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Competency-based Education and Competency-based Career Frameworks: Informing Australian health workforce development

Report by the National Health Workforce Planning & Research Collaboration
# Table of Contents

1. Project briefs ......................................................................................................................... 5  
   Project team .......................................................................................................................... 7  
   Suggested citation .................................................................................................................. 7  
2. Acknowledgements ............................................................................................................... 8  
3. Glossary of terms ................................................................................................................. 9  
4. Project recommendations ..................................................................................................... 13  
   4.1 Australian health workforce .............................................................................................. 13  
   4.2 Terms and conditions ....................................................................................................... 13  
   4.3 Competency-based education and training frameworks .................................................. 13  
   4.4 Competency-based career frameworks ............................................................................ 13  
   4.5 Further research ............................................................................................................. 14  
5. Project summary .................................................................................................................. 15  
   5.1 The Australian health workforce ...................................................................................... 15  
   5.2 Terms and definitions ...................................................................................................... 16  
   5.3 Project drivers .................................................................................................................. 16  
   5.4 Framework mapping exercise .......................................................................................... 17  
   5.5 Case studies of competency-based frameworks ............................................................. 18  
   5.6 Health workforce competency-based career frameworks .............................................. 19  
6. Project methodology ............................................................................................................ 22  
7. Profiling the Australian health workforce ............................................................................. 23  
   7.1 Introduction ...................................................................................................................... 23  
   7.2 Whole of health workforce ............................................................................................... 24  
   7.3 Summary .......................................................................................................................... 27  
8. Findings from the literature ................................................................................................. 29  
   8.1 Competency-based education and training frameworks .................................................. 29  
   8.1.1 History ........................................................................................................................ 30  
   8.1.2 Australian contexts ....................................................................................................... 30  
   8.1.3 Health sector contexts: Clinical competencies and minimal competencies ................ 30  
   8.1.4 The Australian vocational education and training (VET) sector ................................ 31  
   8.1.5 Benefits and drivers ..................................................................................................... 33  
   8.1.6 Examples ...................................................................................................................... 34  
   8.1.7 Recent crucial international developments .................................................................. 34  
   8.1.8 Resourcing Implications .............................................................................................. 35  
   8.1.9 Lessons ........................................................................................................................ 35  
   8.1.10 Transcending opposed positions: Beyond “good tools, used badly” ......................... 35  
   8.2 Competency-based career frameworks .......................................................................... 37  
   8.2.1 Definitions/Terminology and contexts ......................................................................... 37  
   8.2.2 Examples ..................................................................................................................... 38  
   8.2.3 Resourcing and barriers/limitations—lessons learnt .................................................... 38  
   8.2.4 Lessons ........................................................................................................................ 39  
9. Findings from key informants ............................................................................................... 40  
   9.1 Competency-based education and training frameworks ................................................ 40  
   9.1.1 Benefits ....................................................................................................................... 41  
   9.1.2 Limitations and resources ............................................................................................ 42  
   9.1.3 Implementation ........................................................................................................... 43  
   9.2 Competency-based career frameworks ........................................................................... 44  
   9.2.1 Benefits ....................................................................................................................... 45  
   9.2.2 Cautionary note ........................................................................................................... 45  
   9.2.3 Resourcing and implementation ................................................................................. 46  
   9.2.4 A competency-based career framework—the nature of the project ......................... 46  
10. Framework examples .......................................................................................................... 48  
   10.1 Competency-based frameworks ..................................................................................... 50  
   10.1.1 CanMEDS ................................................................................................................. 50  
   10.1.2 ALTC Threshold Learning Outcomes Framework ..................................................... 52  
   10.1.3 Hunter/New England Capability Framework ............................................................ 53  
   10.2 Competency-based career frameworks ....................................................................... 54  
   10.2.1 A Career Framework for the Health Workforce in New Zealand ............................. 54  
   10.2.2 New Zealand Let’s Get Real competencies for the mental health workforce ........... 57  
   10.2.3 Canadian interprofessional competency frameworks .......................................... 59  
   10.2.4 UK Skills Escalator ................................................................................................... 61  
11. Conclusions and recommendations ................................................................................... 65  
   11.1 Detailing current demographics and innovation activity within the Australian health workforce .................................................................................................................................................................................. 65  
   11.2 Whole-of-government leadership and coordination ....................................................... 66  
   11.3 Definitions and glossary of terms ................................................................................. 66  
   11.4 A competency-based education and training framework for the Australian workforce 67  
   11.5 A competency-based career framework for the Australian health workforce .............. 68  
   11.6 Further research recommendations .............................................................................. 69  
References .................................................................................................................................. 70  
Annexes ..................................................................................................................................... 76
1. Project briefs

1.1 National Health Workforce Planning and Research Collaboration

The National Health Workforce Planning and Research Collaboration, a consortium comprising Health Workforce Australia (HWA), Australian Health Workforce Institute and PricewaterhouseCoopers Australia, is in the final year of its substantial three-year program of national health workforce planning and research projects.

