Pharmacist prescribing forum

Background paper

26 June 2018

Pharmacy Board of Australia

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Foreword

On behalf of the Pharmacy Board of Australia, I would like to thank you for accepting the invitation to attend this forum to consider the need and opportunities for expanding pharmacist involvement in prescribing in Australia.

With a growing need worldwide to improve the safe and timely access to medicines and to ensure the most efficient use of healthcare resources, there has been an enhanced involvement of health professions not typically associated with prescribing, to prescribe. In Australia, there is a significant agenda for health reform with many people in our communities not able to access the care they need or to access it in a timely manner.

Prescribing by pharmacists is an established component of practice in a number of countries. In Australia we have seen recent developments in pharmacy services such as administration of vaccines and continued dispensing by pharmacists. It is timely to consider potential models of pharmacist prescribing in order to improve access to medicines by the public to meet their healthcare needs.

This forum will explore the potential role of pharmacists in prescribing in order to contribute to supporting access to medicines in Australia. This aligns with the objectives of the National Registration and Accreditation Scheme, including '*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*'.

The forum is expected to help the Pharmacy Board of Australia and stakeholders in assessing how prescribing by pharmacists can be an effective and sustainable response to meeting the emerging healthcare needs of the Australian community. It will be an opportunity to explore, identify and articulate the roles of different stakeholders to successfully develop proposals about pharmacist prescribing that can be implemented and sustained as part of a broader range of health services to effectively meet the health needs of the community.

You will note some discussion questions on pages 14 to 20 of this paper, which we encourage you to discuss within your organisation before attending the forum. You can use the tables to record your organisation's initial collective thoughts, which can be further explored through the discussion on the day.

I look forward to meeting you and to our valuable discussions.

William Kelly
Chair, Pharmacy Board of Australia

Background

Health service reform is driven by the need to improve access to medicines, increase patient choice, and mitigate ongoing rural and remote workforce shortages.(1) Health costs associated with the ageing population and the increased burden of chronic disease are also driving reform.(2, 3) An objective of our National Medicines Policy is that all Australian communities receive equitable and timely access to healthcare including medicines (Figure 1).(4) These objectives are aligned with the National Registration and Accreditation Scheme.(5) The aims of this Scheme include facilitating workforce mobility across Australia, and enabling the continuous development of a flexible, responsive and sustainable Australian health workforce.(5) Non-medical prescribing can help in achieving these healthcare goals in the Australian context.

Planning for future healthcare needs will require all health practitioners to be working to the full extent of their scope of practice and to enable this, a redistribution of tasks will be required.(5-8) As there are documented shortages in many areas of Australia of medical practitioners as well as other health practitioners with prescribing rights,(6) expanded prescribing rights to other health practitioners is an important strategy.(8) The National Health Workforce Planning and Research Collaboration stated that the number of Australian prescribers needs to increase to maintain the current access to medicines.(2)

Non-medical prescribing is part of the strategy to reform health in Australia and internationally.(6) The *NPS Prescribing Competencies Framework 2012* and the *Health Professionals Prescribing Pathway* both define prescribing as '*an iterative process involving the steps of information gathering, clinical decision-making, communication, and evaluation that results in the initiation, continuation or cessation of a medicine*.'(7, 8) In Australia, non-medical prescribing has been successfully extended to dentists, nurse practitioners, midwives, podiatrists and optometrists applying different prescribing models (Appendix A).(7) Non-medical prescribing can result in improved access to medicines for communities, promote workforce flexibility, contribute to cost-effective care, and has been demonstrated to be safe in international settings.(2, 5, 6, 9)

The *Health Professionals Prescribing Pathway* proposed three models of non-medical prescribing:

- Autonomous prescribing. The prescriber has been educated and authorised to autonomously prescribe in a specific area of clinical practice.

- Prescribing under supervision. The supervised prescriber has been educated to prescribe and has a limited authorisation to prescribe medicines that is determined by legislation, requirements of the National Board and policies of the jurisdiction, employer or health service.

- Prescribing via a structured prescribing arrangement. Prescribing occurs where a prescriber with a limited authorisation to prescribe medicines by legislation, requirements of the National Board and policies of the jurisdiction or health service prescribes medicines under a guideline, protocol or standing order.(7)

In each circumstance, the prescriber must recognise, and prescribe according to their competence for their scope of practice, in accordance with legislative authorisation and with a collaborative approach to patient care.(7)

Non-medical prescribing may contribute to the delivery of sustainable, responsive and affordable access to medicines.(1, 2, 4) It may reduce costs, increase access, and improve outcomes for patients without compromising safety and quality.(4, 9) It promotes a flexible workforce, which is an important initiative to ensure consistency of healthcare as the Australian population ages.(2, 4) A well-trained pharmacist workforce with expertise in medicines management with the ability to prescribe has the potential to facilitate safe and improved access to medicines for all Australians (Figure 1).(9-12)

Non-medical prescribing (including deprescribing) can also play an important part in reducing polypharmacy in the Australian population. One third to one half of older Australians use five or more prescription medicines, and although deprescribing is feasible,(13) it is often not undertaken.(14) Pharmacists and medical practitioners identify polypharmacy and potentially inappropriate prescribing similarly.(15) They largely agree which medicines can be trialled for cessation (deprescribing) in older adults.(15) As the medicines experts, pharmacists have the skills to review and optimise medicines for all Australians.

Non-medical prescribing has been shown internationally to be effective. A 2018 systematic review of non-medical prescribing compared to medical prescribing included a total of 46 studies where 20 studies specifically reported pharmacist prescribing.(9) This systematic review found that non-medical prescribing was as effective as medical prescribing for health outcomes. An Australian study found pharmacists and medical practitioners had substantial agreement on the number of medicines to continue and discontinue for frail older people, with the qualitative analysis indicating similar clinical reasoning.(16) Pharmacists' ability to accurately and safely complete medication charts at Victorian hospitals was evaluated, which found pharmacists undertaking these responsibilities are at least as safe as medical practitioners.(17-19)

