

Clinical Training Profile: *Pharmacy*

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For external consultation

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Pharmacy context

Pharmacy is a registered health profession with the Australian Health Practitioner Regulation Agency (AHPRA) through the National Registration and Accreditation Scheme (NRAS). All practicing pharmacists must be registered with the Pharmacy Board of Australia. In 2012, the total number of registered pharmacists in Australia was 27,025.¹ In the same year, 7,987 pharmacy students were enrolled in accredited pharmacy programs.²

The practice of pharmacy includes the custody, preparation, dispensing and provision of medicines, together with systems and information to assure quality of use. Pharmacists counsel patients on the best use of medicines, provide advice on symptoms, the management of common ailments, possible medication side-effects and drug interactions, prepare and formulate medications, and provide health education.³

In order to achieve defined learning outcomes, pharmacy students are required to complete experiential placement programs set by each higher education provider. Following completion of studies, provisional registration as a pharmacist is obtained and a graduate must then complete an Intern Training Program (ITP). These ITPs in pharmaceutical settings assist graduates to acclimatise to the culture and roles required in pharmacy practice and equip them with the skills and knowledge necessary for professional competence.⁴

Accreditation

Accreditation of pharmacy programs is necessary to ensure consistent outcomes and quality in pharmacy education. The Australian Pharmacy Council (APC) is the body that is responsible for accrediting pharmacy programs in Australia. The Council sets out accreditation standards that a pharmacy program must meet in order to obtain accreditation.

The APC and its evaluators use the accreditation standards to assess whether a bachelor program or graduate entry masters programs of study offered by a pharmacy school will produce graduates with the requisite knowledge, skills and attributes prior to entry into approved ITPs. These accreditation standards state that each higher education provider (HEP) must have clearly defined experiential learning outcomes embedded within the pharmacy curriculum. HEP's must provide students with learning opportunities in hospital and community practice settings to meet those outcomes, and apply assessment methods to achieve program outcomes are met. The quality and performance of the experiential learning elements of the pharmacy program must be co-ordinated, monitored and regularly reviewed by the School of Pharmacy.

¹ National Health Workforce Data Set (NHWDS): *Allied Health Practitioners 2012*.

² Australian Health Practitioner Regulation Agency (AHPRA), *Annual Report 2011-12*, viewed 3 March 2014, <http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&sqi=2&ved=0CC0QFjAB&url=http%3A%2F%2Fwww.ahpra.gov.au%2Fdocuments%2Fdefault.aspx%3Frecord%3DWD12%252F9240%26dbid%3DAP%26checksum%3DS6gwGtLfAovsukYbQ%252F7hw%253D%253D&ei=mclTU4GcEoXylAXBxoC4Cg&usg=AFQjCNGzWGBHaKsq2MOMoWvsjRpGmhyh2g&sig2=NR0G4M8KwVW35cu0HJnj6A&bvm=bv.61965928,d.dGI>.

³ Health Workforce Australia, 2014, *Australia's Health Workforce Series – Pharmacists in Focus*.

⁴ Pharmacy Board of Australia, *Supervised Practice Arrangements Registration Standard*, viewed 23 December 2013, <http://www.pharmacyboard.gov.au/documents/default.aspx?record=WD10%2f196&dbid=AP&checksum=wuRMOWWSRdSujvLSKc6Q%3d%3d>.

Furthermore, the School of Pharmacy must have clearly documented procedures for management of experiential placements that safeguards students and health care consumers.⁵

Pharmacy education pathway in Australia

Pharmacy programs are offered at 17 universities in Australia. There are two principal degree programs:

1. A four-year bachelor degree in Pharmacy
2. A two-year graduate entry masters degree in Pharmacy (profession entry). Entry requirements generally include a relevant bachelor's degree or equivalent.

Figure 1 shows the pharmacy education pathway for pharmacy students in Australia.

