



Australian Pharmacy Council Ltd

Accreditation Standards for Pharmacy Programs in Australia and New Zealand



DECEMBER 2012

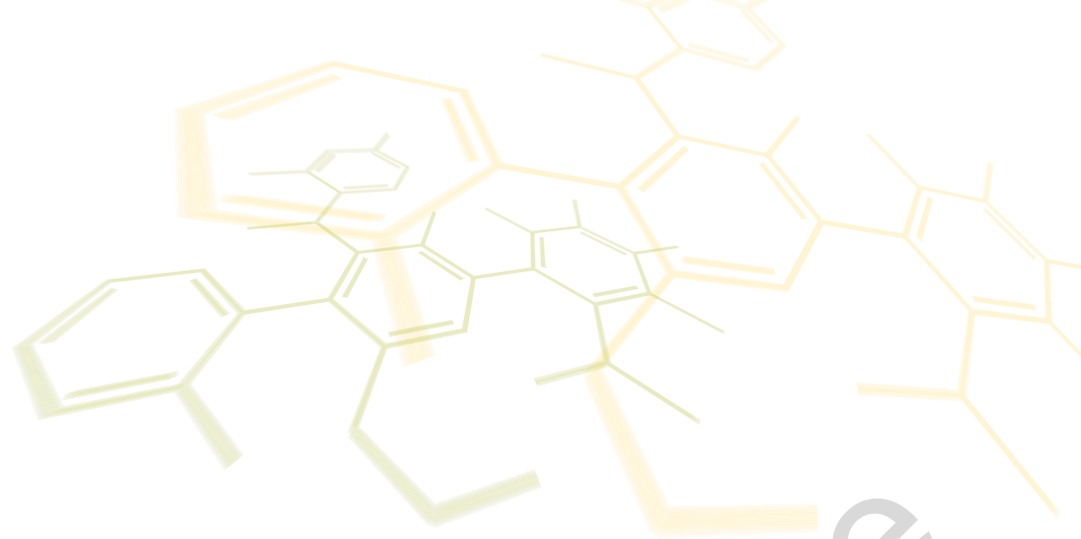
EFFECTIVE FROM 1 JANUARY 2014

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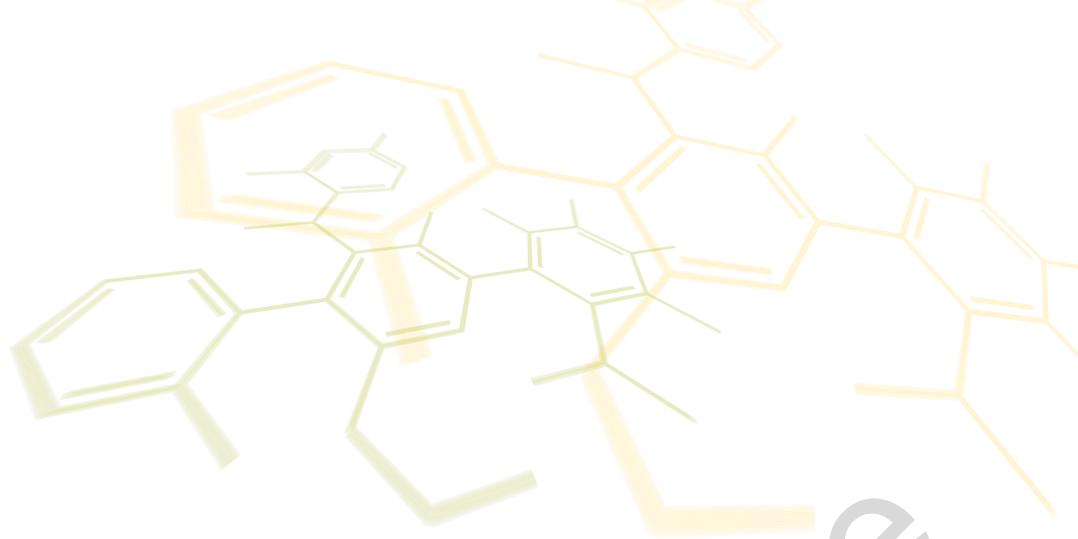
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Preamble

Pharmacist Education in Australia and New Zealand

To be eligible to become a registered pharmacist in Australia and New Zealand individuals must complete an approved program of study. That is, the program of study must be accredited by the Australian Pharmacy Council (APC) and approved by the Pharmacy Board of Australia (PBA) or the Pharmacy Council of New Zealand (PCNZ) and published on the Board or Council's website. Programs eligible for accreditation are those offered at Bachelor or Masters levels which provide a program of study for the initial training and education of pharmacy students¹.

The Bachelor of Pharmacy is a four year, or part-time equivalent, undergraduate degree. The Master of Pharmacy is a three year full-time (or equivalent) graduate and/or articulated program². The duration of pharmacy programs eligible for accreditation must be consistent with the 'volume of learning' descriptor of the Australian Qualifications Framework (AQF)³. Within the AQF this descriptor is identified as a dimension which reflects the complexity of the qualification type and the time required to achieve the learning outcomes specified in the AQF.

Graduates gaining an approved qualification through completion of an approved Bachelor or Masters level program who wish to gain registration with the PBA or PCNZ are required to complete an internship. This involves supervised practice⁴ with an approved preceptor⁵ and participation in a program of education offered by an Intern Training Program (ITP)⁶ provider accredited by the APC. Additionally, graduates must register as intern pharmacists with the PBA in Australia or PCNZ in New Zealand⁷. To achieve general registration as a pharmacist, all intern pharmacists are required to undertake examinations designed to test their competency.

1 The APC accredits degree programs (which enable graduates to enter an internship intended for registration in Australia and New Zealand) which meet the APC Accreditation Standards for Degree Programs and the Australian Qualifications Framework where the nomenclature of the degree title includes BPharm, MPharm, or Hons variations.

2 In this instance, 3 years full-time or equivalent refers to either six semesters over three years or six trimesters over two years.

3 Australian Qualification Framework Council for the Ministerial Council for Tertiary Education and Employment. Australian Qualifications Framework, First Edition, July 2011. Available at: <http://www.aqf.edu.au>.

4 Supervised practice is defined as undertaking pharmacy practice under the direct supervision of a pharmacist who holds general registration (a preceptor), while the pharmacist is providing pharmacy services in pharmacy premises or other circumstances as determined by the Board or Council. In New Zealand this supervised practice is for an intern pharmacist. Adapted from: Pharmacy Board of Australia. Supervised practice arrangements registration standard. Available at: www.pharmacyboard.gov.au under 'Registration Standards'.

5 An approved preceptor is "a pharmacist responsible for the supervision of a person undertaking supervised practice either during undergraduate clinical training placements or during a period of supervised practice as part of the process leading to general registration". *ibid*.

6 An Intern Training Program (ITP) is a program or work integrated learning conducted by intern training providers and accredited by the accreditation authority and approved by the Board or Council. *ibid*.

7 Intern Pharmacist Scope of Practice is a provisional scope which, on completion of an intern training program and examinations leads to eligibility for registration as a pharmacist. Available at: http://www.pharmacycouncil.org.nz/intern_scope.

Accreditation and the Regulatory Environment

Accreditation of pharmacy programs in Australia and New Zealand began in 1998 with the creation of the New Zealand and Australian Pharmacy Schools Accreditation Committee (NAPSAC) as a standing committee of the Association of Pharmacy Registering Authorities (APRA), the organisation which preceded the creation of APC.