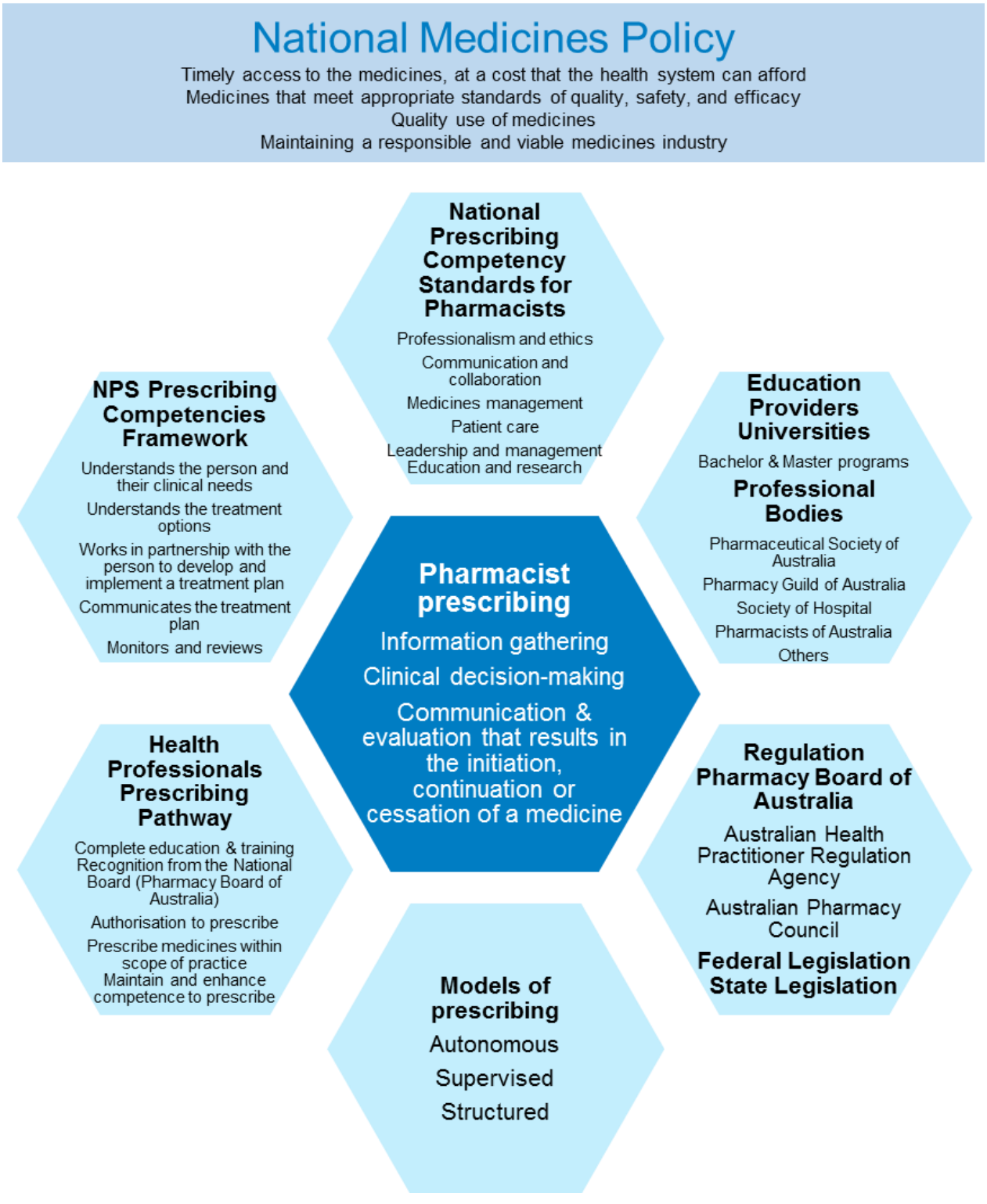


Figure 1: Interplay between the established systems that facilitate and underpin non-medical prescribing. (5, 7, 8, 20, 21)

National frameworks and policies for prescribing medicines

The Australian National Medicines Policy aims to improve health outcomes for all Australians through access to and optimal use of medicines.(4) The National Medicines Policy has four objectives including timely and affordable access to medicines and the quality use of medicines (Figure 1).(4)

The National Medicines Policy's objective to realise the quality use of medicines led to the 2012 release of the *NPS Prescribing Competencies Framework 2012*.(4, 8) This framework defines a demanding set of competencies relevant to all autonomous prescribers of all medicines. The *NPS Prescribing Competencies Framework 2012* was developed with reference to the World Health Organisation's *Guide to Good Prescribing: A Practical Manual*.(8, 22) It was intended for multiple purposes including developing and accrediting prescribing curriculums, and providing guidance for national health professional registration boards.(8) The *NPS Prescribing Competencies Framework 2012* defines seven competency areas (Appendix B).(8)

The *Health Professionals Prescribing Pathway* defines a national five step framework for health professions to progress to being endorsed to prescribe (Appendix C).(7) The *Health Professionals Prescribing Pathway* recommends that prescribing models, education and training are aligned to the *NPS Prescribing Competencies Framework 2012* (Figure 1).(7, 8) Together, the *NPS Prescribing Competencies Framework 2012*(8) and the *Health Professionals Prescribing Pathway*(7) detail the competencies and pathways for non-medical professions including pharmacy to be considered for endorsement to prescribe.(8)

The *National Competency Standards Framework for Pharmacists in Australia 2016* (Appendix D),(21) state the competency standards needed to consider pharmacist activities to support all four objectives of the National Medicines Policy, with an emphasis on the quality use of medicines.(4)

The Pharmacy Board of Australia commissioned research to map the *National Competency Standards Framework for Pharmacists in Australia 2016* to the *NPS Prescribing Competencies Framework 2012*.(8, 11, 21) Using a conservative approach, the mapping process demonstrated that 60-87% within each area of the competency standards for pharmacists was entirely consistent with the prescribing competencies (green bars in Figure 2), with a further 13-33% within each area to be partly consistent (orange bars in Figure 2).

Some of the competencies (7-33%) were unable to be mapped in the competency areas of shared decision-making, coordination and communication (blue bars in Figure 2).(11) This review confirmed that the current *National Competency Standards Framework for Pharmacists in Australia 2016* are favourably mapped against the required prescribing competencies.

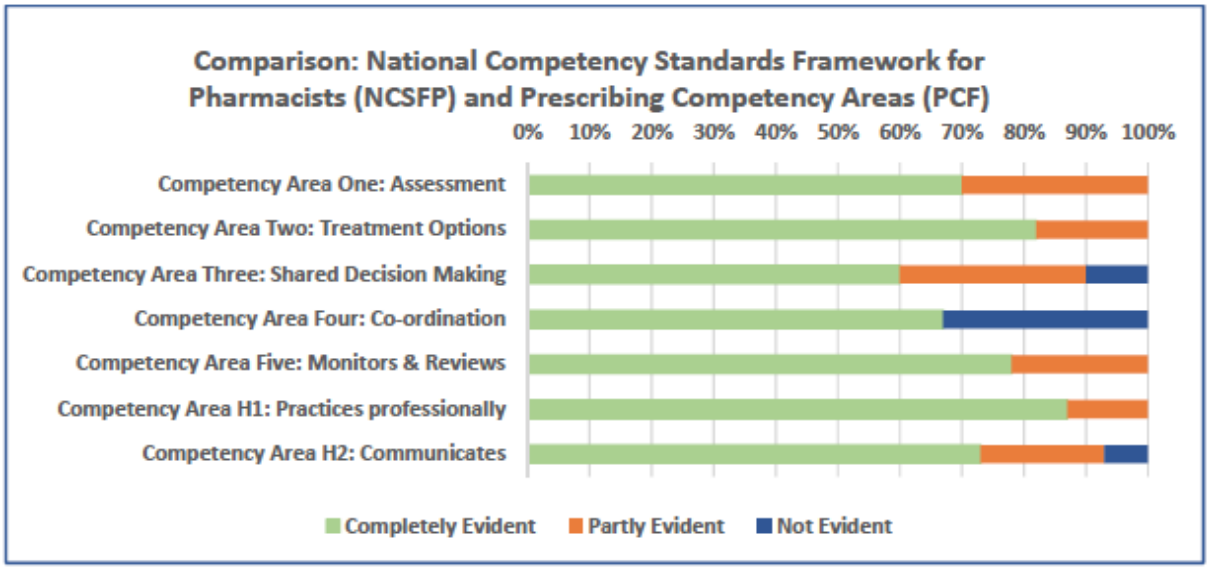


Figure 2: Mapping the National Competency Standards Framework for Pharmacists to the Prescribing Competency Areas. Table developed for the Pharmacy Board of Australia (Nissen L, Kyle G, Cardiff L, Rosenthal M, Shah S, 2017).(11)

International prescribing models

Pharmacist prescribing has become an accepted part of the scope of practice of pharmacists in other comparable developed countries including New Zealand and the United Kingdom, and some provinces and territories within Canada. These countries apply differing prescribing models, education and training standards as well registration requirements.(23-29) In Canada, the prescribing authority, the model, education and training requirements and continuing professional development requirements vary between the provinces and territories.(27-29) The Canadian provence of Alberta has implemented a model that correlates to the autonomous prescribing model in the Health Professionals Prescribing Pathway. All pharmacists registered on the clinical register in Alberta may prescribe most medications with the exception of controlled drugs (equivalent to the Australian Schedule 8 medicines such as opiates) and benzodiazepines by adapting a prescription or may prescribe in an emergency.(30) Pharmacists who have been granted an additional prescribing authorisation may also prescribe to initiate drug therapy and/or manage ongoing drug therapy.(30) The variation in pharmacist prescribing models across the different provonces in Canada has the potential to lead to confusion in the area of pharmacist prescribing.