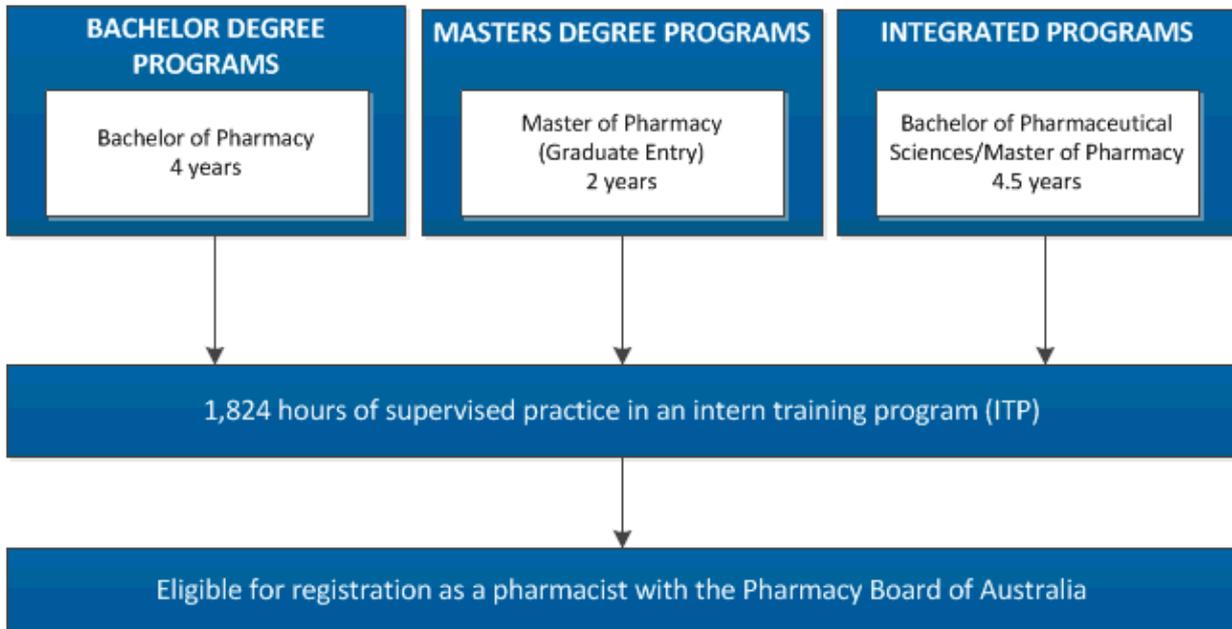


Figure 1: Pharmacy education pathway in Australia

Source: Pharmacy Board of Australia, Approved Programs of Study

Prior to registration, pharmacy graduates are required to complete 1,824 hours of a supervised practice ITP that fulfills the requirements set out in the Pharmacy Board's Pharmacy Registration Standards – Supervised Practice Arrangements Registration Standard. Graduates hold provisional registration while they complete this requirement. The ITP is in addition to the experiential placement requirements of individual pharmacy programs.

⁵ Australian Pharmacy Council Ltd 2012, Accreditation Standards For Pharmacy Programs In Australia And New Zealand, viewed 21 February 2014, <http://pharmacycouncil.org.au/content/assets/files/Publications/Accreditation%20Standards%20for%20Pharmacy%20Degree%20Programs%202014.pdf>

Each ITP is undertaken under the direction of a preceptor approved by the Board for a minimum period of 152 hours. It must be under the direct supervision of a pharmacist who holds general registration (not necessarily the approved preceptor). Supervised practice hours are undertaken regularly and consistently such that a minimum of 80 hours are undertaken in a period of four consecutive weeks. At least 50 per cent of the 1,824 supervised practice hours required must be undertaken in a community pharmacy or a hospital pharmacy department.⁶

Completion of an approved program of study is only one element of the eligibility criteria outlined in section 52(1) of the National Law. An applicant for general registration must meet the eligibility requirements of the National Law, Section 52, including meeting the requirements of the approved mandatory registration standards and any requirements of the Board for supervised practice or any examination or assessment.⁷ It is only if an applicant successfully meets each of these criteria that they are eligible for general registration as a pharmacist with the Board.

Experiential placements (training)

All universities are required to provide professional experience in their pharmacy programs. This is in the form of experiential placements in a range of settings including public hospitals, private practices, and community health settings in the state/territory and surrounding rural regions if available.

The aim of experiential placements for pharmacy is to equip students with the skills necessary, particularly in areas of clinical assessment and treatment, to safely commence their period of internship/supervised practice prior to obtaining general registration.⁸

⁶ Pharmacy Board of Australia, *Supervised Practice Arrangements Registration Standard*, op. cit.

⁷ Health Practitioner Regulation National Law – Sect. 52, viewed 7 January 2014, http://www.austlii.edu.au/au/legis/nsw/consol_act/hprnl460/s52.html.

⁸ Australian Pharmacy Council Ltd, *Accreditation Standards For Pharmacy Programs In Australia And New Zealand*, op. cit.

Placement hours

Unlike the accreditation standards for programs like nursing or medicine, the pharmacy accreditation standard requirements do not specify a minimum number of experiential placement hours required pre-graduation. It is only post-graduation that aspiring pharmacists must complete an ITP which includes 1,824 hours of supervised practice in order to obtain registration.