In Australia, the enactment of the *Health Practitioner Regulation National Law Act 2009* (the National Law)⁸ resulted in the registration of pharmacists being nationalised under a single National Registration and Accreditation Scheme (NRAS) from the 1st of July 2010. NRAS, as it applies to pharmacists, is administered under the auspices of the PBA. A requirement under the National Law is that pharmacy graduates seeking registration must have graduated from an approved program of study.

The APC was appointed the external accreditation entity for pharmacy by the Australian Health Ministers' Advisory Council (AHMAC) under the authority granted by the National Law. The accreditation functions of the APC are undertaken by the Accreditation Committee and include accreditation of pharmacy programs, ITP providers, continuing professional development (CPD), and assessment of overseas trained pharmacists and international students graduating from an Australian program.

In New Zealand, regulation of the pharmacy profession is achieved through the *Health Practitioners Competence Assurance Act 2003* (HPCAA) which dictates that clinical, cultural and ethical competencies must be integrated into the learning objectives of pharmacy programs. The PCNZ is established under the HPCAA with a duty to protect the public and promote good professional practice by pharmacists. It achieves this through a range of roles including review and promotion of the competence of pharmacists, prescribing the qualifications required for scopes of practice within the profession, and accrediting and monitoring educational institutions and the programs of study they provide.

Funding of approved tertiary education programs in New Zealand is managed by the Tertiary Education Commission according to requirements and priorities established

by Government. The New Zealand Vice-Chancellors' Committee (Universities NZ) has legislated authority for program approval and accreditation within the university sector while the New Zealand Qualifications Authority has authority to approve and accredit programs of study in the rest of the higher education sector. Universities NZ has delegated its approval and accreditation powers to the Committee on University Academic Programmes (CUAP), a committee comprising representatives from each of the universities. The CUAP undertakes the approval and accreditation functions within policies, and according to criteria, established by the New Zealand Qualifications Authority. It meets twice annually to consider proposals from universities for new qualifications or major changes to existing qualifications. Approved new qualifications are added to the New Zealand Qualifications Framework which is a comprehensive list of quality-assured qualifications for New Zealand.

APC maintains the accreditation standards⁹ for assessing pharmacy programs in Australia and New Zealand. In Australia, prior to use, the accreditation standards must be approved by the PBA and in New Zealand by the PCNZ. Under the National Law, a pharmacy program may be accredited if, after assessment, APC is reasonably satisfied that:

- the program of study, and the education provider of the program of study, meets the Approved Accreditation Standards¹⁰ for the profession; or
- the program of study, and the program provider of the program of study, substantially meet the Approved Accreditation Standards for the profession and the imposition of conditions on the approval will ensure the program meets the standard within a reasonable time.

Under the National Law, approved programs of study and their providers must also be monitored to ensure APC continues to be satisfied that the Approved Accreditation Standards are met. Provisions exist under the National Law for APC to impose conditions on, or revoke the accreditation of a program should it reasonably believe that the program and the program provider no longer meet the Approved Accreditation Standards. The accreditation process therefore includes site inspection and audit reports as well as ongoing monitoring of program performance to assess whether programs and program providers continue to meet the Approved Accreditation Standards.

8 Available at: <http://www.ahpra.gov.au/Legislation-and-Publications/Legislation.aspx>

9 An accreditation standard is a standard used to assess whether a program of study, and the education provider that provides the program of study, provide persons who complete the program with the knowledge, skills and professional attributes necessary to practice the profession in Australia and New Zealand. Adapted from: *Health Practitioners Regulation National Law Act 2009* (the National Law).

10 An approved accreditation standard is an accreditation standard that has been approved by the National Board or Council and published on the Board's website. *ibid.*

Guidance for the development of accreditation standards has been provided by the Australian Health Practitioner Regulation Agency (AHPRA) in its *Procedures for the Development of Accreditation Standards*¹¹. A key requirement for proposing a new or amended accreditation standard is that the accreditation authority is satisfied that the proposal takes account of the objectives and guiding principles for the NRAS as set out in Section 3 of the National Law. The guiding objectives of the NRAS cited by AHPRA as being of particular relevance when proposing new or amended accreditation standards are:

1. *to provide for the protection of the public by ensuring that only health practitioners who are suitably trained and qualified to practise in a competent and ethical manner are registered;*
2. *to facilitate the provision of high quality education and training of health practitioners; and*
3. *to enable the continuous development of a flexible, responsive and sustainable Australian health workforce and to enable innovation in the education of, and service delivery by, health practitioners.*

Similarly, AHPRA notes that a guiding principle of the NRAS of particular relevance when proposing new or amended accreditation standards is “that the scheme is to operate in a transparent, accountable, efficient, effective and fair way”. Thus, the regulatory environment provides the authority for APC to undertake accreditation functions, including the accreditation of pharmacy programs, and specifies the manner in which they are conducted.

In July 2011, the Australian Qualifications Framework Council, a Council of the Ministerial Council for Tertiary Education and Employment, released the first edition of the AQF. This framework draws qualifications from all educational sectors in Australia into a single, comprehensive and seamless framework under which qualification types may be quality-assured, recognised and regulated. The AQF sets out “the relative complexity and depth of achievement and the autonomy required of graduates to demonstrate that achievement” across 10 levels of qualification type. The levels are defined by criteria in the form of learning outcomes expressed in terms of expected knowledge, skills and their application. Universities will be required to ensure their programs of study comply with the AQF requirements for the level of the

qualification type offered, so are now obliged to take action toward achieving compliance.

In a further regulatory development in Australia, it is mandatory for all higher education providers to comply with the Threshold Standards of the Tertiary Education and Quality Standards Agency (TEQSA) as of the 29th of January 2012. The Threshold Standards consist of Provider Standards (comprising Provider Registration Standards, Provider Category Standards and Provider Course Accreditation Standards) and Qualification Standards. This last category of standards explicitly relates to compliance with AQF requirements. It is therefore a stated expectation that the application of the TEQSA Standards to new and re-accrediting higher education awards will result in full implementation of the AQF by the 1st of January 2015. The Provider Registration Standards and Provider Course Accreditation Standards for higher education providers are directed at many of the same areas as the Accreditation Standards for pharmacy programs. For this reason, every effort has been made during the review of the APC Accreditation Standards to assure consistency with the TEQSA Standards.

¹¹ Available at: <http://www.ahpra.gov.au/Legislation-and-Publications/AHPRA-FAQ-and-Fact-Sheets.aspx>

The Purpose of Accreditation

The purpose of accreditation is to assure the quality of the education and training provided to pharmacy students and to promote further development in the quality of pharmacy degree programs. The accreditation of pharmacy programs is intended to safeguard the public by ensuring the programs graduate students who are able to progress through an accredited intern training program to achieve the required competence to practice as pharmacists and contribute to the achievement of enhanced health outcomes for consumers. The focus of the accreditation process is therefore on both the pharmacy program and the education provider of the program of study. **Schools¹² seeking accreditation by APC must demonstrate that all Approved Accreditation Standards are met.**

Programs Assessed for Accreditation

Pharmacy programs of study currently assessed for accreditation are:

- four year full-time (or equivalent part-time) undergraduate programs (AQF Level 7 *Bachelor Degree* and Level 8 *Bachelor Honours Degree* in Australia) leading to the award of a Bachelors degree; and
- three year full-time (or equivalent) graduate and/or articulated programs (AQF Level 9 *Masters Degree – Coursework* in Australia¹³) leading to the award of a Masters degree.

A provider considering offering any other form of award or program for which it intends to seek recognition as a qualification for the purposes of eligibility to enter Intern Training Programs in Australia or New Zealand MUST seek approval of APC prior to commencement of formal planning. The Committee on University Academic Programmes (CUAP) approval will be regarded as sufficient evidence and basis for a program to be developed and implemented in New Zealand.