The New Zealand, United Kingdom and Canadian models are useful to review when considering applicable models in the Australian context, due to the similarities in the healthcare systems (Table 1).(23-26)

Table 1: Pharmacist prescribing in New Zealand, United Kingdom and Canada

	Health Professionals Prescribing Pathway prescribing model	Education and training requirements
 New Zealand (23-26)	Supervised	Postgraduate Certificate in Pharmacist Prescribing accredited by the Pharmacy Council of New Zealand. 60 days of full-time university education and 20 days of experiential learning under a designated medical prescriber. Prerequisite: Postgraduate diploma in clinical pharmacy and clinical experience.
 United Kingdom (23, 31)	Structured or Autonomous (moving towards only autonomous prescribing)	The General Pharmaceutical Council of Great Britain accredited university training. Autonomous: 26 days of full-time university education and a minimum of 12 days experiential learning under a designated medical prescriber. Prerequisite for autonomous prescribing: Two years of clinical experience following registration as a pharmacist.
 Canada (27-29)	The models of prescribing are different in each provence	There is significant heterogeneity between provinces in the type of prescribing functions that pharmacists can undertake and in the rules governing each function.

The international uptake rate by pharmacists to prescribe has been variable between countries, which may relate to the prescribing model and education requirements. The New Zealand education and training requirements that lead to prescribing under supervision is arduous.(24-26) It has led to low uptake rates (<0.5% of registered pharmacists).(24) In the United Kingdom, 8% of registered pharmacists have completed the requirements for pharmacist prescribing.(31)

In the United Kingdom, prescribing pharmacists may use a model that they call structured or autonomous prescribing. Pharmacists with rights to undertake structured prescribing have the ability to undertake further training in order to prescribe autonomously.(31)

Current situation in Australia

In Australia, a number of health professions have prescribing rights (Appendix A). Medical practitioners, dentists, nurse practitioners, midwives, pharmacists, optometrists and podiatrists can prescribe within their scope of practice. Pharmacists are authorised under state and territory drugs and poisons legislation to supply Schedule 2 and Schedule 3 medicines. Optometrists and podiatrists have a limited list of medicines that they are endorsed to prescribe, which has resulted in practical and logistical problems for these professions. The process for modifying lists is extensive and requires Ministerial or Board approval so cannot be readily adapted in response to evolving evidence, guidelines and practice.(32) Medical practitioners, dentists, nurse practitioners and midwives can prescribe within their scope of practice. For full details of prescribing rights by profession in each state and territory, refer to Appendix A.

In a climate where polypharmacy and escalating medicines use is ubiquitous among older Australians, prescribing pharmacists could have the capability to lead and champion rationalised medicines use, rather than increasing medicine use.(3, 13, 20) Pharmacists routinely advise prescribers on the quality use of medicines and strategies to improve medicine use for better health outcomes for patients.(21) Pharmacists can competently assess a person's complex medication regimen for medicines burden, overall interactions and their clinical significance, monitoring requirements and adverse drug events. Pharmacists with additional prescribing rights would potentially be able to prescribe and deprescribe a broader range of medications.

Scheduled medicines

Pharmacists in Australia are authorised under state and territory drugs and poisons legislation to supply Schedule 2 (Pharmacy Only) and Schedule 3 (Pharmacist Only) medicines (Appendix A).(21) The provision of these medicines require the pharmacist to undertake the four stages of prescribing: information gathering, clinical decision-making, communication, monitoring, and review.(20)

Continued or emergency supply by pharmacists

Pharmacists can authorise the supply of Schedule 4 (Prescription Only) medicines without a prescription in limited situations. The emergency supply provisions in most state and territory laws allow for a three-day supply with restrictions.(33) The continued dispensing provision allows the Australian Pharmaceutical Benefits Scheme-subsidised provision of prespecified medicines (the oral contraceptive pill and statins) once in a 12 month period without a prescription.(34, 35) Both continued dispensing and emergency supply require information gathering, clinical decision-making and communication, with the person requested to return to the prescriber for monitoring and review for ongoing supply.

A current Victorian government initiative aims to manage medicines for chronic conditions in a collaborative care arrangement between general practitioners and pharmacists. In this initiative, the general practitioner leads patient care in collaboration with the pharmacist who undertakes regular monitoring and dose adjustments of the medicines. The patient is assessed by the general practitioner who writes an agreed management plan including monitoring requirements and dosage adjustments. The pharmacist receives a copy of the management plan. The patient attends the pharmacy for the specified monitoring and medicine supply. The pharmacist can adjust medicine doses as specified in the management plan, and when necessary the pharmacist refers the patient back to the general practitioner.(35)

In-patient medication charts

A partnered pharmacist charting process was implemented at The Alfred Hospital, Melbourne, in the General Medicine Unit and Emergency Short Stay Unit in 2012 as an alternative to medical prescribing.(17) The process involves medicine review and subsequent medicine charting on patient admission. It is a partnership between a pharmacist who is credentialed in the workplace and a medical

practitioner. As part of the process, the credentialed pharmacist takes a medicine history and performs a venous thrombo-embolism risk assessment.(36) The pharmacist and the admitting medical practitioner have a face-to-face discussion about current medical and medicine-related problems, and develop a shared medicines management plan. Appropriate medicines and venous thrombo-embolism prophylaxis are then charted by the pharmacist on the in-patient medication chart from which nurses administer the medicines. The pharmacist and the treating nurse then discuss the medicines management plan, including any urgent medicines to be administered, drug-related monitoring and reasons for any medicines changes.

An expanded evaluation of the model was undertaken in 2017 in general medical units in seven public hospitals in Victoria which was funded by the Department of Health and Human Services, Victoria, Australia. Patients were included from the following hospitals: Box Hill Hospital (Eastern Health), Dandenong Hospital (Monash Health), Echuca Hospital (Echuca Regional Health), Geelong Hospital (Barwon Health), Monash Medical Centre (Monash Health), Maroondah Hospital (Eastern Health) and The Royal Melbourne Hospital (Melbourne Health). The results will be reported later this year.

Possible frameworks for pharmacist prescribing in the Australian context

As described in the *Health Professionals Prescribing Pathway* (Appendix E)(7), possible frameworks for pharmacist prescribing in Australia include autonomous prescribing, prescribing under supervision and prescribing via a structured prescribing arrangement.

Autonomous prescribing

Under this model, pharmacist prescribers would prescribe within their scope of practice without the need to be supervised or authorised by another autonomous prescriber. The pharmacist prescriber would be cognisant of their role in the healthcare team and respect the role of other team members, ensuring appropriate communication between all team members including the person taking the medicine. Under this model, pharmacist prescribers would be responsible and accountable for patient assessment and clinical management decisions including prescribing.

