



TOWARDS A BEST PRACTICE FRAMEWORK FOR OPTOMETRY ENTRY-TO-HEALTH PROFESSIONAL PRACTICE COMPETENCY STANDARDS

Emeritus Professor Paul Hager

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Title: Towards a Best Practice Framework for Optometry Entry-To-Health Professional Practice Competency Standards

This report was prepared by Emeritus Professor Paul Hager for the Optometry Council of Australia and New Zealand, with input from the Reference Group of:

Mr Jayesh Chouhan, Chair, Optometrists and Dispensing Opticians Board, New Zealand

Ms Jane Duffy, Deakin University, OCANZ Accreditation Committee member

Mr Ben Hamlyn, Optometry Australia

Associate Professor Peter Hendicott, Chair of OCANZ Board

Dr Michael Pianta, University of Melbourne, OCANZ Member

And support from OCANZ staff, Ms Sian Lewis and Ms Susan Kelly

Background

This project was undertaken following the recent Independent Review of Accreditation Systems within the National Registration and Accreditation Scheme for health professions in Australia. This Review made detailed recommendations about further developments of competency standards for the various health professions. The recommendations covered matters such as standardised definitions and terminology; better recognition of competencies that are common across health professions; a sharper focus on quality and safety, including cultural safety and Aboriginal and Torres Strait Islander health strategies; and better alignment with and responsiveness to national health workforce priorities that best serve evolving community health care needs and the service models that these involve.

The purpose of this project

This project was designed to provide a substantial input into the next iterations of optometry competency standards, whichever peak bodies may be responsible for overseeing these iterations. The present situation is that there is wide variability across the fifteen regulated health professions as to which body is chiefly responsible for the professional competencies. Some competency standards (including Optometry) currently sit with the professional body. In some other cases, the relevant accreditation authorities manage the standards. But there are also instances of the standards sitting with the relevant National Board.

The major aims of this project were:

1. to review/document the latest research/literature and recommend a best practice framework for the development of entry-to-health professional practice competencies; and
2. to document the similarities and differences in optometry competencies in countries where optometry practice is comparable to Australia and New Zealand (mainly USA and Canada), against the proposed framework.

Several key research questions guided the accomplishment of the first major aim:

1. *What are the general features of a best practice framework for entry-to-health professional practice competencies?*
2. *What level of detail characterises such a best practice framework?*
3. *To what extent are entry-to-health professional practice competencies generic across the various health practitioner disciplines?*

Answers to these questions were sought, firstly, by consulting the wider literature on competence frameworks. Secondly, findings pertinent to all three key research questions were obtained from analysis and comparison of the competency standards for a wide assortment of Australasian health professions.

Given the answers to these questions, the second major aim was accomplished by comparing assorted existing Optometry professional practice competencies (both from Australasia and elsewhere) against one another and judging their respective merits against the general features of a best practice competence framework identified under the first aim.

PART I. Review of research and literature of entry-to-health professional practice competencies

The general features of a best practice competence framework

The notion of a competence framework is well established in the international literature. Introducing a recent, major state-of-the-art book, Mulder and Winterton (2017: 26-27) state that “competence frameworks for disciplines, sectors or professions” are the major mechanism for bringing about “the alignment of the worlds of work and education”. Mulder and Winterton add that the “development and enactment of these frameworks are a political process in which various stakeholders are engaged. A competence framework therefore is always a trade-off between different interested parties, including education.”

Although the concept of a competence framework has achieved wide-currency, the general features of a best practice competence framework for *professions* is a topic that has received relatively little attention in the literature. As Mulder and Winterton emphasise, the major focus of competence frameworks is to align work and education. But amongst the diverse “interested parties” that they mention, education stands out from the rest as easily the interest group most concerned to show a research interest in competence frameworks. This is evident from the literature. Much of the literature centres on educational implications of competence frameworks. Common topics include using frameworks or standards: to design curriculum; to identify desirable learning outcomes; to develop novel teaching and learning strategies; etc. Yet, as Lester (2014: 14) points out, professions and professional peak bodies are generally more interested in using competence frameworks for other purposes, such as registration, admission to membership requirements, or assessing overseas applications to practice within their jurisdiction.

In addition, the great bulk of this literature on educational implications of competence frameworks centres on vocational education and training (VET) rather than on the professions. This concentrated focus on competence frameworks from the education sector largely stems from educators charged with better aligning work and education. But a further major component of the general literature on competence is the work of educational theorists who are broadly hostile to the concept. For these educational theorists, whose work typically locates them remote from the wider world of work, the notion of competence is a noxious weed that

has recently invaded the once neatly settled garden of education. Influenced by poor examples of competency-based training, they mistakenly assume that all competency standards involve nothing more than lengthy checklists of mindless behaviours, and are thereby a travesty of actual work performance. (For more on this see Hager 2017: 203-204). The accuracy of these generalisations about the categories of competence literature is supported by a scan of the fifty chapters of Mulder (2017).

Thus, our interest in identifying the general features of a best practice entry-level competence framework, not only for Optometry but for health professions more generally, will be better served by closely examining the evolution of the competence frameworks of many and diverse health professions that have had ongoing experience of their establishment and use.

Given the above, there is also a dearth of literature that answers directly the second research question, namely *What level of detail characterises such a best practice framework?* 'Level of detail' here refers to several aspects or dimensions of a competence framework. The first aspect of the level of detail to be considered is the *number of categories that comprise the overall standards framework*. In Australasia, early experience of professions working with the original National Office of Overseas Skills Recognition (NOOSR) documents led to either a three- or four-category framework being recommended (Heywood et al. 1992: 31-42). The three-category framework comprises:

UNITS OF COMPETENCY (also commonly referred to as UNITS, ROLES or DOMAINS)

ELEMENTS OF COMPETENCY (also commonly referred to as TASKS or KEY TASKS)

PERFORMANCE CRITERIA (for each element of competency).

Heywood et al. (1992: 40) dubbed this "the basic form for Australian competency standards". However, they added that meeting the needs of some professions might well require a fourth category, i.e.:

RANGE INDICATORS (also commonly referred to simply as INDICATORS or CUES).

Basically, this fourth category serves to take account of the sometimes very wide diversity of contexts within which some professions are practised. Hence, in order to guide assessors about the need for flexibility, the range indicators might, e.g., provide examples of the same element of competency being exercised in very diverse circumstances.

(Definitions of each of these four competence framework terms, drawn from the National Training Board's 1991 *National Competency Standards Policy and Guidelines*, are provided in Kiely and Slater 2015. Their article also includes the current Australian Optometry Entry-level Competency Standards).