Similarly, changes to accredited programs of study MUST be advised to APC to allow for an assessment of the relevance and possible impact of the change on the accreditation status of the program.

¹² Throughout this document the generic term 'School' is used to describe the academic unit within a University with primary responsibility for the planning and delivery of the pharmacy degree program. The term may encompass disciplines, faculties, departments or other similar units located in a University that meet the requirements of APC Accreditation Standard 1.

¹³ Australian Qualification Framework Council for the Ministerial Council for Tertiary Education and Employment. Australian Qualifications Framework, First Edition. July 2011. Available at: <http://www.aqf.edu.au>.



A Context for the Standards

The Pharmacy Board of Australia's definition of professional practice¹⁴ presented below provides a valuable context for these Standards.

Practice as a pharmacist means any role, whether remunerated or not, in which the individual uses their skills and knowledge as a pharmacist in their profession. For the purpose of [...] registration [...], practice is not restricted to direct patient care. It also includes working in a direct non-clinical relationship with clients; working in management, administration, education, research, advisory, regulatory or policy development roles; and any other roles that impact on safe, effective delivery of services in the professional and/or use of their professional skills.

The Pharmacy Council of New Zealand describes this as a scope of practice of the pharmacist¹⁵.

The goal of initial pharmacy education is to produce graduates with the requisite knowledge, skills and attributes for entry to an intern training program, to provide a sound foundation for further advanced training, and to engender a commitment to lifelong learning.

In Australia, graduates of approved programs of study are expected to achieve by the end of their internship the competencies of the *National Competency Standards Framework for Pharmacists in Australia* (2010)¹⁶ in accord with those performance criteria considered to be applicable at entry-level to the profession (i.e. at initial registration). In New Zealand, graduates of approved programs of study are expected to achieve by the end of their internship the *Competence Standards for the Pharmacy Profession*¹⁷. For graduates of pharmacy programs to experience a continuum of learning and a seamless transition through the intern training program and registration as a pharmacist, the Accreditation Standards applicable to pharmacy programs should closely align to those applicable to intern training programs.

The Accreditation Standards are intended to reflect that the initial training of pharmacists should provide the foundation for graduates to work in a wide range of practice settings, including community and hospital pharmacy, the pharmaceutical industry, and academia as well as roles in health service administration, research and other health-related government and non-government organisations. The initial training of pharmacists is therefore expected to provide a base upon which pharmacists can build through further education and training, professional development and growth, and professional experience to build their capacity for contributing to health care and broader scientific endeavours.

¹⁴ Pharmacy Board of Australia. Professional indemnity insurance arrangements standard. Available at: www.pharmacyboard.gov.au under 'Registration Standards'.

¹⁵ Pharmacy Council of New Zealand Scope of Practice. Available at: <http://www.pharmacycouncil.org.nz/scopes>

¹⁶ Available at: <http://www.psa.org.au/download/standards/competency-standards-complete.pdf>

¹⁷ Available at: <http://www.pharmacycouncil.org.nz>

Pharmacy Program Learning Outcomes

Graduates are expected to have the capacity to respond to the changing health care needs of the community over the length of their careers, to adapt to evolving priorities in health care and to adopt changing technologies for the delivery of health care services. They must understand and respond appropriately to the different needs of consumers who rely on their expertise and work in a flexible and collaborative manner with a range of other health professionals. They are therefore expected to demonstrate resilience, flexibility and adaptability in response to changing demands and to move forward confidently into new or expanded roles. They should also have the capacity to cope with ambiguity and uncertainty and to manage change as their roles evolve in a changing environment.

In order to practice professionally, safely and competently pharmacists must have the required knowledge, professional, social and communication skills, and exhibit specific attitudes and behaviours. Although the learning outcomes to be achieved by pharmacy programs are not yet fully defined there is a number of initiatives and resources that provide guidance or insight into the desired learning outcomes.

The competency standards to be achieved at initial registration as a pharmacist have been described in both Australia and New Zealand. In Australia, further work has been undertaken to clarify the respective contributions made by pharmacy schools and intern training providers to achievement of those competencies. The work has been presented in the *Customised Entry-level Competency Tool for Pharmacists*¹⁸. This document is due to be reviewed in 2013 based on the experience with its application following its release in 2011. However, the current document and any subsequent version of it, is a source of useful guidance for the learning outcomes expected from pharmacy programs.

In 2010, six threshold learning outcomes (TLOs) were identified for health, medicine and veterinary science by the Australian Learning and Teaching Council (ALTC) in the Learning and Teaching Academic Standards Project. These have been mapped to the entry-level competency standards for pharmacists in Australia in the *Customised Entry-level Competency Tool for Pharmacists*. Further work to identify the learning outcomes for the pharmacy curriculum is currently being undertaken in a project supported by the ALTC Australian Pharmacy Network.

18 Available at: www.psa.org.au/archives/6230



The Accreditation Standards

As professional pharmacy practice and the practice environment are constantly changing, the Accreditation Standards should be subject to regular review.

These Accreditation Standards are intended to be explicit but not prescriptive. That is, they are intended to allow for flexibility and innovation in the design and delivery of pharmacy programs in Australia and New Zealand. This variability in the way courses are developed and delivered is both promoted and celebrated as a means of program providers exploring the various avenues and educational philosophies by which graduates can acquire the qualities and expertise required to ultimately achieve safe and competent practice.

The Standards have been developed by APC under the auspices of the Accreditation Standards Review Steering Committee. They have been developed after due consideration of:

- the results of an earlier project to map the APC Accreditation Standards to those of eight Australasian health professions;
- feedback provided through a national consultative process undertaken across the pharmacy sector in Australia and New Zealand; and
- consideration of the standards applied by other registered professions within Australia and by the pharmacy profession in countries with similar educational and practice requirements for pharmacists.

Each standard is a statement of expectation written in active form. While the standards are presented in logical groupings they are also numbered consecutively. Each group of standards is associated with explanatory notes which provide further clarification and contextual information to the Standards. The material presented at the end of the document in the Pharmacy Learning Domains is included to provide further context to the Accreditation Standards but does not constitute part of the Standards.

1. Standards for Governance, Structure and Administration

1.1 Governance

Standards

Standard 1 (Australia)

The University in which the School of Pharmacy operates holds current registration with the Tertiary Education Quality and Standards Agency (TEQSA) as a higher education provider in the Australian University category.

OR

Standard 1 (New Zealand)

The School of Pharmacy's qualifications are approved by Universities New Zealand quality assurance body, the Committee on University Academic's Programmes (CUAP), listed on the New Zealand Qualifications Framework (NZQF), and eligible for funding through the Tertiary Education Commission (TEC).

Standard 2

The School of Pharmacy is a clearly defined operational entity within the organisational, corporate and academic governance structures, and has systems of academic and administrative responsibility and accountability within the University.

Standard 3

The University governance structures facilitate appropriate representation of the School of Pharmacy on decision-making committees within the University and establish the functions/roles, authority and reporting relationships of the committees at a School, Faculty and/or University level.

Guidance

The form of the academic entity with primary responsibility for the planning and delivery of the pharmacy program may vary depending on the structure of the University. However, the School of Pharmacy would benefit by being a clearly identifiable operational entity of the University.

The structure and systems into which the School of Pharmacy is integrated should be responsive to the School's requirements for achieving ongoing accreditation and should facilitate the development and maintenance of the School within a broader framework of interprofessional health sciences education and practice.

The School of Pharmacy should have formal avenues through the decision-making committees of the institution for pursuing the resources and facilities required to deliver the program (refer also to Standard 8).

