/1)
- Epidemiology of certain diseases and the need to apply this information to the schedule for special groups (e.g. Hepatitis B use for at risk groups; pneumococcal infection and recommendations for Aboriginal adults). (2.3/2)

Physiology — the functions and activities of life or of living matter (as organs, tissues or cells) and of the physical and chemical phenomena involved.

- Definitions of immunisation terminology (e.g. immunogenicity, reactogenicity, efficacy, protection, herd immunity). (1.1/1)
- Basic knowledge of the immune system (e.g. active and passive immunity, acquired immunity, antigens, antibodies). (1.2/1)
- Knowledge on: differences between live attenuated and inactivated vaccines and special precautions; vaccines for special purposes (e.g. Hepatitis A, BCG); passive immunisation with immunoglobulin and its uses; use of vaccines in outbreaks of vaccine preventable diseases (e.g. measles, mumps, rubella). (2.3/1, 2.3/2)
- Immunology, vaccine efficacy and reactogenicity and the spacing of vaccines, particularly in relation to catch-up schedules. (2.3/3)
- Muscle fibres and absorption (2.5/4)

Social pharmacy — the study of social and behavioural factors influencing medicine use including medicine- and health-related beliefs, attitudes, rules, relationships and processes.