The choice of a three- or four-category framework is thus a pragmatic one that depends on such factors as the nature and scope of a particular profession's work, the contexts of practice, and the intended uses of the competency standards. As will be seen later, as many professions have gained substantial experience of employing and updating their competency standards since the 1990s, there is now significant variation in the number of categories used in their competence frameworks. Table 1 below and Table 2 (in Part II) offer various examples of a two-category framework being preferred to the initially recommended three- or four-category alternatives.

However, answering the question '*What level of detail characterises a best practice framework?*' involves a lot more than just deciding upon the number of framework categories. The second aspect of the level of detail that must be considered is '*how many items should there be within each of the chosen categories?*' Again, it is only to be expected that there will be some variation between professions. Experience shows that somewhere from four to eight UNITS or DOMAINS suffices for most professions (e.g. see Table 1 below).

Arguably, however, it is the ELEMENTS (or KEY TASKS or COMPETENCIES) that constitute the core of a competence framework. According to the integrated approach, presented in the early NOOSR documents, competence is to be understood in terms of *knowledge, abilities, skills and attitudes displayed in the context of a carefully chosen set of realistic professional tasks which are of an appropriate level of generality* (Gonczi, Hager & Oliver 1990; Hager 1994; Hager 1997). The emphasis on elements comprising a 'carefully chosen set of realistic professional tasks.... of an appropriate level of generality' was intended to prevent the descriptions of professional work descending into lengthy lists of micro-level behaviours. The more a profession's work is atomised, the more the crucial holism of professional practice is lost. In the professional competency standards developed in the early 1990s there was a lingering tendency to multiply unnecessarily the number of elements. This was predictable since professions were understandably wary of standards that might over-simplify the richness of their professional practice. Thus, a typical recommendation at that time was that thirty to forty elements should suffice for most professions (see, e.g., Hager and Beckett 1995: 4). However, the good news is that as professions have gained significant experience of using and revising their competency standards, there has been a clear trend to reduce the number of discrete elements. Today a figure of 20 or less elements or key occupational tasks is not uncommon.

Once the key professional tasks are identified and the various practitioner attributes that they imply are elucidated, this information becomes the basis for constructing an initial set of competency standards. The key professional tasks are the basis for choosing the elements, whilst the various attributes that practitioners need for competent performance of these key tasks provide crucial input for developing performance criteria.

Evidence for the trend in more recent professional competency standards to reduce the number of discrete elements is provided in Table 1 (below). Table 1 includes details of both earlier and

more recent versions of competency standards for four professions: Registered Nurse, Physiotherapist, Osteopath, and Podiatrist. Of these, Podiatry is the only profession that has not significantly reduced the number of elements (or their equivalents). The present situation is that usually somewhere between twenty and forty elements (or their equivalents) will provide sufficient detail for an acceptable representation of professional work. (Again, with a few notable exceptions, Table 1 below confirms this 'rule of thumb'). This trend to minimise the number of elements (or their equivalents) conforms to the principle that best practice professional competency standards emphasise the need for them to be used holistically (see Hager 2017: 205-211). This means, for example, that any slice of actual professional practice typically involves several elements simultaneously. Needless to multiply the number of elements serves to artificially atomise professional work.

Beyond elements (or their equivalents) competence frameworks commonly include multiple PERFORMANCE CRITERIA. Performance criteria "specify the type of performance in the workplace that would constitute adequate evidence of personal competence.... [They] seek to specify competent performance in 'output' terms; i.e. performance criteria express what a competent professional would do in terms of observable results and/or behaviour in the workplace." (Heywood et al. 1992: 34-35). A typical number of performance criteria is somewhere between three and five for each element. Further, in the case of four-category frameworks, there are multiple RANGE INDICATORS (INDICATORS or CUES) for each performance criterion. As noted earlier, range indicators serve to take account of the sometimes very wide diversity of contexts within which some professions are practised. They supply "the need for a mechanism to specify more clearly what circumstances apply to the entry-level of the profession for the purposes of registration of individuals to practise". (Heywood et al. 1992: 40-41). For example, the veterinary profession caters for a very wide range of animals and contexts. But, in order to qualify for registration, an entry-level veterinarian is not expected to be competent across the full range of animals and contexts.

Table 1 (below) provides an overview of diverse health-related competency standards that will serve to illustrate the above matters. For instance, taking the estimates of between twenty and forty elements with somewhere between three and five performance criteria for each element, gives us mean totals of thirty elements and one hundred and twenty performance criteria. These approximate estimates, both of the means and of the ranges of variation around the means, sit well with the numbers for most of the more recent competence frameworks. However, it is unrealistic to expect all professions to conform to a single norm.

But before we consider Table 1 in more detail, there are some important principles established in the research literature that are crucial for designing a best practice competence framework. Though the research literature provides no straight-forward answers to the question 'how many categories are optimal for a competence framework?', it does offer the following three key principles.

1. A SET OF COMPETENCY STANDARDS IS NEVER COMPREHENSIVE OR COMPLETE

One reason for this is the tacit aspects of practice. Not all aspects of know-how are amenable to being captured by language. The best practitioners know more than they can say. It is well established by research that formulaic protocols are helpful for beginners but are never the full story. Proficient practitioners typically discard formulaic protocols. This progression is incorporated into the Dreyfus model of stages of expertise (Dreyfus and Dreyfus 1986, Dreyfus 2001). Arguably, the pace of change in many professional work settings is such that practitioners require ongoing substantial learning if they are to maintain their competence (see, e.g., Evers and van der Heijden 2017). Some professions have produced competency standards tailored to performance at various stages along a continuum from entry-level to expert. But this matter is beyond the scope of the present project, which centres on competence frameworks for entry-level to health-related professions in general, and to optometry in particular. Thus, our focus is on what constitutes *safe practice* for newly graduated health professionals upon entry to practice of the profession. Interestingly, some professions (such as physiotherapy) refer to entry-level standards as 'practice thresholds'. This terminology has the advantage of implying that with experience of practice the professional's level of competence will be expected to increase and deepen.

Another reason for the incompleteness of competency standards is that professional competence is always a work-in-progress as the contexts in which it occurs are shaped and reshaped by more or less significant changes.

Recognition of the inevitable incompleteness of competency standards has led various authors to recommend that the term 'competency' be replaced, or at least complemented by, 'capability' (See, e.g. Cairns and Malloch 2017, Lester 2014). The arguments for 'capability' being preferable to 'competency' centre on its supposedly capturing better the less tangible aspects of professional practice, such as its flexibility and adaptability. Capability, according to Cairns and Stephenson (2009: 16-17), "is a holistic concept which encompasses both current competence and future development through the application of potential." They claim that capability includes higher order dimensions of professional performance, such as "the capacity to operate in both familiar and unfamiliar situations" and "being mindful about change and open to opportunities or uncertainties". Actually, the integrated conception of competence, as employed by the professions in Australasia, does in its own way recognise these less tangible aspects of professional practice (see Hager 2017).