Figure 2 depicts the range of experiential placement hours required for different Australian pharmacy programs, as reported by individual higher education providers.⁹ In 2012, there were 17 higher education providers offering 19 programs leading to provisional registration as a pharmacist.¹⁰ The placement requirements for pharmacy programs range from 178 hours to 690 hours of experiential placements, with an overall average of 361 hours.¹¹

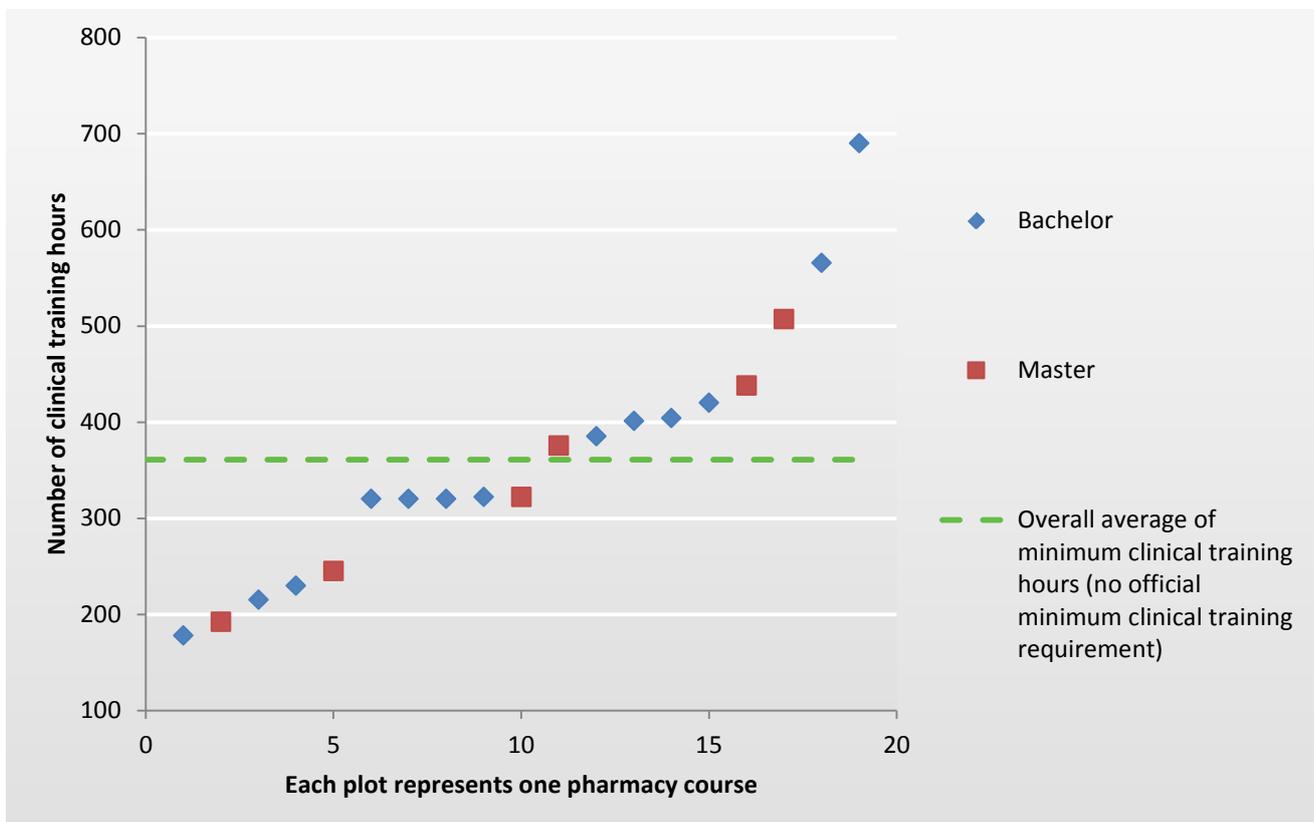


Figure 2: Range of experiential placement hours across pharmacy programs, 2012

Source: Health Workforce Australia survey of 2012 clinical training placements.

⁹ Honours programs, and those that did not have any enrolled students were excluded from this analysis.

¹⁰ For the data analysis, 'program' was defined as training delivered in Australia that on completion leads to eligibility for registration (after completion of 1,824 hours of supervised practice upon graduation).

¹¹ The average in this clinical training profile is the simple average of all experiential training hours of all pharmacy programs that were taken into account for the analysis.

The placement requirements reported by individual higher education providers do not include hours spent on undertaking a research project.