1.2 Strategic and Operational Planning

Standards

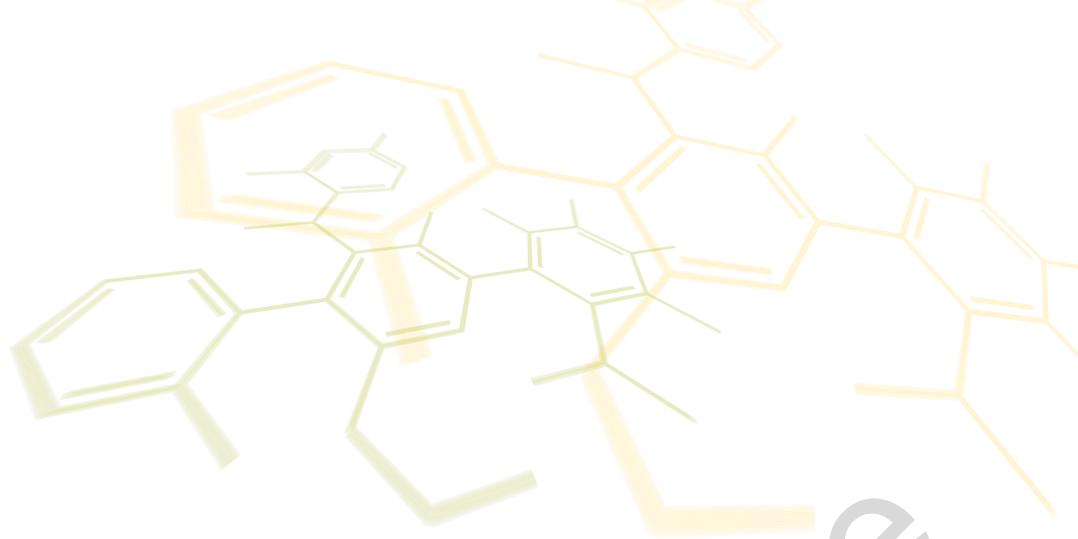
Standard 4

The School of Pharmacy has an operational plan which is aligned to deliver the objectives of the University's strategic plan and which specifies the School's mission, objectives and key performance indicators/targets against which performance and achievements are regularly measured.

Guidance

In developing its operational plan, the School of Pharmacy should consult with both internal and external stakeholders who have a legitimate interest in the program, such as academic staff, members of the profession, professional organisations and the community, students, and relevant government and health care entities.

The School of Pharmacy's operational plan should be aligned to the strategic plan of the University and serve as a source of guidance for prioritising action. The School's plan should outline the underpinning educational philosophy and how it prepares graduates for practice as health professionals who also embrace life-long learning. It should encompass objectives that demonstrate a commitment to excellence in teaching and learning methods, social responsibility and community involvement, and research or scholarly activities.



1.3 Leadership and Autonomy

Standards

Standard 5

The School of Pharmacy has a designated leader¹⁹ with requisite profession-specific experience and expertise who is responsible for the provision of professional and academic leadership, engagement and advocacy for the School and the profession within and beyond the institution.

Standard 6

The School of Pharmacy has designated authority and autonomy within the University to design, develop, deliver and evaluate their pharmacy program.

Guidance

Academic and professional leadership is an essential component for assuring the strength, quality and future development of the School of Pharmacy and the pharmacy program. This leadership, ideally contributed by a pharmacy qualified leader, is the means by which a role model and mentor is provided for guiding the efforts of less-experienced academic staff but is also a key factor in forging the partnerships and collaborations through which mutual interests in research, clinical care and professional practice can be pursued.

The School of Pharmacy should have sufficient authority to control the curriculum and administer the pharmacy program to achieve program objectives. The structure and processes by which the Head of the School maintains oversight of the program development, delivery and evaluation should support this.

1.4 External Relationships

Standards

Standard 7

The School of Pharmacy has active and ongoing partnerships or associations with relevant professional, government, health, indigenous and community agencies through which matters of mutual interest are progressed. Formal relationships exist with health care providers, practitioners and services to facilitate access to appropriate experiential placements.

Guidance

There should be evidence of constructive relationships or collaborations with professional bodies, practice institutions and other relevant external entities to foster and improve teaching, learning and research capabilities and/or opportunities. Maintenance of rapport with relevant external entities is fundamental to gaining support for collaborative research.

Effective partnerships or engagement with individuals, their communities or networks of Aboriginal and Torres Strait Islander people in Australia and Māori in New Zealand is important for gaining an understanding of the unique challenges faced by indigenous people that impact on their health status and for securing relevant expertise for assisting program development.

Experiential placements provide an important setting within which essential competencies can be gained, building on prior learning. Active engagement with the community and hospital pharmacy sectors as well as other health care providers is critical to the success of the placement program by facilitating access to quality placements (refer also to Standards 22–24).

¹⁹ Throughout this document the designated leader of the School of Pharmacy is referred to as the Head of School.

2. Standards for Resource Allocation and Management

2.1 Financial Resources

Standards

Standard 8

There are clearly defined mechanisms by which the Head of School can secure and be accountable for the financial resources necessary to ensure the effective operation of the School and its pharmacy program.

Guidance

The Head of School should have defined autonomy in financial decision-making and clear mechanisms by which they can secure adequate financial resources for the School of Pharmacy. They should have the delegated authority to manage allocated financial resources, be accountable for the way in which they are disbursed, and have the authority to redirect resources, as required, to deliver the pharmacy program. The School should have an established process for reviewing financial resource requirements that permits effective planning.

2.2 Infrastructure

Standards

Standard 9

The School of Pharmacy has general and specialised teaching facilities, learning resources and equipment of appropriate type, size and quantity for the effective delivery of the pharmacy program.

Standards 10

The School of Pharmacy has a planned approach for the review of facilities, resources and support infrastructure to accord with significant program changes and to inform future needs and facilitate the requisite forward planning.

Guidance

The School of Pharmacy should provide facilities of sufficient size to accommodate the student cohort for lectures and tutorials, practice experience in a simulated practice environment and practical laboratory sessions, including for the extemporaneous preparation of pharmaceutical products. Where shared facilities are used this should occur without adverse impact on program scheduling or student learning opportunity.

Information and communication technologies used in teaching and by students should be both appropriate and adequate for supporting the teaching, learning and research objectives of the School of Pharmacy, particularly where any part of the program is delivered in a flexible learning mode. The School has an obligation to ensure the curriculum delivery infrastructure is adequate for supporting all students, that student access is assured and that continuity of delivery and access is fully supported. The School should also ensure students have, or can readily gain, the required IT skills to successfully complete those parts of the program that are delivered electronically.

Access to learning resources facilities with relevant collections, including electronic reference systems, and trained staff who are available for assistance is fundamental to supporting the professional and academic endeavours of students and staff. Policies and procedures for access and use of the learning resources and information and communication technologies should be readily available to users.

Forward planning of infrastructure requirements is important for ensuring teaching and learning capabilities are maintained at a level that is consistent with contemporary professional practice requirements. It is also a means by which budgetary impacts can be assessed.



2.3 Human Resources

Standards

Standard 11

The School of Pharmacy has an academic staff complement that ensures an appropriate level of expertise in the pharmaceutical sciences, pharmacotherapeutics and pharmacy practice to:

- effectively develop, deliver and evaluate the pharmacy program;
- provide for timely access and interaction with students as individuals or small groups; and
- achieve a balance between teaching, administration, research/scholarship and clinical/professional practice by the academic staff.

Standard 12

The School of Pharmacy clearly defines and regularly reviews the reciprocal responsibilities that exist between the School and part-time or sessional contributors to the program.

Standard 13

The School of Pharmacy actively encourages contribution to program delivery in Australia by Aboriginal and Torres Strait Islander people, and in New Zealand by Māori.