However, 'capability' does seem to be a more encompassing term than either 'competence' or 'competency'. Not surprising then that it is having some influence in Australasia. As Table 1 below shows, professions working under the auspices of the Australian Health Practitioner Regulation Agency (AHPRA) have replaced the term 'ELEMENTS' by 'KEY CAPABILITIES'.

Interestingly, there are other reasons why the term 'competency' might be displaced. The 2016 revision of the Australian Registered Nurse competency standards is titled *Registered Nurses Standards for Practice*, whereas the previous 2006 version was titled *National Competency Standards for the Registered Nurse*. The reason given for the term 'competency' being dropped was that research suggests that confusion exists "between the use of the term 'competency-based assessment' in the vocational education and training (VET) sector and use of the term 'competency' in other settings." (Nursing and Midwifery Board of Australia (2016) Registered Nurse Standards for Practice – Fact Sheet).

However, the concept of capability should be viewed as a useful means of improving competence frameworks, rather than as a replacement for them. As Lester (2014: 40) concludes

Because capability has a less tangible nature than competence, it is unlikely that "capability frameworks" will emerge to take the place of competence standards and frameworks. More realistically, a capability approach is able to inform and modify competence frameworks so that they represent something that better reflects professional work, taking account of things that characterise the working environments of many professions such as emergent contexts, evolving and contested practices and the need for intelligent judgement and lived ethical practice.

2. THE ERROR OF OVER-SPECIFYING COMPETENCY STANDARDS

There are many warnings in the relevant literature against representing professional work as long lists of minute tasks (e.g. Halcomb et al. 2016: 1202, Frank et al. 2010: 643, Hager and Beckett 1995: 3-4). In large part this error results from overlooking the fact that competency standards can never be comprehensive or complete. As noted already, professions newly engaged in developing competency standards have an understandable desire to accurately capture the full complexity of their work. In the process of seeking completeness, they can unwittingly end up producing more and more micro-level descriptions that cover aspects of practice that many (or most) practitioners will never experience anyway. More importantly, the more professional practice is atomised into micro-level components, the more its crucial holistic dimensions are pushed into the background. There comes a point in specifying competency standards where contextually-sensitive, informed professional judgement takes over from micro-level descriptions. As noted above, there is empirical evidence that as professions have gained long-term experience of working with and refining their competency standards, they have come to realise that too much micro-description is unnecessary. Indeed, it tends to obstruct the aim of having practical, usable standards. For example, Boritz and Carnaghan (2017) describe the problems created by excessive micro-description in the implementation of Accountancy

competency standards in Canada. Similar problems occurred in the early versions of competency standards in some branches of engineering and in other technically oriented fields.

As well, there is the matter of the multiple uses of competency standards. Experience shows that over-specification hinders rather than facilitates the multiple uses. There is a need to contextualize the competency standards for each different use. (The Canadian optometry documents – see below - illustrate this point quite well).

When professional competency standards were instituted in Australia in the early 1990s, under the auspices of NOOSR, the focus then was firmly on developing standards for entry-level to the professions. From the beginning participating professions were aware that the competency standards, once they were developed, could have many uses. (For a fairly comprehensive summary of the possible uses see Appendix 1). Of course, though this initial work was on entry-level standards, NOOSR was looking ahead to these professional standards serving ultimately as a basis for systematic assessment of overseas applicants seeking to practice in Australia. It is fair to say that in the early 1990s it was widely assumed that, once developed, entry-level standards by themselves would straightforwardly serve to accomplish the wide range of uses. Thus, many professions put enormous work into producing minutely detailed supposedly comprehensive entry-level standards. It was taken for granted that this detailed work would readily facilitate all future uses of the standards. But later on there was some surprise and disappointment when it was found that different uses of competency standards in many instances required significant further development work to contextualise them to the particular needs of some applications.

3. EFFECTIVE USE OF COMPETENCY STANDARDS ALWAYS RELIES UPON SOUND PROFESSIONAL JUDGEMENT

This is a corollary of professional competency standards never being comprehensive or complete. Micro-description can never overcome the central role of professional judgement within the diverse uses of competency standards. The inescapable role of professional judgement is seamlessly integrated with the holistic nature of sound professional practice (for fuller discussion see Hager 2017: 208-212). There is always a need to contextualise the use of competency standards. The practitioner's personal characteristics and interests are part of that context.

The centrality of sound professional judgement is recognised in the England and Wales General Optometry Council (GOC) Standards of Practice: "You will need to use your professional judgement in deciding how to meet the standards" (2016: 5). To assist in this use of professional judgement, the GOC document provides 94 quite detailed 'elements cum performance criteria' covering the 19 standards. This is a prime example of a two-category competence framework.

The moral is that a framework with less categories is even more reliant on professional judgement than are two- and three-category frameworks. Put simply the extra categories provide fuller guidance to complement and assist sound professional judgement.

In summary, taking proper account of the above three points, the choice of the appropriate levels of detail and generality for professional competency standards becomes a matter to be decided largely by considerations of *practicality* and *usability*.

Further insights on the appropriate levels of detail and generality for Optometry professional competency standards can be gleaned from an analysis of the professional standards of various diverse health-related professions. In the following Table 1, underlined terms are the actual terminology used by the respective professions. The standards listed are Australian except where New Zealand alone or Australasian coverage is indicated.

Note also that the ordering of the professional standards in this Table is chosen deliberately. The first grouping (Registered Nurse to Osteopath, 2012 version - highlighted gold) follows closely the original NOOSR four-category template (i.e. Units, Elements, Performance Criteria, and Indicators). The second grouping (Medical Radiation Practitioner to Aboriginal and Torres Strait Islander Health Professional - highlighted green) presents a three-category template for the displaying the competency standards, supplemented by sets of explanatory notes to guide assessors. This approach stems from the original NOOSR three-category template, but its details reflect recent work under the auspices of the Australian Health Practitioner Regulation Agency (AHPRA). Hence their common terminology employed for the three categories (i.e. Domains, Key Capabilities, Enabling Components).

The Pharmacist standards constitute a single item third grouping (highlighted grey) since they attempt to synthesise both of the previous groupings. The fourth grouping (Physiotherapist to NZ Occupational Therapist, 2015 version – highlighted blue) presents a three-category standards template with no further guidance for assessors in the standards document. Finally, the fifth grouping (Occupational Therapist, 2018 version, to Midwife - highlighted purple) presents standards that have adopted a two-category template. The significance of these differences will be discussed below, along with other findings suggested by Table 1.