Seven out of 13 bachelor of pharmacy programs require less than the overall average of experiential placement hours, while three out of six masters of pharmacy programs require more.¹² Bachelor programs require their students to complete an average of 367 hours of experiential placements. The average placement requirement for master programs is 347 hours. Each pharmacy program has an average of 329 students. The number of students ranges from 72 to 1,060 students for bachelor programs and 46 to 378 students for master programs.

¹² For data analysis purposes, one integrated bachelor/masters pharmacy program was included in the master's program totals in this clinical training profile.

Programs

Figure 3 divides programs offered in 2012 into four groups based on the amount of clinical training hours they require in comparison to the overall average. Programs requiring students to complete up to 325 hours of experiential placements are grouped in the category requiring less than 90 per cent of the overall average. There were no programs requiring between 325 and 357 hours of clinical training (90 – 99% of the overall average), however for completeness the category was still displayed in the figure below.

The largest proportion of programs requires their students to complete less than 325 hours of experiential placements which is the category requiring less than 90 per cent of the overall average of 361 placement hours. Two programs had requirements between 100 and 110 per cent of the overall average of training hours, while seven programs required more than 110 per cent of the overall average.

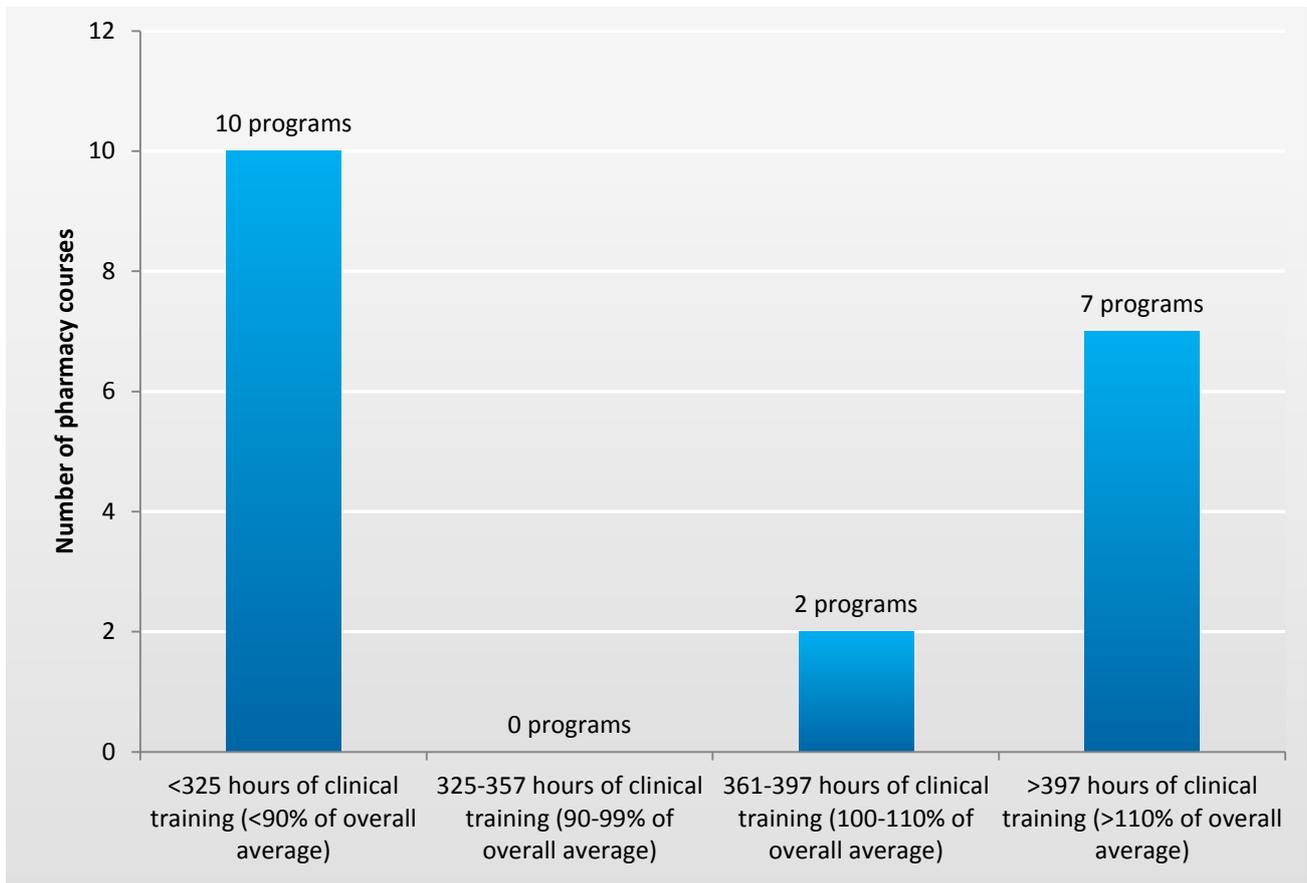


Figure 3: Numbers of pharmacy programs within different ranges of placement hours, 2012

Source: Health Workforce Australia survey of 2012 clinical training placements.