In the United Kingdom, autonomous pharmacist prescribers have to undertake a General Pharmaceutical Council accredited program that is generally conducted part-time over six months to be able to undertake a process analogous to the Australian autonomous prescribing.(23)

> *Example:* A pharmacist in a hospital reviews a medication chart and observes that there are some missing therapies. The patient has been using regular opioids and is experiencing considerable nausea. No antinauseants are prescribed. The hospital pharmacist notes that this appropriate therapy has been omitted from the chart. The pharmacist prescribes an antinauseant on the medication chart and writes a note in the progress notes to explain why this has been done and when it should be reviewed.

Prescribing under supervision

Under this model, pharmacist prescribers would have limited authority to prescribe medicines. They could prescribe a scheduled medicine or class of scheduled medicines within their scope of practice under the supervision of a specific autonomous prescriber. Pharmacists prescribing under supervision would implement an agreed clinical management plan that was patient-specific. The pharmacist prescriber would be cognisant of their role in the healthcare team, ensuring appropriate communication between team members including the person taking the medicine.

> *Example*: A community pharmacist and general practitioner discuss de-escalating the proton pump inhibitor for a patient. The patient was using a high dose proton pump inhibitor (esomeprazole 40mg daily) for gastrointestinal reflux associated with a short course of diclofenac (a nonsteroidal antiinflammatory). The patient has now ceased the diclofenac, and no longer has any gastrointestinal reflux symptoms. The patient, general practitioner and pharmacist agree to a dose reduction schedule with dose reductions every two weeks and the pharmacist implements this agreed process.

Prescribing via a structured prescribing arrangement

This model would require an established diagnosis by an appropriately trained healthcare professional, usually a medical practitioner. Protocols would need to be developed collaboratively and define clearly the roles of each member of the team, with clear referral responsibilities and pathways.

> *Example:* A pharmacist is working in a general practice that uses a Health Care Home model. The healthcare team has decided to target optimal blood pressure control as a quality improvement exercise. Together, the general practitioners, allied health practitioners, practice nurses and practice pharmacist develop a protocol for managing blood pressure. The general practitioners identify patients to refer to the shared care arrangement. The group of patients attend regular shared consultation sessions with the dietician and physiotherapist for nonpharmacological interventions. At each session, the nurse measures their blood pressure. The pharmacist titrates the antihypertensive therapy according to the protocol to ensure blood pressure control stays within the target range. This change is updated in the clinic's medical software and in the patient's *My Health Record*. The pharmacist issues the patient a new prescription that can later be presented at a community pharmacy to be dispensed.

Education and training for pharmacist prescribing

In Australia, 18 universities deliver approved undergraduate or graduate entry masters programs that lead to initial registration for pharmacists. The Pharmacy Board of Australia, under the Health Practitioner Regulation National Law, as in force in each state and territory, has assigned the accreditation function (which includes the accreditation of programs of study) to the Australian Pharmacy Council as the independent accrediting authority for Australian pharmacy education and training under the National Registration and Accreditation Scheme.(5, 37) To ensure that current curriculums deliver a consistently high quality pharmacy graduate, the Australian Pharmacy Council sets and reviews the standards for education and training.(38) The standards for the accreditation of pharmacy programs in Australia are being reviewed in 2018 by the Australian Pharmacy Council, ready for the Pharmacy Board of Australia to consider them for approval (Figure 3).

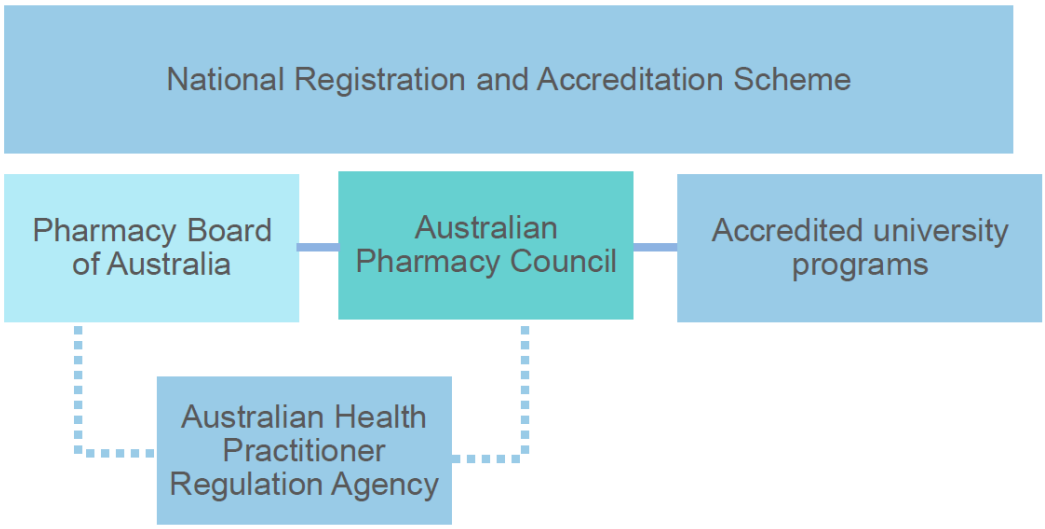


Figure 3: Scheme for accreditation of university programs in Australia.

Pharmacy programs of study that lead to registration

The *NPS Prescribing Competencies Framework 2012* was mapped to selected Australian university curriculums for ten health professions and the *National Competency Standards Framework for Pharmacists in Australia 2016* in the *ASPRINH (Assessment of Prescribing in Health) Project*.(8, 10, 21) The *ASPRINH (Assessment of Prescribing in Health) Project* found that new registrants would be '*very well qualified to complete most prescribing tasks, as defined by the NPS Prescribing Competencies Framework 2012.*(8, 10) As the *National Competency Standards Framework for Pharmacists in Australia*

2016 reflect the expectations of a registered pharmacist,(21) the project concluded that: '*the practice of currently registered pharmacists would reflect the majority of components relevant to prescribing*.'

Following the *ASPRINH (Assessment of Prescribing in Health) Project* the Pharmacy Board of Australia commissioned a second study which looked at a broader range of pharmacy programs of study. The curriculum of seven programs with differing structures (Bachelor, Bachelor (Hons), Masters programs) and setting (metropolitan and rural), were mapped to the *NPS Prescribing Competencies Framework 2012*.(11) This involved 188 units of study and 1179 learning outcome statements.

Overall, 37% of all learning outcomes reviewed mapped to at least one of the performance criteria described in the *NPS Prescribing Competencies Framework 2012*, although many mapped to multiple performance criteria. Just under half (44%) of all learning outcomes reviewed were considered supportive of learning required to prescribe medicines.

This review found that the current curriculum performed favourably in relation to the competencies relating to Treatment Options and Professional Practice, and identified a gaps in those relating to Shared Decision Making, Co-ordination and Monitors and Reviews (Figure 4).