TABLE 1 - Overview of Professional Standards for Selected Health-Related Professions

PROFESSION	UNITS	ELEMENTS	PERFORMANCE CRITERIA	INDICATORS
Registered Nurse (2010)	4 <u>Domains</u>	10 <u>Competency Units</u>	45 <u>Competency Elements</u>	230 cues (Between 2 and 14 for each <u>Competency Element</u>)
Dietitian (2015)	4 <u>Domains</u>	13 <u>Key Tasks/ Elements</u>	55 <u>Performance Criteria</u> (also called <u>Observable and/or measurable actions</u>)	Document includes assorted examples, comments, definitions, etc to assist assessors and others.
Physiotherapist (2006)	9 <u>Standards</u>	41 <u>Elements</u>	171 <u>Criteria</u>	<u>Examples of Evidence</u> for each element, plus detailed assessor guidance.
Podiatrist (2009) (Covers both Australia and NZ)	8 <u>Competency Standards</u>	35 <u>Elements</u>	135 <u>Performance Criteria</u>	<u>Examples of Evidence</u> for each element.
Podiatrist (2015) (Covers both Australia and NZ)	8 <u>Competency Standards</u>	35 <u>Elements</u>	137 <u>Performance Criteria</u>	<u>Examples of Evidence</u> for each element.
Osteopath (5 years experience) (2012)	6 <u>Domains</u>	39 <u>Elements</u>	134 Criteria	<u>Examples of evidence</u> for each element.

PROFESSION	UNITS	ELEMENTS	PERFORMANCE CRITERIA	INDICATORS
Medical Radiation Practitioner (2018 preliminary consultation document)	5 <u>Domains</u> (As well as a common core, domain 5 includes sub-domains for each of 4 different specialties)	23-26 <u>Key Capabilities</u> (depending on specialty)	101-121 <u>Enabling Components</u> (depending on specialty)	<u>Enabling Components</u> are accompanied by further explanatory notes to guide assessors.
Chinese Medicine Practitioner (2019 preliminary consultation document)	5 <u>Domains</u>	15-18 <u>Key Capabilities</u> (depending on specialty)	69-86 <u>Enabling Components</u> (depending on specialty)	<u>Enabling Components</u> are accompanied by further explanatory notes to guide assessors.
Aboriginal and Torres Strait Islander Health Professional (2019 preliminary consultation document)	5 <u>Domains</u>	20 <u>Key Capabilities</u>	103 <u>Enabling Components</u>	<u>Enabling Components</u> are accompanied by further explanatory notes to guide assessors.
Pharmacist (2016)	5 <u>Domains</u>	26 <u>Standards</u>	103 <u>Enabling Competencies</u>	Numerous <u>Performance criteria</u> and <u>Evidence examples</u> constituting a five-category template.

PROFESSION	UNITS	ELEMENTS	PERFORMANCE CRITERIA	INDICATORS
Physiotherapist (2015) (Covers both Australia and NZ)	7 <u>Roles</u>	21 <u>Key Competencies</u>	113 <u>Enabling Components</u>	
Osteopath (2018 draft for public consultation)	7 <u>Roles</u>	21 <u>Key Capabilities</u>	75 <u>Enabling Components</u>	
Chiropractor (covers both Australia and New Zealand) (2017)	2 Universal Competencies 3 Practice Competencies	22 'Elements' (Listed but not named)	71 Performance Criteria	
NZ Occupational Therapist (2015)	5 <u>Competencies</u>	13 <u>Outcomes</u>	<u>Performance Indicators for Competency list 67 abilities and actions</u>	
Occupational Therapist (2018)	4 <u>Competency Standards</u>	52 <u>Practice Behaviours</u>		
Dentist (2016)	6 <u>Domains</u>	59 <u>Descriptions</u>		
Dental Prosthetist (2016)	6 <u>Domains</u>	50 <u>Competency Statements</u>		
Dental Hygienist, Dental Therapist, Oral Health Therapist (2016)	6 <u>Domains</u>	DH: 53 <u>Competency Statements</u> DT & OHT: 56 <u>Competency Statements</u>		

PROFESSION	UNITS	ELEMENTS	PERFORMANCE CRITERIA	INDICATORS
Registered Nurse (2016)	0	7 <u>Standards</u>	41 <u>Criteria</u>	
Midwife (2018)	0	7 <u>Standards</u>	38 <u>Criteria</u>	

Some general conclusions suggested by examining these health-related competency standards for professions other than optometry

1. There is significant variation in the number of categories employed within the competency standards component of these twenty examples of health-related competence frameworks. Six competence frameworks adhere to the original NOOSR four-category template. Three competence frameworks exemplify what might be termed the AHPRA variant on the original NOOSR three- and four-category templates. This variant supplements a three-category template, with sets of explanatory notes to guide assessors. Pharmacy, perhaps uniquely, has adopted a five-category template that synthesises the NOOSR and AHPRA templates. Its five template categories are: Domain, Standard, Enabling competency, Performance criterion, and Evidence example. Four competence frameworks adopt a version of the NOOSR three-category template, thereby leaving assessment against the standards requiring a major input of informed professional judgement. Whether, as seems likely, these three-category competence frameworks are accompanied by other guidance material and/or training activities to assist those engaged in particular applications of the frameworks is not known. Finally, six other competence frameworks feature two-category templates, leaving an even bigger role for informed professional judgement. Again, whether or not these two-category competence frameworks are accompanied by other guidance material and/or training activities to assist those engaged in particular applications of the frameworks is not known.
2. Table 1 includes earlier and later versions of the standards for four professions. Of these, only Podiatry remained virtually unchanged both in the number of its template categories, and in the number of items within these categories. However, the competency standards for the other three professions (Physiotherapy, Osteopathy, Registered Nursing) all show major changes over time. Significantly, for all three the changes serve to reduce the complexity of the standards. Nine years later, Physiotherapy has gone from a four- to a three- category template, whilst also reducing considerably the number of items with in each category. After six years, Osteopathy has also moved from a four- to a three- category template. Here the major reductions are in the numbers of elements and performance criteria (or their equivalents). However, it should be noted here that the earlier Osteopath standards aimed to describe a professional with five years of practice experience, whereas the

later standards are the current draft for entry-level. Nevertheless, the major reductions are more about streamlining the standards than implying that whole new areas of competence result from five years of practice. The Registered Nurse standards across six years changed from a four- to a two- category template, as well as reducing the numbers of elements and performance criteria (or their equivalents). (The 2018 Midwifery standards likewise feature this two- category 'elements and performance criteria' template). (It seems likely that these two- category standards would need to be supplemented by other documents and/or training activities for many of their uses, but online searches have not answered this query). It is also worth noting here that Nursing, unlike most other Australasian professions, was working with competency standards prior to the NOOSR initiatives of the early 1990s. Their longer experience with competency standards reflects international trends within the nursing profession.