Student load

Figure 4 demonstrates the proportion of students studying programs that require completion of experiential placement hours in line with the four categories defined in Figure 3. The columns compare each category of programs with the equivalent full time student load (EFTSL) studying that program. Programs with placement requirements either more than 10 per cent above the overall average or more than 10 per cent below the overall average had the highest student loads. Programs requiring the lowest number of placement hours were training 49 per cent of the total EFTSL. Programs within a 10 per cent range of the overall average only carried 18 per cent of the total student load. There were no students completing training between 90 and 99 per cent of the overall average hours, however for completeness the category was still displayed in the figure below.

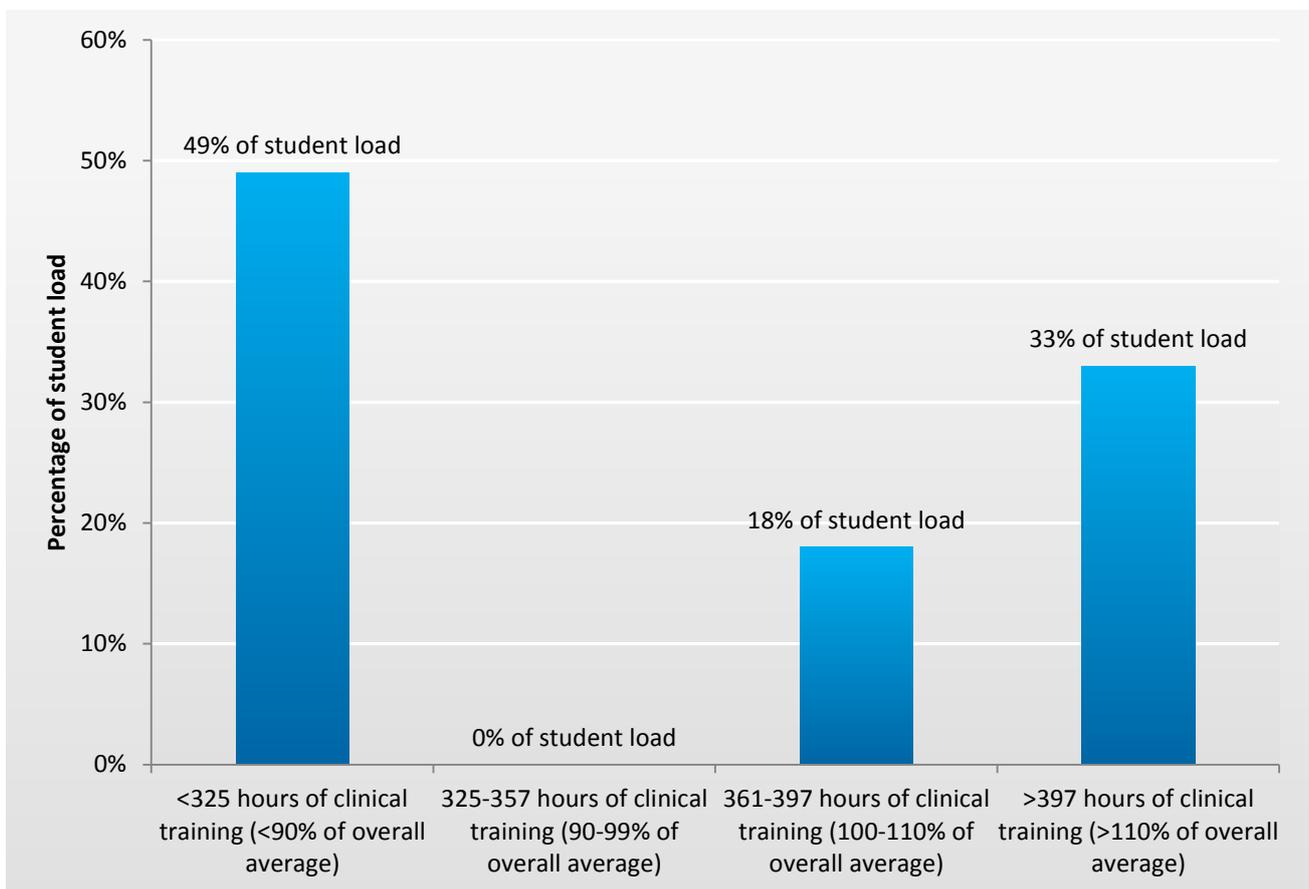


Figure 4: Proportion of student load in pharmacy programs, 2012

Source: Health Workforce Australia survey of 2012 clinical training placements.