Standard 14

The School of Pharmacy actively promotes and supports research and scholarship.

Standard 15

The School of Pharmacy has sufficient type and number of administrative and professional staff to support the educational program, the operation of the School and the effective management of resources.

Standard 16

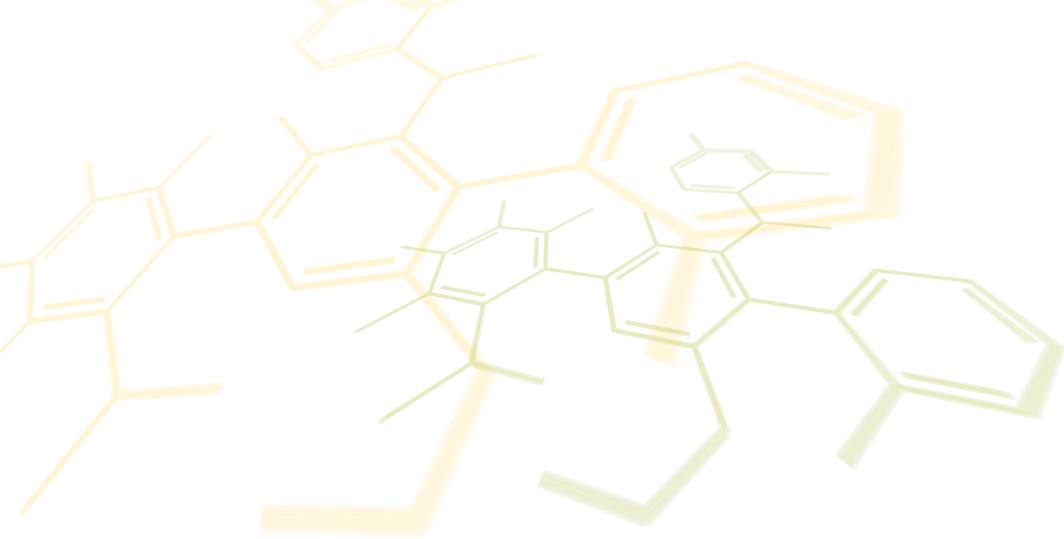
All staff are regularly provided with feedback on their performance through formal performance planning, development and review processes and are encouraged and supported to undertake professional development activities relevant to their roles within the School of Pharmacy.

Guidance

The academic staff complement should ensure the School of Pharmacy is able to achieve its desired learning outcomes and educational objectives. It is appropriate and desirable for the staffing profile to include academic staff with relevant doctoral degrees and post-doctoral research experience to foster and build the School's research capabilities and to promote research-led teaching. The inclusion of pharmacists in the staffing profile provides for professional mentors within the School and the professional practice expertise necessary to underpin some aspects of curriculum development and review.

It is appropriate and desirable for the staffing profile to include appropriately qualified 'teacher practitioners'²⁰ with specific expertise to contribute to delivery of the program. Such arrangements enhance and highlight the nexus between teaching and practice. Particular attention will be given to the currency and relevance of their qualifications, their current practice, their teaching experience and their ability to contribute to curriculum development and review. The School has an obligation to ensure 'teacher practitioners' are familiar with the program objectives, are aware of their teaching and assessment responsibilities and of the responsibilities owed them by the School.

²⁰ In this document the term 'teacher practitioner' refers to an individual whose principal employment is outside the University but who is contracted to contribute to the delivery of the pharmacy program because of their subject-specific expertise.



Australian Aboriginal and Torres Strait Islander people and New Zealand Māori have a unique contribution to make to the education of future health professionals. Their contribution is essential for developing cultural competence²¹ and cultural sensitivity²² in students but also to assist students' understanding of the significant gaps in health indices of these groups in comparison to the population as a whole.

The research program of the School of Pharmacy may focus on the creation of new knowledge or the application of existing knowledge to create new concepts, understandings or methodologies. It could also include the synthesis and analysis of previous research to the extent that it leads to new and creative outcomes. While the research capacity and impact of the School will be heavily reliant on post-doctoral academic staff and doctoral research students, it may be further enhanced by other academic staff supervising research provided they are sufficiently experienced and are authorised to do so by the School.

The staffing profile for the School of Pharmacy should include the employment status, qualifications and responsibilities of administrative and professional staff to demonstrate how they meet the needs of the program and the School. An experiential placement coordination function, with academic staff oversight, should be apparent within the staffing profile as this is integral to the School fulfilling its placement obligations.

The resources of the School of Pharmacy should be sufficient to provide for supporting the ongoing development of staff. All staff should undergo regular performance appraisal through established processes and be provided with development opportunities consistent with identified needs. Staff contributing to the delivery of the pharmacy program should have access to opportunities for developing their teaching and assessment skills. The engagement of academic staff in research or other scholarly activities, involvement in the work of professional associations or community groups, or participation in educational seminars or other activities that foster professional growth and development should also be encouraged.

21 Cultural competence has been defined as the ability to interact respectfully and effectively with persons from a background that is different from one's own. It goes beyond an awareness of or sensitivity to another culture to include the ability to use that knowledge in cross-cultural situations, and includes the development and implementation of processes, procedures and practices that support the delivery of culturally competent (appropriate) services. Pharmacy Council of New Zealand competence standards for the pharmacy profession. Available at: <http://www.pharmacycouncil.org.nz>.

22 Cultural sensitivity is an appreciation for the scope of cultural differences arising in a multicultural community, a capacity for self-reflection on cultural beliefs, attitudes and conditioning, and an ability to set aside assumptions and personal paradigms in their professional dealings with consumers from culturally diverse backgrounds. Adapted from: Skellet, L. Cultural awareness and cultural safety. *Australian Pharmacist*. 2012; May: 382-84.

3. Standards for the Curriculum

3.1 Curriculum Development

Standards

Standard 17

The School of Pharmacy has responsibility and authority for curriculum design and evaluation and has established mechanisms for doing so.

Standard 18

Review of curriculum content, delivery and evaluation and student assessment methods is undertaken through broad stakeholder engagement and use of a consultative and collaborative approach.

Standard 19

Cultural competence and cultural sensitivity are fostered through embedded curriculum content that enables students to develop an appreciation and respect for cultural diversity, and specifically addresses the health and wellbeing of Aboriginal and Torres Strait Islander people in Australia and Māori in New Zealand.

Guidance

It is important for curriculum development to be undertaken through a process which engages individuals with expertise in pharmacy education as well as individuals with expertise in the basic and clinical sciences encompassed within the pharmacy program. Funding arrangements within the University should be supportive of collaborative efforts between schools/disciplines. The curriculum development process should also take account of government health care initiatives and/or health priorities and the evolving roles and perspectives of the pharmacy profession.

The curriculum should provide students with an appreciation for the professional practice issues that arise from practising in a multicultural society. Input to the curriculum on Indigenous health issues and health priorities provided in Australia by Aboriginal and Torres Strait Islander people and in New Zealand by Māori will be important for ensuring the completeness of the program and for assuring a culturally-sensitive program

of study. The curriculum should provide opportunities for the development of cultural competence and cultural sensitivity and provide insights and/or experience into differences in health care needs and approaches to practice in urban, rural and remote communities.

Where the School of Pharmacy is grouped in a health sciences faculty with other health care professions some elements of the curriculum may be undertaken with other disciplines. However, in many subject areas the depth or specialised nature of the knowledge required by students will dictate that the content is designed specifically for the pharmacy curriculum.

3.2 Curriculum Management

Standards

Standard 20

The curriculum of the pharmacy program demonstrates congruency with contemporary pharmaceutical sciences, pharmacotherapeutics and pharmacy practice and the pharmacy learning domains.