Overall, these four 'earlier and later' comparative examples support the point, suggested earlier, that as professions gain more experience of working with competency standards, they become aware of the distinct advantages of avoiding needless atomisation of professional practice.

3. Table 1 contains examples ranging from two-category templates up to a five-category template. No doubt there will be some advantages as well as some limitations for each type of template. Pharmacy, with its five-category template, might claim a sense of thoroughness that others lack. However, the drawback is that the Pharmacy standards framework document is complex and unwieldy. The document runs to 109 pages, with the standards themselves comprising 79 pages. (The bulkiness is partly because the standards also include three levels of competence: Stage 1 – Transition level, Stage 2 – Consolidation level, and Stage 3 – Advanced level). The three-category template seems to be gaining wider support. For future development of the Optometry competence framework, the AHPRA three-category model is worth serious consideration. Such a three-category template normally would involve the inclusion of supporting notes to guide assessors within the framework documents. As well, some different uses of the standards may require other supporting guides for those responsible for a particular application of the standards. At first sight a two-category template is probably too economical. It would require a lot of training activities to ensure consistency of application. At present no significant information has been located about how those professions with two-category templates for their competence frameworks deal with this issue.
4. Table 2 illustrates the earlier point that few professions have retained the original NOOSR terminology, opting instead for terminology thought to be more descriptive of the various components of the standards. Optometry could usefully rethink its preferred terminology, whilst taking into account the need to consider common terminology across health-related professions.
5. There is also variation in the visual presentation of the standards. The format of the standards document can influence the degrees of usability and practicality of the standards. For examples. In comparison to most of the standards listed above, the

current optometry standards are more complex and cumbersome. (This is true of the version made available for this report, which was part of a journal article published in 2014 in *Clinical and Experimental Optometry*). As already noted, the Pharmacy five-category competence framework is lengthy and unwieldy. It thereby exemplifies complexity of visual presentation.

6. Most of the standards documents place a strong emphasis on the variety of uses of the standards. Appendix 1 is a compilation of fourteen diverse uses of competency standards, based largely on the standards documents that were examined during the course of this project. However, it should be emphasised again that the competency standards document by itself does not provide all the answers for each application. Rather it a valuable starting point for designing a process that will serve to accomplish the required purpose. Typically this will include contextualising and elaborating parts of the competency standards as tools suitable for achieving the particular purpose. For instance, in the case of returners after a period away from practice, a key consideration will be: in which aspects of the standards do (say) five years absentees need updating? Likewise, for (say) ten years absentees, etc. On this basis, refresher course curricula, assessment arrangements, etc. can be designed. A different application of competency standards concerns the admission and registration of overseas trained practitioners. The standards will serve to decide, firstly, the nature and content of preliminary screening of applicants, such as what evidence is to be supplied by candidates (case notes, qualifications, experience, etc.). Secondly, for those candidates accepted for migration, the competency standards will serve to decide what aspects of practice need to be tested and what levels of attainment are required prior to registration. Evidently then, each particular use requires some expansion of and contextualisation of some or all of the standards. This expansion and contextualisation results in different levels of detail and explanation according to the very different purposes. In all of this, group professional judgement is at the heart of decision-making.
7. In a few cases there seems to be unclarity around the relationship of range indicators (cues, etc.) to performance criteria. (This unclarity will be even more marked below in Table 2, which compares various Optometry competency standards). Quite a few professional standards simply omit range indicators altogether, presumably because *either* the profession is practised in a very limited range of contexts *or* they are content to leave it to unaided professional judgement about whether or not performance criteria have been met in a given situation. However, several sets of standards suggest a different way to address this matter. Some include within the standards document itself extra explanatory notes to guide assessors. Perhaps others recognise that each different use of the standards will likely require further development work? So they leave the further elaboration of the standards to those responsible for each particular use of the standards?
8. Both Registered Nurse (2016) and Midwife (2016) competence frameworks include suggestive holism diagrams (see Appendices 3 and 4). While other competence framework documents tend to stress the importance of using the standards holistically, these nursing diagrams seek to make this crucial point visually. Both

nursing holism diagrams are similar in conception. Three relatively generic standards are represented each as a horizontal box. These three horizontal boxes are criss-crossed by four vertical boxes that contain four nursing practice-specific standards. These diagrams suggest that all three generic standards are together closely involved in all facets of nursing practice. They also suggest that all four practice standards are inter-connected. Perhaps the overall message of these diagrams is that any slice of actual nursing or midwifery work can potentially involve all seven of the standards. (Appendix 2 offers an alternative holism diagram from the *CanMEDS 2015 Physician Competency Framework*).

9. Several of the above points suggest that a competence *framework* is best thought of as an informative document that includes something more than a mere copy of the standards themselves. This 'something more' typically includes such matters as purposes/uses of the standards, explanation of terminology employed in the standards, holism diagrams, indication of the expected life of the standards and their component parts before they require revision, etc.

Finally, in this section of the report, we turn to the third research question

To what extent are entry-to-health professional practice competencies generic across the various health practitioner disciplines?

Generic competencies (also called generic attributes or generic skills) are important aspects of professional practice. However research shows consistently that they are significantly context dependent. (For a survey of this research see Hager 2006). Take, for example, critical thinking: a little thought quickly shows that the context dependency of critical thinking is rather obvious. Someone might very well be an excellent critical thinker in the practice of (say) nursing, but this does not in itself suffice for being a critical thinker across all other disciplines and fields of practice. True, the critical thinker in nursing practice would very likely have some *dispositions* to be a critical thinker in non-nursing contexts, particularly in ones that had some overlap with nursing. But dispositions alone are not enough for significant critical thinking within a discipline or field. Thinking critically within any given discipline or field of practice requires a detailed knowledge and sound understanding of the central concepts and practices of that discipline or field, as well as know-how on the ways they relate to one another. In the absence of such detailed knowledge, understanding and know-how, generic critical thinking dispositions alone will prove to be ineffectual. Of course, not all so-called 'generic' capabilities are generic to the same extent, e.g. communication may be somewhat more generic than critical thinking. But even so, sound communication is still significantly contextual, sometimes even across contexts within a single profession, e.g. psychiatric nursing as against surgical nursing. Of course, the *actual* extent to which a given 'generic' competency is in fact common across professions or branches of professions is a matter to be decided empirically by trial and error, rather than by any *a priori* debates.