Characteristics of experiential placements

Figure 5 reflects the proportions of placement days by setting.

Half (52 per cent) of all placement activity in 2012 occurred in private/professional practice settings. Acute, and primary and community health settings provided 26 per cent and 12 per cent of training respectively in 2012. It is important to note that due to different interpretations of the setting definitions by health education providers, many training facilities have been classified in both private/professional practice and primary care and community health; the settings are therefore not mutually exclusive.¹³ A description and examples for each type of setting can be found in Appendix A.

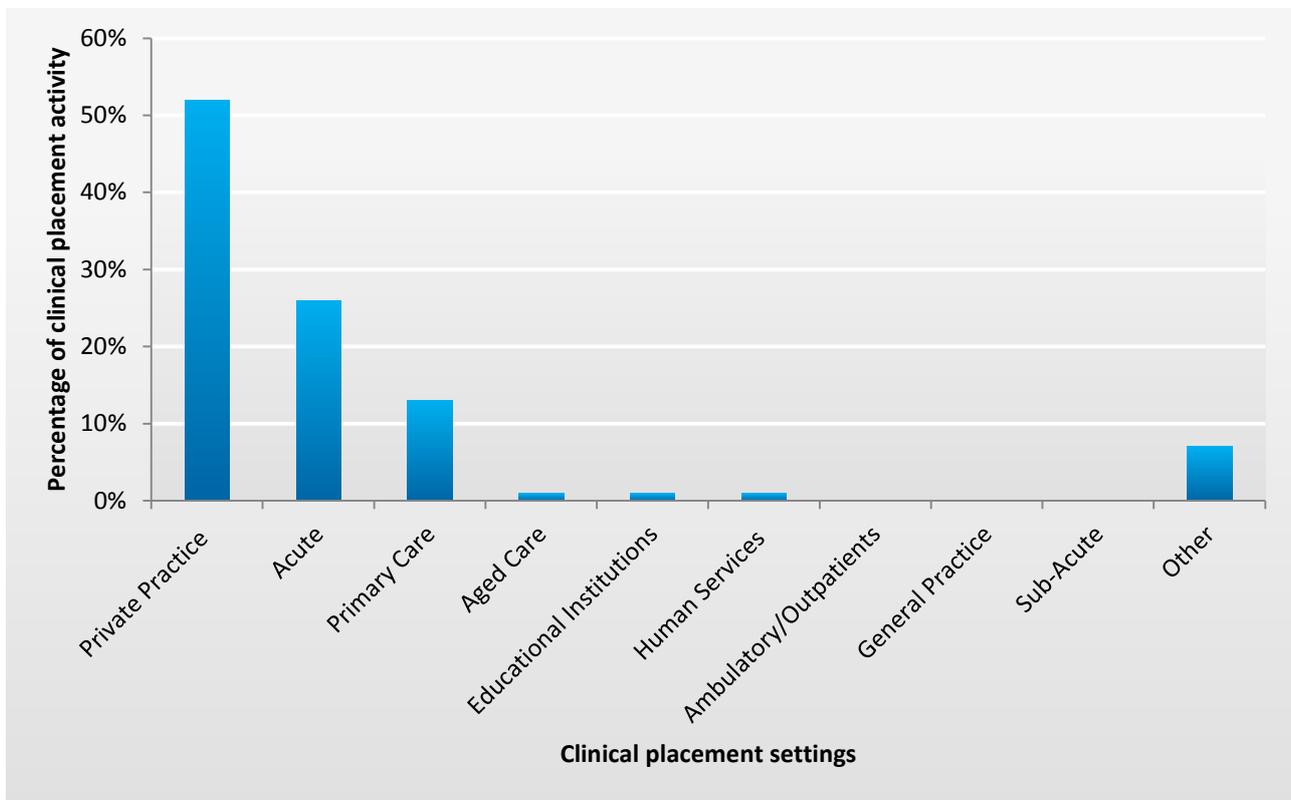


Figure 5: Proportion of pharmacy experiential placement activity by placement setting, 2012

Source: Health Workforce Australia 2013, *Clinical Training 2012*.