Standard 21

The School applies a variety of teaching and learning approaches to stimulate student engagement and to enhance student learning.

Guidance

The pharmacy learning domains have been developed to reflect the learning needs of students that arise from consideration of contemporary pharmacy practice, evolving developments in practice and the unique health and educational systems in Australia and New Zealand. The School of Pharmacy should have clearly stated learning outcomes which can be related to the curriculum content.

The range of teaching and learning strategies used should ensure each student becomes familiar with consumer-centred care, contemporary pharmacy practice and collaborative engagement with health care consumers and health professionals. They may include most or all of the following: lectures, practical classes, tutorials,

experiential placements, computer-assisted learning, self-directed learning, interactive small group teaching, collaborative case-based learning, problem based learning, and contemporary tools such as the use of virtual or simulated health care consumers and distance learning technology.

3.3 Experiential Placements

Standards

Standard 22

The School of Pharmacy has clearly defined experiential learning outcomes embedded within the curriculum, provides students with learning opportunities in hospital and community practice settings to meet those outcomes, and applies assessment methods for assuring those outcomes are met.

Standard 23

The School of Pharmacy co-ordinates, monitors and regularly reviews the quality and performance of the experiential learning elements of the program.

Standard 24

The School of Pharmacy has clearly documented procedures for management of experiential placements that safeguards students and health care consumers.

Guidance

The experiential placement program develops the foundation communication and clinical skills for professional practice. Experiential learning should start early in the program, with increasing decision-making and level of responsibility over the course of the program. Each placement should have clear learning outcomes. These should be informed by the curriculum to ensure the theoretical base has been laid so that students can experience the placement within the relevant context. Simulated experiences may support the development of clinical skills and competencies required by pharmacists to supplement and complement, but not replace, the placement experience.

Graduates of pharmacy programs will become members of a health profession that upholds defined professional and ethical values. Early and continuing exposure to the workplace and pharmacy practice is important for students gaining an understanding of professional roles and responsibilities, reinforcing learning, and assisting integration of learning with professional practice requirements. However, experiential placements should:

- Be participative, in that each student must be active rather than a passive observer.
- Be interactive between more than just the student and the clinical educator²³ providing guidance to the student while on placement. For example, it should encompass interactions of the student with health care consumers, other health professionals and the practice environment.
- Have a whole-person emphasis. The experiential learning should involve learning in the behavioural and affective as well as the cognitive dimension.
- Involve variability so that each student has the opportunity to integrate learning with real-world situations and understand and recognise the uncertainty that is the reality in clinical practice.
- Balance structure and autonomy. With little guidance, the experience may be meaningless. With too much structure, the ability to be opportunistic with the experiences that present in the placement is stifled.
- Provide each student with the opportunity to articulate their thoughts and feelings as to their learning experiences (e.g. through use of a workbook, e-workbook, diary or group or individual feedback sessions).
- Involve post-placement feedback to each student. Each student needs to be able to articulate their experience and what they have learned, and receive constructive feedback from those involved in their placement which addresses not only knowledge, but also, and especially, skills and professional attributes. Both the outcome of experiences and the processes involved need to be commended and constructive recommendations provided. Where differences occur between expected learning outcomes and the student's learning experience, then contributing key variables should be identified and the dominance of these factors to learning experience reviewed with the student, clinical educator and preceptor.
- Have in place a process to identify and immediately address concerns about the safety of health care consumers arising from the experiential placement and to clarify what students should do if they have concerns about the care provided or the conduct of the clinical educators.
- Have assessment methods appropriate to the learning outcomes with respect to not only knowledge, but also, and especially, skills and professional attributes.

²³ In this context the term 'clinical educator' is intended to mean any individual actively guiding the learning that occurs during an experiential placement. This may not necessarily be a pharmacist or the preceptor responsible for the student's learning within the placement.

The experiential placements are, in this way, intended to support achievement of desired learning outcomes. Since most graduates will ultimately find employment in community or hospital pharmacy practice environments, and both Australia and New Zealand have widely dispersed populations across rural and remote settings, it is important for both community and hospital practice settings to be experienced, with consideration being given to inclusion of rural or remote sites for experiential placements. The use of other settings (e.g. general practice, residential care facilities, primary care, community nursing, pharmaceutical industry and policy and regulatory settings) for additional experiential placement experience is encouraged. Placement sites should be selected based on the learning outcomes to be achieved and with the involvement of academic staff.

Prior planning to establish the specific arrangements and objectives for placements is fundamental to their success by ensuring clarity in expectations for the placement. The arrangements and objectives for experiential placements should be clearly documented. It is important for students and preceptors to receive formal advice on the objectives of the experiential placement and the School's expectations of them. This may be achieved through the use of tools such as information sheets, placement handbooks or explicit contracts. Indemnification of students during experiential placements should be provided and evidenced by Universities. A contract may be the most appropriate means of achieving this. Universities should be aware of and ensure students comply with pre-placement human resource and governance requirements of hospitals and other placement sites (e.g. immunisation status).

The School of Pharmacy has an obligation to monitor the quality of the placement experience by seeking feedback from both the students and their preceptors and to use that feedback to improve the placement program, for both current students and those that follow. Suitable arrangements should be in place for debriefing those students whose experience in a placement is unfavourable to minimise any adverse impact and to provide for the experience to be appreciated as a learning opportunity. There should be demonstrable evidence of a quality improvement cycle for evaluation of the experiential placements program.

3.4 Educational Outcomes

Standards

Standard 25

The pharmacy program produces graduates who have the graduate attributes of the University and the knowledge, skills and attitudes necessary to commence supervised practice as an intern pharmacist.

Standard 26

The School of Pharmacy uses a range of assessment methods that are appropriate to the outcomes of the program.

Standard 27

The School of Pharmacy has policies and procedural controls that involve external assessment or moderation to assure integrity, reliability, fairness and transparency in the assessment of students.

Guidance

Since the entry-level competencies are to be met at entry to professional practice, they can serve as a source of guidance to the teaching and learning expected across both the pharmacy degree program and the intern training program²⁴. The goal of initial pharmacy education is to produce graduates with the requisite knowledge, skills and attributes for entry to an intern training program, to provide a sound foundation for further advanced training, and to engender a commitment to lifelong learning and professional practice. Graduates will be expected to be able to assume responsibility for safe consumer care at entry to the intern training program (e.g. recognising limitations and confidently referring or seeking substantive documented advice in circumstances beyond their knowledge/skill scope). For these reasons assessment processes will be directed to assessing knowledge, skills and professional attributes in the pharmacy practice context (e.g. OSCEs). Some entry-level competencies may be achieved during the pharmacy program, however, the majority will be achieved through the application of knowledge and skills in the workplace during their internship.

²⁴ In this regard, the *Customised Entry-level Competency Tool for Pharmacists* (available at: www.psa.org.au/archives/6230) may be of assistance for identifying the contributions of pharmacy programs and intern training programs to the learning and development of students and intern pharmacists respectively.

4. Standards for Program Students

4.1 Admission Policy

Standards

Standard 28

The School of Pharmacy has clearly documented and regularly reviewed eligibility or admission criteria and policies which are applied consistently, equitably and fairly.

Standard 29

Potential students receive information on:

- the accreditation status of the course;
- student groups for whom defined affirmative action policies exist;
- specific academic entry requirements and arrangements by which advanced standing may be granted;
- English language proficiency requirements;
- criteria to be met for right of entry to experiential placement sites; and
- PBA registration standards (e.g. criminal history and English language skills).