It is fortunate, however, that competence frameworks are well suited to incorporate the competencies that may be relatively generic across (say) the health-related professions,

whilst at the same time doing justice to their contextual features that may be specific to a particular profession. To illustrate this point, consider a hypothetical nursing example. My initial impression on first reading the 2016 Registered Nurse framework was that, like the Dentistry standards, its two categories comprised units (or domains), and elements. But on closer inspection it became very clear that the two nursing categories are actually *elements* (in this case called ‘standards’) and *performance criteria* (in this case called simply ‘criteria’). Of the seven ‘standards’, the first three are more generic (see Appendix 3). We could easily turn this nursing template into a three-category template by supplying more generic healthcare units (or domains). For example, for the first three more generic ‘standards’ we could suggest as units (or domains): critical thinking; communication with patients and other professionals; ongoing professional learning. The key point that this expansion illustrates is that the three categories reading from left to right *progressively move from the more generic to the more specific*. Were we to add a fourth category (range indicators) to these nursing standards, this fourth category would be even less generic, since it would feature very specific details that are unique to nursing. This cross-template trend from the more generic to the more specific is a universal feature of competency standard templates.

So, it follows that for multiple professions operating across a broad field, such as the health professions, it should be feasible for the various professions to cooperate when next revising their standards so as to reflect their more generic features. However it is only to be expected that, in reading left to right across the various competence templates, the items will become less generic as they describe more and more the specific details that characterise a particular profession’s work, as well as the variety of contexts, some of them unique, in which its practitioners operate.

In summary, at least some *units* (or equivalents) will have generic features across various health professions. As well, some *elements* (or equivalents) will also exhibit some commonality, but perhaps with small differences to take account of the distinctiveness of particular professions. Then commonalities can be expected to be less apparent in the *performance criteria* (or equivalents) that are expected to reflect the particular profession’s scope of practice, as well as the contexts in which the profession operates. For those competency standards that include the fourth category, i.e. *range indicators* (or equivalents), even more specificity will be apparent in this category, which focuses on the distinctive contextual specifics that characterise work of these particular professions.

PART II. Comparisons of Optometry Competencies

Part I of this report has aimed to summarise relevant findings about competence frameworks in order to propose options for designing a best practice competence framework. The final section of this report (Part III) is charged with proposing options for designing a best practice Optometry competence framework, whilst neither prescribing the actual content of the standards, nor rewriting any of the current competency standards. In the light of the findings

in Part I, the next step is to analyse relevant Optometry professional standards in order to identify and address issues relevant to both current and future versions of Optometry competency standards.

It should be noted that in the following Table 2, underlined terms are the actual terminology used by the respective peak bodies.

TABLE 2 - Overview of Relevant Optometry Professional Competency Standards

PEAK BODY	UNITS	ELEMENTS	PERFORMANCE CRITERIA	INDICATORS
Optometry Australia Entry- Level Competency Standards (2014)	5 <u>Units</u>	43 <u>Elements</u>	125 <u>Performance</u> <u>Criteria</u>	Numerous suggested <u>Indicators</u>
New Zealand ODOB Standards of Clinical Competence (2018)	8 <u>Tasks</u>	47 <u>Elements/</u> <u>Competencies</u>	163 <u>Performance</u> <u>Criteria and</u> <u>Indicators</u>	0(?) See note 1 below.
Optometry Examining Board of Canada National Competency Profile for Entry-level Optometry (2015)	9 <u>Functional</u> <u>Areas of</u> <u>Practice</u>	92 <u>Competencies</u>	0 See note 3 below.	0(?)
England and Wales General Optical Council Standards of Practice for Optometrists and Dispensing Opticians (2016)	19 <u>Standards</u>	94(?) No name given. Just “additional information about what we expect of you under each standard.”	0(?) The question marks in this and the previous column signify that the 94 items are actually a mix of elements and performance criteria.	0 Left to professional judgement.

Further notes on Table 2

1. The 163 items listed in the New Zealand Performance Criteria column are titled 'Performance Criteria and Indicators'. However, they are mostly clear examples of performance criteria. As well it is stated clearly that this list of items is not exhaustive.
2. The New Zealand Standards of Clinical Competence document is supplemented by separate Ethical Standards and Cultural Competence Standards documents. Given the recommendations of the recent Independent Review of Accreditation Systems within the National Registration and Accreditation Scheme for health professions in Australia these NZ documents are suggestive for Optometry and other professions.
3. The Canadian Competency Profile for Entry-level Optometry document includes no performance criteria or indicators as such. It seems that their approach is to issue separate 'Blueprint' documents to inform participants about the standards of performance expected for particular uses of the Competency Profile. For example, the Canadian Board has issued 'The OEBC Written Examination and OSCE Blueprint' document, which informs entry-level candidates by listing 147 'written exam indicators' and 104 'OSCE exam indicators'. However, as was the case for the NZ Standards above, the supposed indicators are mostly clear-cut examples of performance criteria.
4. It will be noted that Optometry Competency Standards from the USA are not mentioned in the above comparative table. This is so because the only document from the USA that has been accessed thus far is the Association of Schools and Colleges of Optometry (ASCO) 2011 report 'Attributes of Students Graduation from Schools and Colleges of Optometry'. This document lists three pages of assorted graduate attributes. Whilst this material is informative for anyone developing competency standards, graduate attributes are not by themselves competency standards. Rather graduate attributes are typically broad statements of educational outcomes. In this USA case they include a mix of very general statements about domains of practice, about the nature of optometry qualifications and post-graduate learning provisions, as well as specific knowledge outcomes, and various mandated practice capabilities. Similar comments are applicable to the Australia Medical Council Limited's 'Accreditation Standards for Primary Medical Education Providers and their Program of Study and Graduate Outcomes Statements' (not dated).

Some general conclusions suggested by examining Table 2

At first glance, the Australian and New Zealand Optometry Standards look to be rather different. For instance, the Australian version has five Units as against New Zealand's eight Tasks. But the magnitude of these differences is minimised when it is noted that four of the New Zealand Tasks correspond closely to four of the Australian Units, and, further, that Tasks 4, 5, and 6 taken together correlate closely with the Australian Unit 4. As well the NZ standards are supplemented by separate Ethical Standards and Cultural Competence Standards documents. In Australia the recent 'Independent Review of Accreditation Systems within the National Registration and Accreditation Scheme for health professions in Australia'

has recommended the need for “a sharper focus on quality and safety, including cultural safety and Aboriginal and Torres Strait Islander health strategies”. So any future project to better align the standards across the two nations should be quite feasible.

A further issue suggested by the above comparative table is that there appears to be confusion in some cases, firstly, about the nature of elements vs performance criteria (the England and Wales standards) and, secondly, about the nature of performance criteria vs indicators (the NZ standards). Whilst this is understandable, it is better if the clear differences between these categories are maintained. Elements (or their equivalents) describe what is DONE in professional work (see, e.g., Heywood et al. pp. 33-34). Performance criteria describe in sufficient detail the level required for proficient performance of the task or function. That is, performance criteria set out what constitutes SUFFICIENT EVIDENCE of a professional performance. Indicators (or cues) describe the kinds of things that assessors need to consider in order to judge whether performance criteria have been met satisfactorily within diverse or even unique contexts and situations.