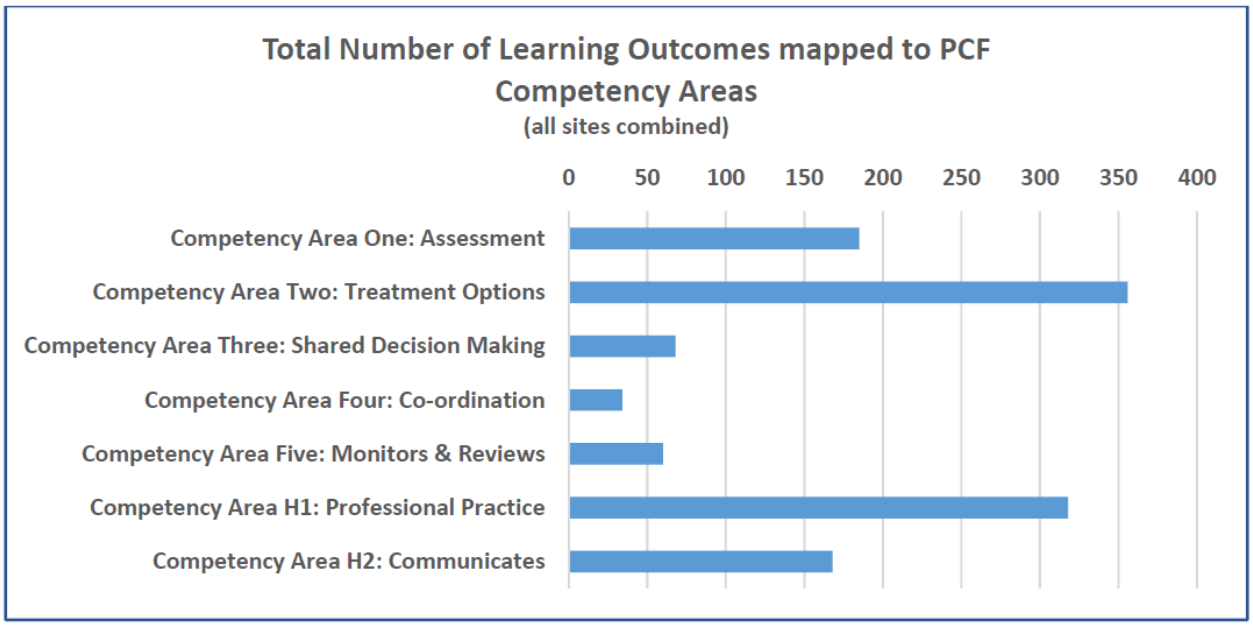


Figure 4: Number of learning outcomes mapped to prescribing competency framework competency areas.

Maintaining competency for pharmacist prescribers

Maintaining competency to prescribe can be achieved by meeting the Pharmacy Board of Australia continuing professional development requirements, as described in the Pharmacy Board of Australia's *Registration standard: Continuing professional development.*(39)

Stakeholders

Pharmacist prescribing can contribute to responsive and affordable access to medicines for patients.(1, 2, 4) It can increase access to medicines and improve outcomes for patients without compromising safety and quality.(4, 9) Polypharmacy and increasing medicines use is pervasive in the Australian community and prescribing pharmacists have an enhanced capability to lead and champion rationalised medicines use, rather than increasing medicine use.(3, 13) A key facilitator in this space is that patients find pharmacists easy to access in the community and this accentuates pharmacists' importance in this area. The patient (and their carer) are the profession's key stakeholders; as such, ensuring that we engage these key stakeholders in the planning and implementation phase of pharmacist prescribing is crucial.

The views of all key stakeholders must be considered during the planning and implementation phase. In addition to patients and carers, these stakeholders will include, but are not limited to: community pharmacists, hospital pharmacists, consultant pharmacists, pharmacy organisations, educators, government, regulators, funders, other healthcare providers including medical practitioners and nurses, training organisations and accrediting organisations.

Questions for discussion

You may wish to make some handwritten notes in the tables below ahead of the forum.

The Health Professionals Prescribing Pathway outlines three models of prescribing.

We invite you to consider the following for each model in relation to pharmacist prescribing.

	Autonomous prescribing	**Prescribing under supervision**	**Prescribing under a structured prescribing arrangement**
How will this model provide increased access and improved quality use of medicines for patients?			
What are the advantages of this model?			

	Autonomous prescribing	Prescribing under supervision	Prescribing under a structured prescribing arrangement
What are the barriers to implementing this model?			
Are there any safety or conflicts of interest issues raised by this model?			
What safeguards need to be considered for this model?			

	Autonomous prescribing	Prescribing under supervision	Prescribing under a structured prescribing arrangement
Should this model be limited to a particular practice setting? **(E.g. primary healthcare, hospital, rural and remote)**			
Should there be additional prerequisites for this model? **(E.g. years of experience, additional study/assessment of competence)**			
Should the profession aim for all pharmacists with general registration to be able to prescribe under this model?			

	Autonomous prescribing	Prescribing under supervision	Prescribing under a structured prescribing arrangement
Is there a role for workplace/site-based credentialing in this model? **If so, please describe.**			
Can medicines be safely supplied or dispensed under this model?			

Should a pharmacist who is authorised to prescribe who works in multiple settings (e.g. general practice and hospital) be able to prescribe in each setting?	

A number of legislative considerations are required to enable prescribing by pharmacists for each of the three models.

We invite you to consider what these may be ahead of discussion at the forum.

Model of prescribing	National Law	State and territory medicines and poisons Acts
Autonomous prescribing		
Prescribing under supervision		
Prescribing under a structured prescribing arrangement		

The authorisation to prescribe is conferred under each state and territory legislation.

What lessons can we learn from the international experience?	
How can we ensure consistency across the different states and territories?	
What forums are available for these discussions to occur?	
Who are the right stakeholders to lead these discussions?	

The profession will need to work in partnership with a range of stakeholders to enable pharmacist led prescribing.

We invite you to consider who the main stakeholders might be.

Stakeholder name	How can they help?	How best to engage them?	What would be their main concerns?	What strategies could be used to overcome those concerns?

References

1. National Health and Hospitals Reform Commission. A healthier future for all Australians - final report 2009. Canberra; 2009.

2. National Health Workforce Planning and Research Collaboration. Non-Medical prescribing. An exploration of likely nature of, and contingencies for, developing a nationally consistent approach to prescribing by non-medical health professionals. 2010;Final Report.

3. Page AT CA, Elliott R, Pond D, Dooley M, Beanland C, Etherton-Beer C. Integrate health care to provide multidisciplinary consumer-centred medication management: Report from a working group formed from the National Stakeholders' Meeting for the Quality Use of Medicines to Optimise Ageing in Older Australians Journal of Pharmacy Practice and Research. 2018;In press.

4. Australian Government Department of Health. National Medicines Policy. Canberra, Australia; 2000.

5. Australian Department of Health. National Registration and Accreditation Scheme (NRAS) Canberra, Australia: Department of Health; [updated 2 February 2016. Available from: http://www.health.gov.au/internet/main/publishing.nsf/content/work-nras

6. Duckett S, Breadon P. Access all areas: new solutions for GP shortages in rural Australia. 2013.

7. Health Workforce Australia. Health Professionals Prescribing Pathway (HPPP) Project - Final Report. 2013.

8. NPS: Better choices Better health. Competencies required to prescribe medicines: Putting quality use of medicines into practice. Sydney; 2012.

9. Weeks G, George J, Maclure K, Stewart D. Non-medical prescribing versus medical prescribing for acute and chronic disease management in primary and secondary care. Cochrane Database of Systematic Reviews. 2016(11):CD011227.

10. Cardiff L, Nash R, Bennett P, Mitchell C, Clifford R, Whitelaw K, et al. ASPRINH Assessment of prescribing in health: Enabling competence in prescribing medicines across multiple healthcare disciplines through systematic assessment practices. Brisbane, Queensland: Australian Government, Department of Education and Training; 2017.

11. Nissen L, Kyle G, Cardiff L, Rosenthal M, Shah S. Pharmacist prescribing in Australia: An exploration of current pharmacist capabilities, required education and training to prescribe medicines and a process for moving forward. Commissioned report. Unpublished: Pharmacy Board of Australia; 2017.

12. Tully MP, Latif S, Cantrill JA, Parker D. Pharmacists' changing views of their supplementary prescribing authority. Pharmacy World and Science. 2007;29(6):628-34.