¹³ Health Workforce Australia 2013, *Clinical Training 2012*, viewed 13 January 2014, <https://www.hwa.gov.au/sites/uploads/Clinical-Training-2012.pdf>.

Metropolitan, regional and remote placements

Figure 6 presents the location of placements for pharmacy programs for each higher education provider. The figure distinguishes between major cities of Australia (Remoteness Area 1), inner and outer regional Australia (Remoteness Area 2 and 3) and remote and very remote Australia (Remoteness Area 4 and 5).

The majority of pharmacy experiential placements (74%) occur in metropolitan locations. Approximately 24 per cent of all placements are completed in regional locations, while only two per cent occur in remote settings. This reflects the geographical locations of employed pharmacists, with most located in metropolitan areas (76%), followed by regional locations (23%) and remote locations (1%) in 2012.¹⁴

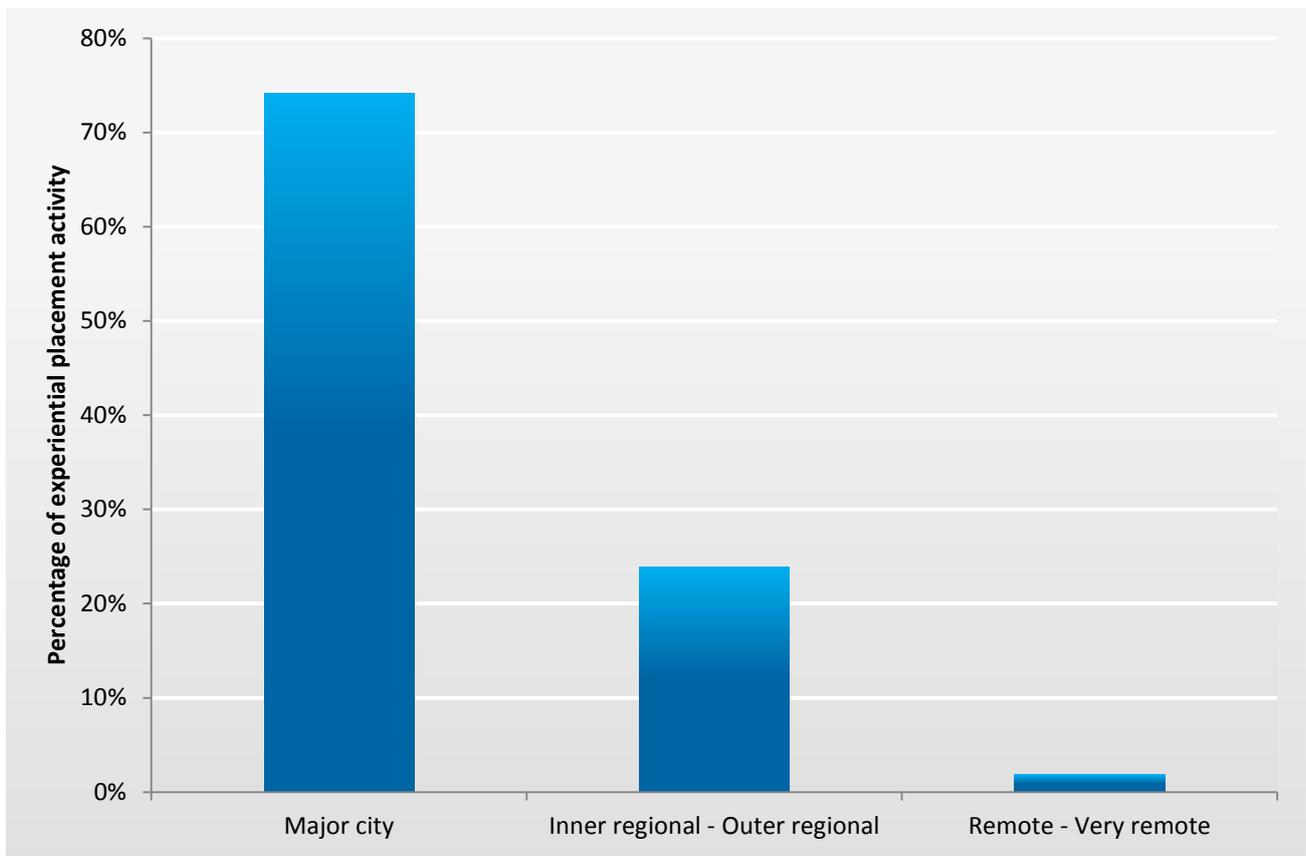


Figure 6: Proportion of pharmacy placements by geographical location, 2012

Source: Health Workforce Australia 2013, *Clinical Training 2012*.