PART III. Recommendations for a Best Practice Competence Framework for the Development of Entry-To-Health Professional Practice Competencies

Based on the preceding sections, the features that a best practice entry-level competence framework should exemplify are:

Firstly, a competence *framework* should be thought of as something more substantial than just a mere set of the standards themselves. As well a best practice professional competence framework might include:

1. An introductory section providing an overview of the document and its intended audience(s).
2. An account of the categories employed within the standards component of the competence framework, including defining the agreed meaning of the terminology used to name the various categories.
3. A statement about the purposes of the standards, also outlining the main uses envisaged for the competence framework, together with other possible uses (see Appendix 1).
4. A statement stressing the holism of the standards and how they are to be used holistically. This important matter ideally should be illustrated with a suitable holism diagram.
5. A succinct explanation of why a set of competency standards can never be comprehensive or complete. That is, the reasons why they are always a work-in-progress.

6. A visually effective, user-friendly table of the actual professional competency standards. This can be complemented where necessary by further explanatory notes either appended to the table of standards or available as a separate supplementary document. Tailored supplementary documents will likely prove beneficial for providing further information to guide some particular uses of the competency standards.

7. A statement of the expected lifetime of the competency standards and their component parts, leading to their further updating and revision. Whilst change over time may be required within any of the categories within the standards, the categories of performance criteria and range indicators are particularly susceptible to improvement resulting from increasing experience of using the standards.

Secondly, there are the issues of the number of categories within the standards component of the competence framework, together with the number of items within each category. Whilst other health-related professions offer various alternatives, to a significant extent the answer to this question is a matter of what best suits the needs of the particular profession, in this case Optometry. Other considerations being equal, the AHPRA three-category competency standards template may well be the most fruitful approach. In this framework, the standards themselves are to be read in conjunction with supplementary notes to guide assessors. This approach has some commonality with the direction taken by the Canadian Optometry framework – but there are also some differences. In particular, the Canadian ‘blueprint’ documents are primarily addressed to *assesses* rather than to *assessors*.

Based on the Table 1 analysis of twenty health-related competence frameworks, approximately thirty elements (or equivalents) and about one hundred and twenty performance criteria should suffice for an effective set of competency standards for a health profession. The data from Table 1 suggests that health professions have found that further proliferation of elements (or equivalents) and performance criteria does not significantly improve the competency standards.

Thirdly, any best practice health-related competence framework should take account of possible commonalities across the competence frameworks of other health-related professions.

There are two other matters to be considered in designing a best practice health related competence framework. These are:

1. Terminology

It does seem to be better to adopt terminology for the template categories that is more accurately descriptive of professional practice, thereby replacing the original NOOSR terms. However, given moves to standardise areas of overlap across the health-related professions, probably the best place to begin is a consideration of how well the AHPRA terminology works for Optometry. It is notable also that the AHPRA templates include ‘capabilities’ as a central

concept. (See the earlier discussion about the suitability of this term for inclusion in professional competence frameworks).

In Australia, Optometry has been one of the few health professions to thus far adhere closely to the original NOOSR terminology for the categories of its competency standards template right through the various successive versions. It also seems that the Australian Optometry framework has even become the model for Optometry standards worldwide. Nevertheless, as Table 1 demonstrates, it is the norm that most other Australian health-related standards have adopted more accurately descriptive terminology for the categories within their standards templates. If the imperative is for more commonality of terminology across Australian health-related standards, it seems inevitable that the Optometry standards terminology will need some revision.

2. Possible convergence of Australian and New Zealand Optometry Standards

Though, at first glance, the Australian and New Zealand Optometry Standards look to be rather different, for the reasons discussed above, a common Trans-Tasman competence framework looks to be achievable.

Concluding comment

This report has identified various trends that have marked more than twenty-five years experience of Australasian health-related professions using competency standards. However, there is evidence that the main trends identified are not unique to Australasia. For instance, the *CanMEDS 2015 Physician Competency Framework*, which has already been mentioned above for its distinctive holism diagram, “has been adopted in many countries across the globe” (ten Cate 2017: 907). The 2015 CanMEDS framework is the second updating of the original 1996 version. The 2015 version sets out changes that have been made over time. Amongst other things, they include:

- significant reductions in the numbers of elements and performance criteria within the framework;
- use of more accessible, practical language;
- integration of safeguarding and enhancing patient safety throughout the framework; and
- highlighting of the importance of the standards being used holistically.

ten Cate (2017: 916-924) also provides a useful summary of the advantages as well as ongoing challenges for the CanMEDS and two other major medical competence frameworks. Overall, we can be confident that the major findings and recommendations of this report reflect best international practice.

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Appendices

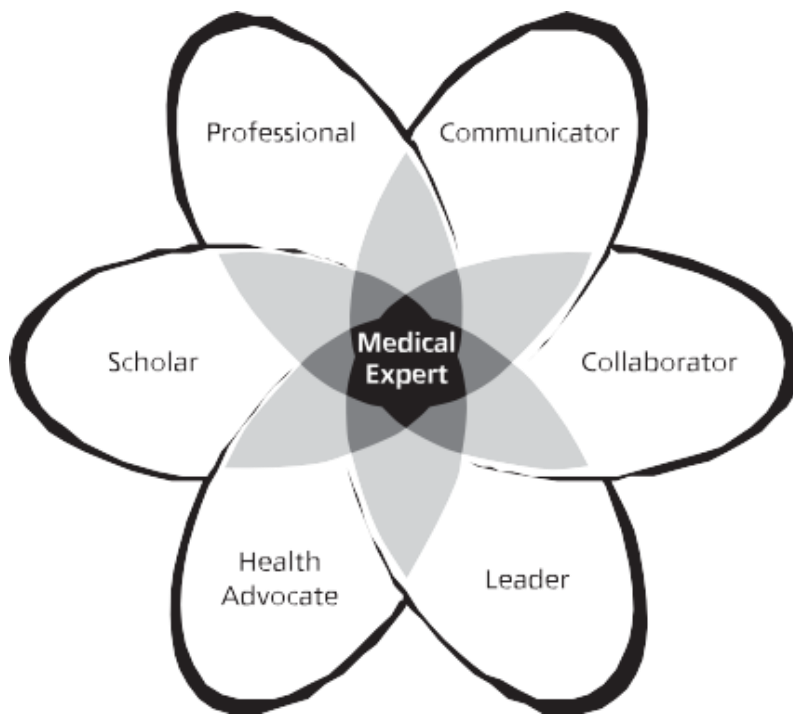
Appendix 1: The multiple uses of professional competency standards

Most of the competence frameworks/competency standards consulted for this report featured a prominent section outlining the various uses or purposes of the frameworks/standards. The following is a compilation of the diverse uses/purposes of competence frameworks/competency standards encountered in these documents.