13. Page AT, Clifford RM, Potter K, Schwartz D, Etherton-Beer CD. The feasibility and effect of deprescribing in older adults on mortality and health: a systematic review and meta-analysis. British Journal of Clinical Pharmacology. 2016:583-623.

14. Kouladjian L, Gnjidic D, Reeve E, Chen TF, Hilmer SN. Health care Practitioners' perspectives on deprescribing anticholinergic and sedative medications in older adults. Annals of Pharmacotherapy. 2016;50(8):625-36.

15. Ong GJ, Page A, Caughey G, Johns S, Reeve E, Shakib S. Clinician agreement and influence of medication-related characteristics on assessment of polypharmacy. Pharmacology Research and Perspectives. 2017;5(3):e00321.

16. Page AT, Etherton-Beer CD, Clifford RM, Burrows S, Eames M, Potter K. Deprescribing in frail older people - Do doctors and pharmacists agree? Research in Social and Administrative Pharmacy. 2016;12(3):438-49.

17. Tong E, Roman C, Mitra B, Yip G, Gibbs H, Newnham H, et al. Partnered pharmacist charting on admission in the General Medical and Emergency Short-stay Unit–a cluster-randomised controlled trial in patients with complex medication regimens. Journal of Clinical Pharmacy and Therapeutics. 2016;41(4):414-8.

18. Tong EY, Roman CP, Mitra B, Yip GS, Gibbs H, Newnham HH, et al. Reducing medication errors in hospital discharge summaries: a randomised controlled trial. Medical Journal of Australia. 2017;206(1):36-9.

19. Hale A, Coombes I, Stokes J, Aitken S, Clark F, Nissen L. Patient satisfaction from two studies of collaborative doctor - Pharmacist prescribing in Australia. Health Expectations. 2016;19(1):49-61.

20. Lum E, Mitchell C, Coombes I. The competent prescriber: 12 core competencies for safe prescribing. Australian Prescriber. 2013;36(1):13-6.

21. Pharmaceutical Society of Australia. National Competency Standards Framework for Pharmacists in Australia. 2016.

22. de Vries T. Guide to good prescribing: a practical manual: World Health Organization; 1995.

23. General Pharmaceutical Council. Pharmacist independent prescriber London, United Kingdom [Available from: https://www.pharmacyregulation.org/education/pharmacist-independent-prescriber

24. New Zealand Ministry of Health. Pharmacist prescriber New Zealand2017 [updated 20 March 2017]. Available from: https://www.health.govt.nz/our-work/health-workforce/new-roles-and-initiatives/established-initiatives/pharmacist-prescriber.

25. Rakhee R, June T, Alesha S. Non-medical prescribing in New Zealand: an overview of prescribing rights, service delivery models and training. Therapeutic Advances in Drug Safety. 2017;8(11):349-60.

26. University of Otago. Postgraduate Certificate in Pharmacist Prescribing (PGCertPharmPres) Dunedin, New Zealand: University of Otago,; 2018 Available from: https://www.otago.ac.nz/courses/qualifications/pgcertpharmpres.html.

27. College of Pharmacists of British Columbia. Framework for Pharmacist Prescribing in BC Vancouver, Briish Columbia: College of Pharmacists of British Columbia; Available from: http://www.bcpharmacists.org/certified-pharmacist-prescriber.

28. Faruquee CF, Guirguis LM. A scoping review of research on the prescribing practice of Canadian pharmacists. Canadian Pharmacists Journal. 2015;148(6):325-48.

29. Law MR, Ma T, Fisher J, Sketris IS. Independent pharmacist prescribing in Canada. Canadian Pharmacists Journal. 2012;145(1):17-23.

30. Alberta College of Pharmacists. FAQ Edmonton, Alberta, Canada [Available from: https://pharmacists.ab.ca/faq/faq?shs_term_node_tid_depth=4.

31. General Pharmaceutical Council. Prescribers Survey Report. London, United Kingdom; 2016.

32. Borthwick AM, Short AJ, Nancarrow SA, Boyce R. Non- medical prescribing in Australasia and the UK: the case of podiatry. Journal of Foot and Ankle Research. 2010;3:10.

33. Department of Health. Emergency supply of medicines Perth, Western Australia: Government of Western Australia; [Available from: https://ww2.health.wa.gov.au/Articles/A_E/Emergency-supply-of-medicines.

34. Department of Health. Frequently Asked Questions - Supply of Medicines Sydney, New South Wales: NSW Government; 2015 [updated 17 November 2015. Available from: http://www.health.nsw.gov.au/pharmaceutical/pharmacists/Pages/faq-supply-of-medicines.aspx.

35. Minister of Health. Easing the burden of chronic disease: Department of Health, Victoria; 2017 [updated 19 July 2017]. Available from: https://www.premier.vic.gov.au/easing-the-burden-of-chronic-disease/.

36. Dooley MJ, McGuiness JV, Choo S, Ngo-Thai LL, Tong E, Neave K, et al. Successful implementation of a pharmacist anticoagulant dosing service in ambulatory care. Journal of Pharmacy Practice and Research. 2011;41(3):208-11.

37. Australian Pharmacy Council. Australian Pharmacy Council Canberra, Australia: Australian Pharmacy Council Ltd; Available from: https://www.pharmacycouncil.org.au/

38. Australian Pharmacy Council. Accreditation standards for pharmacy programs in Australia and New Zealand effective from 2014 Canberra, Australia: Australian Pharmacy Council ltd; 2012 Available from: https://www.pharmacycouncil.org.au/policies-procedures/standards/standards_pharmacyprograms2014.pdf

39. Pharmacy Board of Australia. Registration Standard: continuing professional development. Registration Standards. Melbourne, Victoria: Pharmacy Board of Australia; 2015.

40. Health Practitioner Regulation National Law (ACT) Act 2009, (2009).

41. The Federal Poisons Act (Standard For The Uniform Scheduling Of Medicines And Poisons - SUSMP). Number 10. 2018.

42. Background Paper: Registered Nurse / Midwife Prescribing Symposium. 2017.

Definitions

Term	Definition	Reference
Administer	To personally (or personally observe) apply or introduce a medicine to the patient's body.	Section 14 of the *Health Practitioner Regulation National Law Act*(40)
Community pharmacy	Community pharmacy is a primary care business operating from approved premises by the jurisdiction for the supply of scheduled medicines.	
Endorsement of registration	An endorsement of registration by a National Board (approved by Ministerial Council under section 14 of the National Law) recognises that a person has additional qualifications and expertise in an approved area of practice and/or for scheduled medicines.	
Hospital pharmacy	An approved pharmacy department within a public or private hospital to supply medicines and provide in-patient and outpatient services.	
Medicine	A medicine in this context is a pharmacologically active substance that is included in a current Poisons Standard schedule.	The *Federal Poisons Act* (Standard For The Uniform Scheduling Of Medicines And Poisons)(41)
Multidisciplinary settings	Multidisciplinary settings that employ or contract the services of a pharmacist but do not involve the supply of medicines. These settings include, but are not limited to, medicine review services, outreach services, residential aged care facilities and general practice.	
Prescribe	To authorise the supply or administration of a medicine to a patient.	Section 14 of the *Health Practitioner Regulation National Law Act*(40)
	An iterative process involving the steps of information gathering, clinical decision-making, communication, and evaluation that results in the initiation, continuation or cessation of a medicine.(8)	Health Professional Prescribing Pathway(7)
Prescriber	A health professional authorised to undertake prescribing within their scope of practice.	Prescriber
Safe prescribing models	The Health Professionals Prescribing Pathway defines three distinct safe prescribing models. The three models are not mutually exclusive; health professionals may work within one or more prescribing models in clinical practice. These models are: (1) autonomous prescribing (2) prescribing via a structured prescribing arrangement, and (3) prescribing under supervision.	Safe prescribing models
Scope of practice	The area and extent of practice for an individual health professional, usually defined by a regulator, a profession or employer, after taking into consideration the health professional's education, training, experiences, expertise and demonstrated competency. (8)	Health Professional Prescribing Pathway(7)
Supply	To provide a medicine to a patient for their later use or administration	Section 14 of the *Health Practitioner Regulation National Law Act*(40)