Guidance

The School of Pharmacy should have clearly specified and transparent eligibility criteria for admission to the pharmacy program that are readily available to potential students and are subject to regular review to assess their ongoing relevance and appropriateness. In the interest of procedural fairness, admission policies should be applied equitably and without bias to all potential students. However, it is recognised that affirmative action policies may be established by the School or the University to facilitate access to programs by groups that are under-represented in the student population (e.g. rural students) and who would otherwise experience difficulty in gaining entry. Aboriginal and Torres Strait Islander people in Australia and Māori and Pacific peoples in New Zealand should be included within the scope of any such policy.

It is appropriate that students are made aware before enrolment of any eligibility criteria that are mandatory and unique to the pharmacy program or that will be required by the PBA for registration as a pharmacist. In some instances this may result in a student declining the offer of enrolment which is preferable to them experiencing difficulty with completing program requirements at a later time.

Eligibility criteria should include a tertiary entrance score or equivalent scholastic measure reflecting a capacity to effectively cope with the academic rigour of the pharmacy program. Of all the health professions, pharmacists have the broadest role in respect to scheduled medicines and poisons and programs of study should sustain the rigour required to maintain the profession's pre-eminent position as experts in the quality use of medicines.

Eligibility criteria for admission to a graduate entry program should include demonstrated higher education achievement of at least a Bachelors level degree, including a thorough and contemporary grounding in the biological and physical sciences, as well as a thorough grounding at Higher School Certificate/NCEA Level 2/3 or through tertiary level bridging study in chemistry, mathematics and English. It is expected the criteria will demonstrate students enrolling in a graduate entry Masters program have sufficient knowledge, skills, abilities and competencies to undertake studies in pharmacy, recognising that it is generally not feasible for graduate entry students to have covered all the pharmacy based material covered in the first two (2) years of a Bachelors level program.

4.2 Student Selection

Standards

Standard 30

The School of Pharmacy ensures that students seeking admission who have not completed their secondary education in English or earlier prerequisite tertiary studies in English, have demonstrated English language of a proficiency to undertake the program.

Standard 31

Enrolling students are provided with an orientation to the School/University and its facilities, and information about:

- program objectives, structure and delivery;
- policies and procedures relevant to academic assessment and progression, student obligations, conduct and access to resources/facilities; and
- available student support services.

Guidance

Pharmacy practice relies extensively on the capacity of the pharmacist to impart complex health and medicines-related concepts and information to consumers and other health professionals through effective written and verbal use of



English and through non-verbal communication processes. Success also depends on the capacity of the pharmacist to adapt their communication style to the audience and understand the colloquial use of English. It is for this reason that the Pharmacy Board of Australia requires some international students who do not meet specified conditions, to demonstrate proficiency in English²⁵.

The Pharmacy Council of New Zealand (PCNZ) requires that all New Zealand and Australian graduates applying for registration in the scope of practice of an intern pharmacist are able to communicate effectively in English for the purpose of practising in the workplace. Graduates are required to sign the statement in the application form agreeing that if a preceptor, other health professional or member of the public finds they are not communicating in English to an acceptable standard, the intern pharmacist will accept the decision of the PCNZ as to whether they remain eligible to practise as a pharmacist in New Zealand.

The heavy reliance on effective English communication skills in professional practice means it is essential for students to have a sound command of English at entry to the pharmacy program. Proficiency at a level suitable for effective learning and communication with consumers and other health professionals should ideally be achieved prior to the first experiential placements.

It is essential for students to receive information relevant to the School and program study so that they understand the basis upon which they are accepted into the program and the expectations that will apply during their time in the program. Information regarding academic progression should encompass any applicable minimum academic achievements, measures for dealing with missed work, disciplinary procedures, and complaints and appeals processes.

4.3 Student Support

Standards

Standard 32

The School of Pharmacy has processes in place for the early identification of students in need of support or remediation.

Standard 33

Students have access to relevant remedial and counselling support services, including appropriate English language support, to assist their successful progression through the

pharmacy program and the School of Pharmacy has measures in place to ensure progression through the program is continued.

Guidance

The School of Pharmacy should adopt an active approach to identifying and supporting students in need of additional assistance. Students should have access to remedial support and/or counselling in relation to issues impacting on program participation. This includes issues such as poor academic progress, learning and communication difficulties, technology illiteracy, impairment or disability, and health and social issues.

Remedial English language support should be available for all students with demonstrable weaknesses in English communication, particularly if the difficulties are being experienced during activities that simulate interactions with health care consumers or other health professionals.

4.4 Student Representation

Standards

Standard 34

The School of Pharmacy actively promotes the engagement and involvement of students in the governance and curriculum management processes of the School.

Guidance

Students are a significant stakeholder of the pharmacy program and their input to development of the objectives and operational strategies promotes integration of the student body and a sense of student ownership of the program. This can be further enhanced through their formal participation in curriculum management activities and through the operation of student feedback processes. Where students provide spontaneous input or are invited to make representations on matters related to the program they should receive feedback on the outcome of their representations. This is sound practice educationally but also fosters an environment of self-determination and empowerment for students. Student input is also valuable in facilitating early identification of problems and opportunities which might otherwise go unnoticed. School of Pharmacy support for student organisations is likely to strengthen the quality of the student representation available to the School.

²⁵ Pharmacy Board of Australia policy for implementation of the English language skills registration standard. Available at: www.pharmacyboard.gov.au under 'Registration Standards'.

5. Standards for Quality and Risk Management

5.1 Quality Management

Standards

Standard 35

The School of Pharmacy has a demonstrable and continuous quality improvement program and is responsive to both internal and external feedback and review.

Guidance

A focus on the quality improvement cycle is essential for sustaining a quality program. Quality assurance and improvement processes should be integrated into all activities of the School of Pharmacy rather than introduced as a separate process. For this reason quality management issues related to specific areas of School activity have, wherever possible, been addressed within the Standards related to those areas. The Standards in this section relate to quality assurance or quality improvement activities initiated by the School or the University in response to particular circumstances or events or as part of a more global approach to assuring quality (for example, benchmarking with local or international partner institutions or initiation of external reviews).

5.2 Risk Management

Standards

Standard 36

The School of Pharmacy has a documented risk management plan for assuring continuity of program delivery.

Guidance

Risk management is that end of the quality management spectrum where effort is directed at mitigating or avoiding adverse outcomes. Once again, some aspects of risk management have been dealt with elsewhere in the standards (for example, pre-enrolment advice of particular criteria applicable to experiential placements and documented procedures for managing risks associated with experiential placements). In this section the aspects of risk management dealt with are those likely to affect the continuity of the program.

Appendix 1

Pharmacy Learning Domains

Curriculum content

It is recognised that in developing a curriculum for a pharmacy degree program, there is an increasing move by Schools of Pharmacy to integrate subject matter, providing students with a co-ordinated understanding and the comprehensive knowledge and expertise needed to achieve the pharmacy learning outcomes required for entry to an intern training program. Further, in our rapidly changing health care environment, innovation, responsiveness and flexibility in a School's curriculum needs to be supported.

To reflect this, it should be highlighted that the pharmacy learning domains presented here are indicative and not prescriptive. While the items are grouped within the domains to give prominence to the health care consumer and avoid traditional categorisations, this format is not intended to be imposed on Schools' curricula.

The pharmacy learning domains described here were originally based on the Indicative Syllabus for UK pharmacy degrees, as developed and published by the Royal Pharmaceutical Society of Great Britain (RPSGB) in 2002, with minor variations to reflect systems and concerns specific to Australia and New Zealand. The UK syllabus was adopted in the form of an Indicative Curriculum with the permission of the RPSGB. The UK syllabus has since been amended, but without significant changes in the content itself. These pharmacy learning domains are the result of further amendment of the Indicative Curriculum based on feedback provided during the 2012 review of the *Accreditation Standards for Pharmacy Degree Programs in Australia and New Zealand*. The pharmacy learning domains will be subject to periodic review to reflect developments in the profession and educational needs arising from matters unique to Australian or New Zealand pharmacy practice, and/or health and educational systems.