- They provide members of the occupation with a guide to planning personal career paths. This can be particularly important in those professions and other occupations that have a variety of levels and specialisms. The nursing framework stresses the value of individuals self-assessing their practice against the standards.
- They are a major tool employed by registration authorities, whether it be for initial registration, for re-registration or for annual renewal of registration.
- As well, they are a major resource for registration and accreditation authorities to employ, in performing their role of accrediting professional preparation courses.
- They provide a basis for assessing and recognising the capacities of overseas-qualified practitioners seeking to migrate to other countries to practice. Managing this process well is especially vital for registered occupations.
- They provide professional and other occupational authorities with a basis for determining refresher course content for those seeking to return after a significant absence from practice of the occupation. This issue is important for registered occupations.
- Potentially they provide the public with direct knowledge of what might be expected of a competent practitioner in a particular occupation, i.e. they describe safe practice.
- They are employed by universities and other higher education providers, vocational education providers, and by professional and other occupational authorities as an important guide for designing initial professional and vocational preparation courses, higher level courses (e.g. Masters) and ongoing professional development programs.
- They enable students in initial preparation programs to identify the relationships between their course of study and its expected outcomes.
- They serve to inform expectations for clinical education placements.
- For those professions for which full admission to the profession requires that graduation be followed by satisfactory completion of an internship, a probationary year, etc., they serve to suggest the content of these supervised training activities.
- They inform the assessment, investigation and management by responsible authorities of notifications about practitioners who may pose a risk of harm to the public with respect to health, professional conduct and performance matters.
- They serve to inform third party providers, such as workers compensation or transport accident organisations.
- They serve to inform employers of professionals on matters such as preparing job descriptions for recruitment purposes or for performance evaluation and management of professionals in their employ.
- They inform credentialing decisions for parties seeking to contract professionals to provide specific services.

Appendix 2 - CanMEDS Holism Diagram

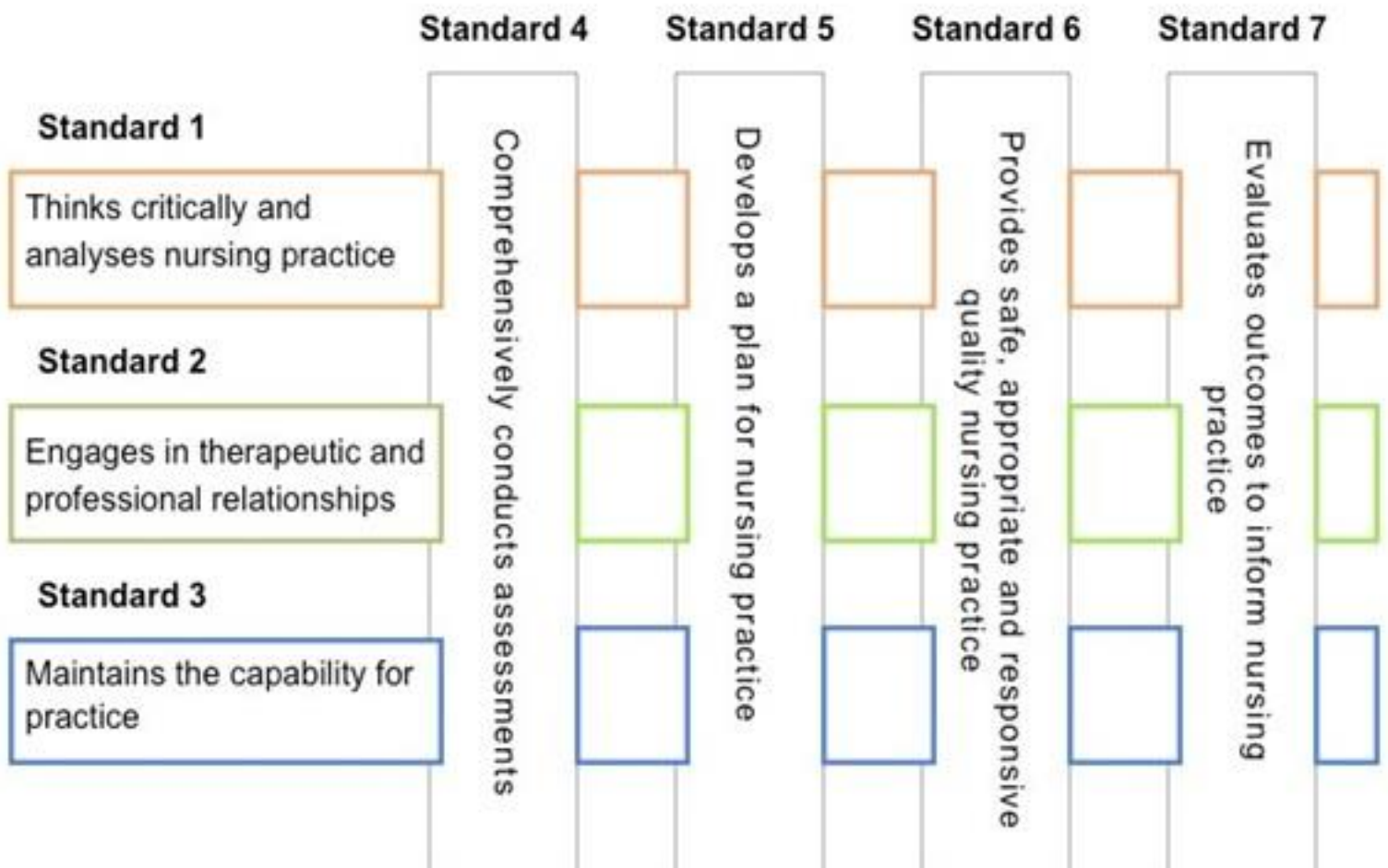
(from Frank J.R., Snell L., Sherbino J. (Eds.) (2015) *CanMEDS 2015 Physician Competency Framework*. Ottawa: Royal College of Physicians and Surgeons of Canada.)



CANMEDS

Appendix 3 – Nursing Holism Diagram

(from: Nursing and Midwifery Board of Australia, 1 June 2016, *Registered Nurses Standards for Practice*)



Appendix 4 – Midwifery Holism Diagram

(from: Nursing and Midwifery Board of Australia, 1 October 2018, Midwife Standards for Practice)