Appendix A: State and territory legislation for health professionals to prescribe medicines

The tables below are adapted from the Background Paper for the Registered Nursing/Midwifery Prescribing Symposium (42)

State or territory	Prescribing	Limited prescribing	Possess medicines only	Possess and supply	Administer in accordance with protocol but not prescribe	Prescribe or supply	Relevant state or territory legislation
New South Wales	Medical practitioner Dentist Veterinary practitioner Nurse practitioner Midwife Optometrist Podiatrist	Pharmacist (prescribe Schedule 2 & 3)	Medical superintendent of hospital (possess medicines only unless is an authorised prescriber)	Dental therapist Oral health therapist Dental hygienist Ambulance officer Registered nurse involved in vaccination program			Poisons Act 1966 Poisons and Therapeutic Goods and Regulation 2008
Victoria	Medical practitioner Dentist practitioner Veterinary practitioner Nurse practitioner Authorised registered midwife Authorised: - optometrist - podiatrist			Registered nurse			The Drugs, Poisons and Controlled Substances Act 1981 The Drugs, Poisons and Controlled Substances Regulations 2006

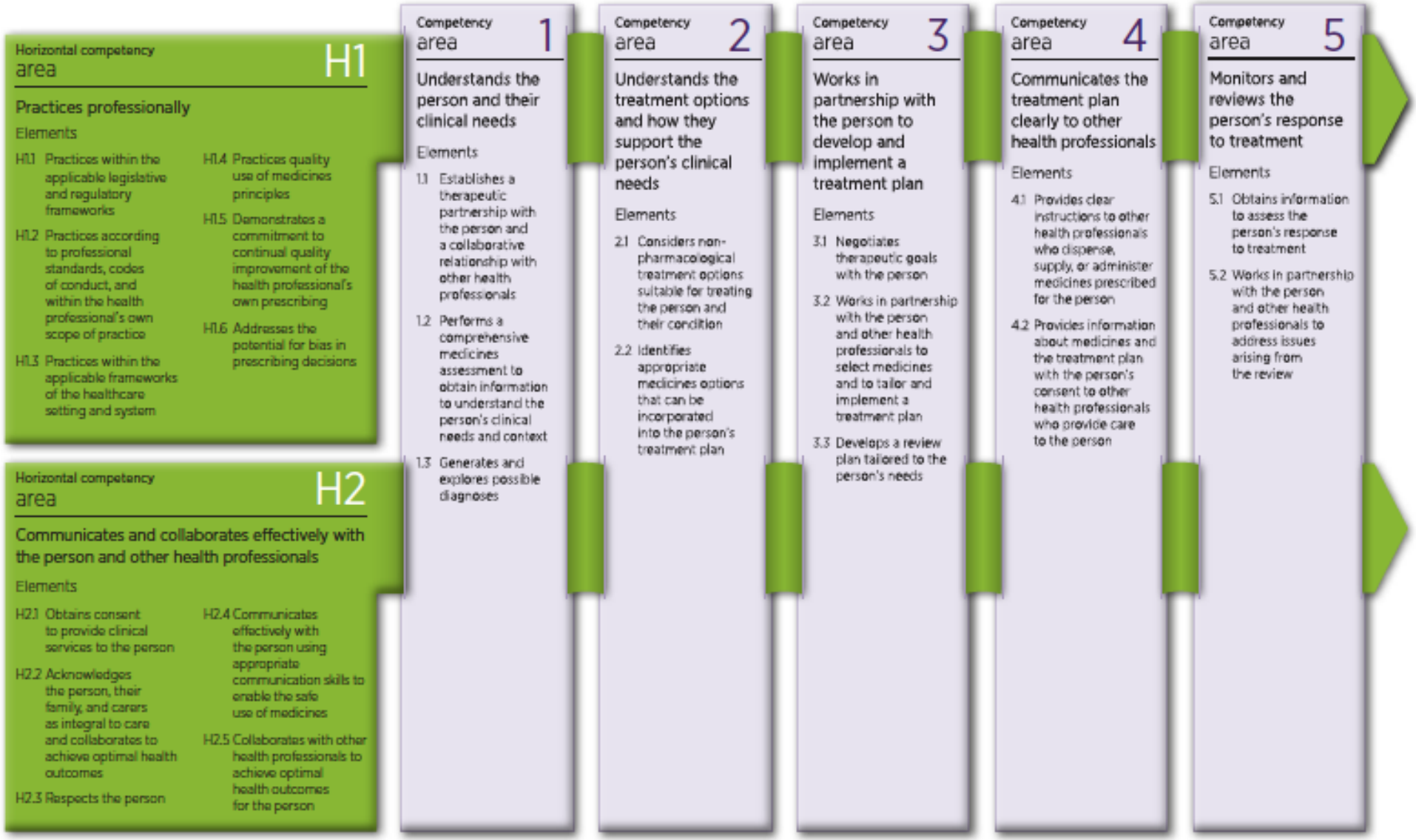
State or territory	Prescribing	Limited prescribing	Possess medicines only	Possess and supply	Administer in accordance with protocol but not prescribe	Prescribe or supply	Relevant state or territory legislation
Queensland	Medical practitioner Nurse practitioner Endorsed midwife Surgical podiatrist	Pharmacist (prescribe Schedule 2 & 3)		Indigenous health worker Registered nurse Midwife Oral therapist		Physician assistant (under supervision of medical officer)	Health Act 1937 Health (Drug and Poisons Regulation 1996) Health (Drugs and Poisons Regulation 1996)
Western Australia	Medical practitioner Dentist Veterinary surgeon Nurse practitioner Endorsed: - midwife - optometrist - podiatrist	Pharmacist (prescribe Schedule 2 & 3)		Registered nurse			Medicines and Poisons Act 2014
South Australia	Medical practitioner Dentist Veterinary surgeon	Pharmacist (prescribe Schedule 2 & 3) Nurse practitioner (Schedule 2, 3, 4 or 8 within scope of practice approved by their Local Health Network)			Registered nurse Registered midwife		Controlled Substances (Poisons) Regulations 2011

State or territory	Prescribing	Limited prescribing	Possess medicines only	Possess and supply	Administer in accordance with protocol but not prescribe	Prescribe or supply	Relevant state or territory legislation
Tasmania	Medical practitioner Dentist Veterinary surgeon Nurse practitioner Endorsed midwife	Pharmacist		Registered nurse Midwife			Poisons Act 1971 consolidated 2015 Tasmanian poisons regulations 2008
Australian Capital Territory	Medical practitioner Intern medical practitioner Dentist Veterinary surgeon Nurse practitioner Endorsed midwife	Pharmacist		Health practitioners employed at institutions Nurse Midwife Trainee dentists (under supervision of dentist) Dental hygienist Dental therapist Oral health therapist Optometrist Podiatrist			Medicines, Poisons and Therapeutic Goods Act 2008 Medicines, Poisons and Therapeutic Goods Regulation 2008 Drugs of Dependence Act 1989 Drugs of Dependence Regulation 2009