¹⁴ Health Workforce Australia 2014, *Australia's Health Workforce Series – Pharmacists in focus*.

Placement supervision

Supervised practice in pharmacy 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.¹⁵ 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'.¹⁶

The general ratio of staff to students on placement is one staff to up to 20 students.¹⁷

Simulated learning environments

The Accreditation Standards for Pharmacy Programs in Australia and New Zealand stipulate that while simulated experiences may support the development of clinical skills and competencies required by pharmacists to supplement and complement experiential placements, they may not replace the placement experience.¹⁸

The Health Workforce Australia funded *Use of Simulation in Pharmacy School Curricula* report expressed that simulation based educational techniques could be used to assist with the delivery of the following elements within the pharmacy education:

- Dispensing, including preparation and optimal use of medicines;
- Communication;
- Interprofessional learning and interaction;
- Cultural training and awareness, including rural and remote healthcare delivery; and
- Clinical skills development and awareness.

According to the report, the main simulation based learning techniques used in pharmacy schools include role playing, case-based scenarios and simulated patients.¹⁹ It should be noted that simulation based educational techniques outlined above only relate to the training completed within an accredited pharmacy program and do not apply to the 1,824 hours of supervised practice required post graduation in order to obtain registration.

¹⁵ Pharmacy Board of Australia Registration Standards, *Supervised Practice Arrangements Registration Standard*, op. cit.

¹⁶ *ibid.*

¹⁷ *ibid.*

¹⁸ Australian Pharmacy Council Ltd 2012, *Accreditation Standards For Pharmacy Programs In Australia And New Zealand*, op. cit.

¹⁹ The University of Newcastle and The University of Tasmania 2011, *Use of Simulation in Pharmacy School Curricula*, viewed 9 January 2014, <http://www.hwa.gov.au/sites/uploads/simulation-in-pharmacy-school-curricula-201108.pdf>.

Disclaimer:

Please note that the survey of clinical placements is a young collection and as such has data constraints which limit interpretation of the results. With time and investment, this type of data will be progressively standardised and analysis of the collection should become more accurate. The data has been reported by the participant HEPs. Training providers were not required to validate the data in 2012. Post-registration pharmacy programs have not been taken into account for the analysis.

For the data analysis, 'program' has been defined as training delivered in Australia that on completion leads to graduation, and registration to practice the profession.

Appendix A – Definition of 2012 placement settings

Setting name	Definition	Examples
Acute (medical/surgical/maternity/emergency)	Includes all hospital placements in wards, theatres and other specialty programs excluding sub-acute, mental health and ambulatory/outpatients	Emergency, ICU, HDU, peri-operative, maternity, paediatric, hospital pharmacy, day surgery, etc. – not psychiatric wards
Sub-acute	Includes placements in rehabilitation, palliative care, geriatric evaluation & management units	
Ambulatory/outpatients	Includes all hospital placements involving outpatient and non-admitted patient care and home delivered services provided by hospital staff	Specialist clinics, outpatient clinics, hospital in the home, antenatal clinics
Aged care	Placements in residential and community aged care facilities and day programs	Low and high care facilities, independent living units, respite programs
Primary care and community health (excluding GP)	Placements in community health centres or government managed health services that involve direct patient care	Community health centre, superclinic, community pharmacy, HACC, health promotion, maternal and child health centres – unless covered by another setting
Diagnostic services	Placements in diagnostic laboratories and medical imaging organisations	Pathology laboratories, medical imaging, sonography
General practice	Includes general practice whether in a private clinic, community health centre, superclinic or other setting	
Private/professional Practice (excluding GP and diagnostic)	Placements in non-hospital based professional practices including specialist medical clinics and excluding GP and community health centres	Audiology, allied health, retail pharmacy, paramedics
Mental health/alcohol and other drugs	Includes all placements in mental health programs. This also includes	Psychiatric/mental health wards, day programs, community mental health

	alcohol and other drugs services	services and programs
Dental and oral health	Includes placements in school dental clinics, private or public clinics or laboratories	
Educational institutions	Includes all university administered clinics and other secondary and tertiary education provider clinics	University clinics, primary and secondary schools, specialist schools
Human services	Includes placements with organisations that are involved in human service related industries	Child protection, public health, disability support, correctional facilities, relevant state, federal and local government departments, special interest organisations e.g. Red Cross, Heart Foundation etc. – unless covered by another setting
Other	If the placement does not correspond to any of the listed settings	

Source: Health Workforce Australia, 2013, *Clinical Training 2012* (Appendix C)