Learning domain 1:

The health care consumer

The health care consumer is central to the degree course, reflecting the importance that a pharmacy graduate focuses on prevention and wellness in all people, as well as the needs of patients. The items grouped under this heading address the biological, environmental, psychological and some of the social foundations of treatment with medicines. The curriculum should address specific consumer needs in diverse multicultural populations, particularly Aboriginal and Torres Strait Islander people in Australia and Māori in New Zealand.

Indicative Elements

- The unique expertise of the pharmacist in ensuring that the consumer achieves optimal health outcomes from medicines and minimises the potential for harm.
- Principles and methodologies of the social sciences relevant to pharmacy.
- Cultural competence and cultural awareness.
- Health and illness: definitions and perceptions.
- Theory and practice of personal and inter-personal skills, including written and oral communication skills to proactively build trust, support, motivate and influence professional colleagues and consumers with varying levels of health literacy, as well as study skills.
- The ideas and approaches of compliance or concordance in health care provision, including as they apply to medicines administration.
- The pharmacist's contribution to the promotion of good health and disease prevention.
- Normal and abnormal bodily function: anatomy, biochemistry, genetics, microbiology, nutrition, immunology, physiology, pathology, pathophysiology and infective processes.

- Aetiology and epidemiology of major diseases and the principles of their treatment.
- Symptoms recognition and management, the principles of differential diagnosis, important diagnostic methods and tests, and medical terminology.
- Disease management and care planning, including application of clinical guidelines, prescribing guidelines, medication review and new models of care.
- Clinical reasoning, collaborative decision making and documentation.
- Complementary therapies.
- Drug and substance misuse, and physiological and psychological dependence. Clinical toxicology associated with drug overdose, drug or substance misuse or accidental exposure.
- Physico-chemical aspects of drugs and biological systems, including thermodynamics and chemical kinetics.
- Specifications of substances used in medicine, including physical and chemical tests.
- Analytical methods: principles, design, development, validation and application.
- Prediction of drug properties, including chemical compatibilities, from molecular structure.
- Drug design and discovery: principles, approaches and future prospects.
- Cell and molecular biology, including genomics, proteomics and gene therapy, relevant to pharmacy.
- Biological methods of measuring drug activity and biological standards.
- Biotechnology and biotechnological processes.

Learning domain 2: Medicines: drug action

The focus here is on drugs. The first three items in this list are large in scale and high in importance.

Indicative Elements

- Molecular basis of drug action and the actions of drugs within living systems; molecular, cellular, biological and physical aspects.
- Clinical therapeutic uses of drugs and medicines in man, including contraindications for, adverse reactions to, and interactions of medicines and their relevance to treatment.
- Drug absorption, distribution, metabolism and excretion and influences thereon, including formulation, route of administration, dosage regimen, ageing and disease.
- Clinical evaluation of new and existing drugs and medicines, and post-marketing surveillance. Good clinical practice.
- Prospects for new approaches in therapeutics.

Learning domain 3: Medicines: the drug substance

For consumer safety and often for the quality and efficacy of treatment, it is important that the pharmacy graduate, uniquely among the team of health professionals, has an appreciation and understanding of the sources and properties of drugs which form the biologically active and therapeutic components of medicines.

Indicative Elements

- Sources and purification of substances of biotechnological, chemical synthetic, immunological, mineral and plant origin used in medicine.

Learning domain 4: Medicines: the medicinal product

The formulation and compounding of medicines, taking the pure drug substance and producing a dosage form for administration to the consumer, are at the heart of pharmaceutical science. For the safety, quality, efficacy and economy of treatment with medicines, all pharmacy graduates need knowledge, understanding and capability in this area.

Indicative Elements

- Sale and supply of medicines, including evaluation and management of risk and provision of advice.
- Medicines: schedules of medicines and controlled substances; PBS (Australia) and Pharmacy scheduling (NZ); consumer protection, including product liability and unapproved medicines.
- Materials used in formulations and devices for the delivery of drugs, their biological, chemical and physical properties, and the development and application of standards.
- Biopharmaceutics, developmental pharmaceutics, pre-formulation and formulation studies; design and standardisation of medicines for administration to the body by different routes and for delivery to specific target sites.
- The influence of manufacture and distribution on product quality with respect to biological safety, bioavailability (including bioequivalence), dosage uniformity and stability.
- Packaging and labelling; purpose, design and evaluation.

- Quality assurance of pharmaceutical products and processes, including Good Laboratory Practice and Good Manufacturing Practice.
- Microbiological contamination: sources, determination, consequences and control.
- Sterilisation procedures and aseptic procedures in the preparation of pharmaceutical products and medical devices; monitoring of sterilisation processes.
- Environmental control in manufacturing facilities and in the supply chain.
- Degradation of medicines; evaluation and control of biological, chemical and physical degradation.
- Immunological, biotechnological and radiopharmaceutical products.
- Dressings and other wound management products.
- Medical devices: their types, regulation and, particularly, their use for the measurement and maintenance of physiological function or medicine delivery.
- Statutes and regulations related to medicines, poisons and controlled substances.

Learning domain 5: Health care systems and the roles of professionals

For pharmacy graduates to be able to practise effectively, efficiently and confidently they need to know about, understand and have some of the skills to operate within health care systems, alongside and together with other health professionals and other scientists. They need to have an appreciation of their responsibility to share and contribute to the knowledge of others.

Indicative Elements

- Health care systems in Australia or New Zealand (as applicable) including roles of pharmacists and other health care professionals in primary, secondary and tertiary health care. Rural and remote health care systems, including Aboriginal Health Services.
- The duty of care to the health care consumer and the wider public: concept, scope and application of professional ethics, including gaining informed consent.
- Professional standards and guidelines for practice. Self-reflection and reflective practice, self-audit, continuing professional development and maintenance of competency.
- Interprofessional communication, teamwork and collaborative decision-making.
- Clinical governance: clinical audit and risk management. Quality assurance and improvement. Managing and learning from errors.
- Use of information technology in pharmacy and more widely in health care.

Learning domain 6: The wider context

The pharmacy graduate needs a realistic and well-informed view of how health care, and pharmacy fits within and operates in the wider world.

Indicative Elements

- The political and legal framework, requirements and processes relevant to pharmacy.
- Health policy and economics, particularly pharmacoeconomics.
- Population health.
- Scientific, clinical, health services and social services research; methods, results and their application as they are relevant to pharmacy.
- Occupational and environmental health and safety.

List of Acronyms

AHMAC	Australian Health Ministers' Advisory Council
AHPRA	Australian Health Practitioner Regulation Agency
ALTC	Australian Learning and Teaching Council
APC	Australian Pharmacy Council
APLF	Australian Pharmacy Liaison Forum
AQF	Australian Qualifications Framework
CPD	Continuing Professional Development
CUAP	Committee on University Academic Programmes
ITP	Intern Training Program
NAPSAC	New Zealand and Australian Pharmacy School Accreditation Committee
NRAS	National Registration and Accreditation Scheme
NZQF	New Zealand Qualifications Framework
PBA	Pharmacy Board of Australia
PCNZ	Pharmacy Council of New Zealand
SET	Site Evaluation Team
TEC	Tertiary Education Commission
TEQSA	Tertiary Education Quality and Standards Agency
TLO	Threshold Learning Outcome