State or territory	Prescribing	Limited prescribing	Possess medicines only	Possess and supply	Administer in accordance with protocol but not prescribe	Prescribe or supply	Relevant state or territory legislation
Northern Territory	Medical practitioner Dentist Veterinarian Nurse practitioner Endorsed midwife Optometrist Podiatrist Podiatric surgeon	Pharmacist (prescribe Schedule 2 & 3)		Aboriginal and Torres Strait Islander health practitioner Approved ambulance officers Dental therapists Dental hygienists Oral health therapists Nurse and midwife			Medicines, Poisons and Therapeutic Goods Act Medicines, Poisons and Therapeutic Goods Regulation

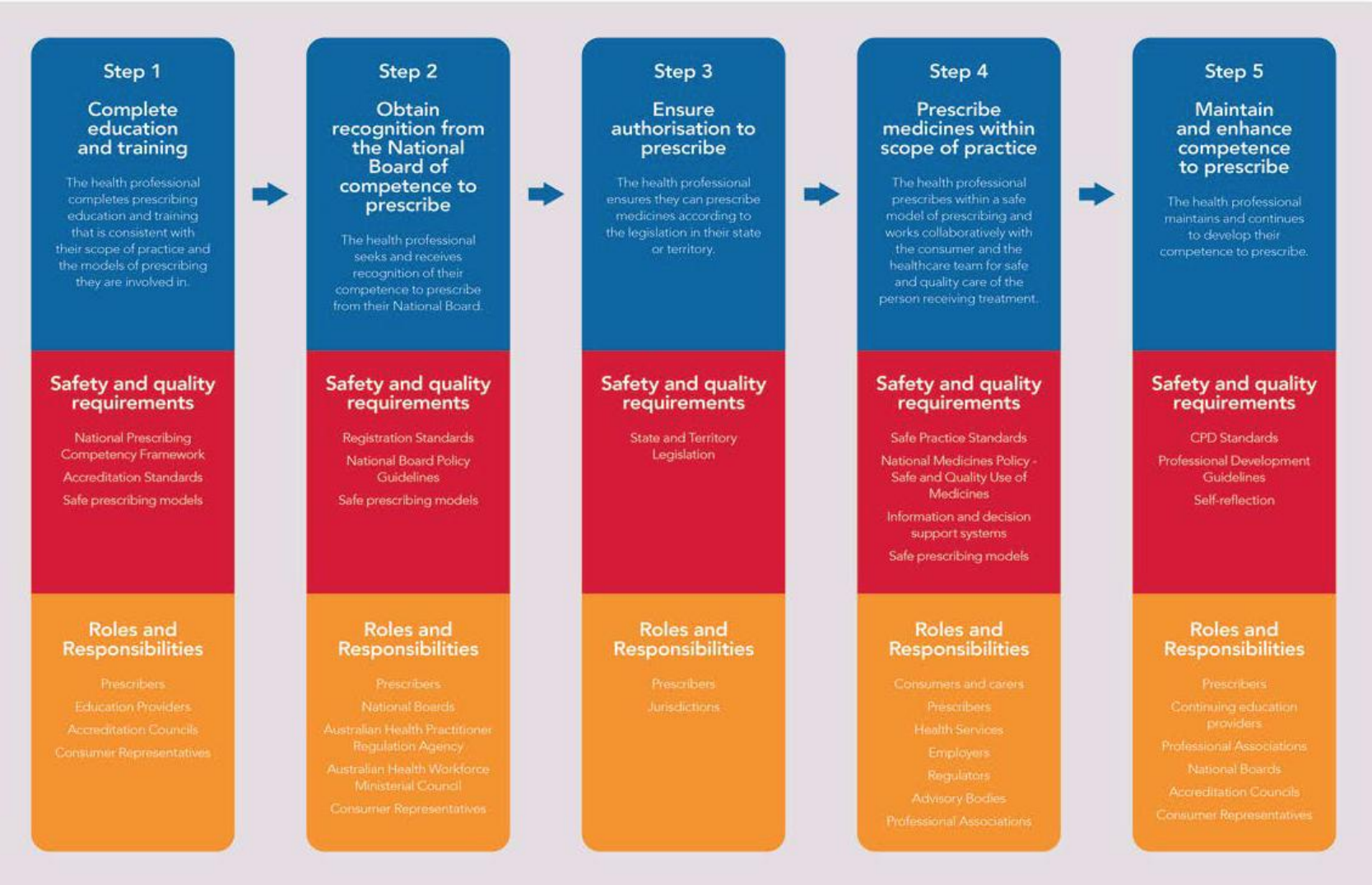
Appendix B: National Competency Standards Framework for Pharmacists in Australia 2016 (21)

The Five Vertical Competencies and Two Horizontal Competency areas (7, 8)



Appendix C: The five steps to safe and competent prescribing pharmacists

Reproduced from the Health Professionals Prescribing Pathway 2013 (7)



Appendix D: National Competency Standards Framework for Pharmacists in Australia 2016 (21)

Domain 1	Professionalism and ethics
*Standard 1.1	Uphold professionalism in practice
*Standard 1.2	Observe and promote ethical standards
*Standard 1.3	Practise within applicable legal framework
*Standard 1.4	Maintain and extend professional competence
*Standard 1.5	Apply expertise in professional practice
*Standard 1.6	Contribute to continuous improvement in quality and safety
Domain 2	**Communication and collaboration**
*Standard 2.1	Collaborate and work in partnership for the delivery of patient-centred, culturally responsive care
*Standard 2.2	Collaborate with professional colleagues
*Standard 2.3	Communicate effectively
*Standard 2.4	Apply interpersonal communication skills to address problems
Domain 3	**Medicines management and patient care**
Standard 3.1	Develop a patient-centred, culturally responsive approach to medication management
Standard 3.2	Implement the medication management strategy or plan
Standard 3.3	Monitor and evaluate medication management
Standard 3.4	Compound medicines
Standard 3.5	Support Quality Use of Medicines
Standard 3.6	Promote health and well-being
Domain 4	**Leadership and management**
*Standard 4.1	Show leadership of self
*Standard 4.2	Manage professional contribution
Standard 4.3	Show leadership in practice
Standard 4.4	Participate in organisational planning and review
Standard 4.5	Plan and manage physical and financial resources
Standard 4.6	Plan, manage and build human resource capability
Standard 4.7	Participate in organisational management

Domain 5	Education and research
Standard 5.1	Deliver education and training
Standard 5.2	Participate in research
Standard 5.3	Research, synthesise and integrate evidence into practice

Appendix E: Health Professionals Prescribing Pathway (7)

The Health Professional Prescribing Pathway defines three distinct safe prescribing models. These models are: (1) autonomous prescribing; (2) prescribing under supervision; (3) prescribing via a structured prescribing arrangement. The three models are not mutually exclusive; health professionals may work within one or more prescribing models in clinical practice.

Autonomous prescribing	The prescriber can prescribe medicines within their scope of practice without the approval or supervision of another health professional. The prescriber ensures that he or she communicates appropriately with all team members. Autonomous prescribers are educated to prescribe. They are authorised to autonomously prescribe within a specified area of clinical practice.
Prescribing under supervision	The prescriber can prescribe medicines within their scope of practice under the supervision of an authorised autonomous prescribing health professional. The prescriber and their supervisor ensure to communicate appropriately with all team members. Supervised prescribers are educated to prescribe. They have limited authorisation to prescribe medicines determined by legislation, the National Board and policies of the jurisdiction, employer or health service.
Prescribing via a structured prescribing arrangement	The prescriber has limited authorisation to prescribe medicines under a guideline, protocol or standing order. Sufficient documentation of the structured prescribing arrangement is required to describe responsibilities and communication between team members.