Australian Health Workforce Institute itself is a consortium of The University of Melbourne and The University of Queensland and for the purposes of this collaboration has established links with Australian National University, The University of Adelaide and Monash University.

The projects informing this report are situated in the Year 2 stage of project work. During the project procurement stage, the initial Chief Investigator was Professor Helen Chenery. This role then transferred to Associate Professor Sharon Brownie, Director of The University of Queensland node of the Australian Health Workforce Institute.

1.2 Contracted projects

The remits for the contracted work underpinning this report consist of two distinct health workforce projects, namely:

- mapping health workforce competencies, with a view to developing a taxonomy (classification framework) for competency-based standards in health
- exploring evidence-based options for competency-based health career frameworks in Australia.

As the projects were developed, the extent of synergy and overlap between the projects became increasingly obvious, and the contracting organisation, HWA, requested that a combined report covering both projects be produced, as outlined below. The projects are unique in their whole-of-workforce focus.
1.2.1 Mapping health workforce competencies by developing a taxonomy for competency-based standards in health

The objectives of the project are as follows:

- report on research into definitions and terminologies used with potential relevance to the broader health sector in Australia, based on key informant interviews and a search of the peer-reviewed and grey literature
- produce examples of major types of competency-based frameworks and standards already in use in the health sector in Australia
- delineate existing roadmaps of key competency-based frameworks and standards in use in Australia now, demonstrating consistencies and inconsistencies, and relationships
- recommend a taxonomy for competency-based education and training in health.

The project scope consists of the following activities:

- literature review, including national and international sources and identification of level of evidence, which meshes with the competency-based career frameworks project (Project 5)
- interviews conducted with key informants, or respondents, to clarify, confirm or review gaps arising during project activities
- organising and conducting a comprehensive workshop of the research team
- organisation of meetings of the research team, consisting of the core University of Queensland team plus subject matter experts
- writing and delivery of interim and final report.

1.2.2 Evidence-based options for competency-based health career frameworks in Australia

The project objectives are as follows:

- a review of the literature on models for competency-based career frameworks
- articulation of the purpose and value of a competency-framework and its place in the Australian health workforce
- identification of evidence-based options for models of health career frameworks likely to facilitate a more flexible workforce in the Australian sector, and case studies to illustrate such models
- identification of lessons learned from previous experience in developing competency-based career frameworks—what to do, what not to do.

The project scope is twofold:

- to explore and articulate the purpose of a competency framework in health and its place in the health care sector in Australia
- to explore options for generic (that is, horizontally integrated—multi-professional—and vertically integrated) competency-based health career frameworks at a national level based on experiences in Australia and overseas.

1.3 Project team

The research projects involved extensive work across a number of complex fields. This report is the combined effort of many contributors.

Principal investigator:
Associate Professor Sharon Brownie, Health Workforce Innovation, The University of Queensland.

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Associate Professor Sharon Brownie, Health Workforce Innovation, The University of Queensland
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Ms Amanda Rainey.

Suggested citation


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2. Acknowledgements

We would like to acknowledge and thank the many participants representing the organisations listed below, who have generously contributed their time, knowledge and information to this project.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Institution</th>
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</thead>
<tbody>
<tr>
<td>ACT Health Directorate, Australian Capital Territory Government</td>
<td>Faculty of Health Science, University of Tasmania</td>
</tr>
<tr>
<td>Allied Health Professions Australia</td>
<td>Faculty of Health Sciences, Curtin University</td>
</tr>
<tr>
<td>Australasian College of Health Service Management</td>
<td>Faculty of Health Sciences, La Trobe University</td>
</tr>
<tr>
<td>Australian Association for Social Workers</td>
<td>Faculty of Health Sciences, The University of Sydney</td>
</tr>
<tr>
<td>Australian College of Health Service Management</td>
<td>Faculty of Medicine, Health and Molecular Science, James Cook University</td>
</tr>
<tr>
<td>Australian Institute of Radiography</td>
<td>Faculty of Science, Charles Sturt University</td>
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<tr>
<td>Australian Medical Association</td>
<td>HealthCare</td>
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<tr>
<td>Australian Medical Council</td>
<td>Lifeline</td>
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<tr>
<td>Australian Medical Students' Association</td>
<td>Manchester Business School, United Kingdom</td>
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<tr>
<td>Australian Nursing Federation</td>
<td>Medical Board of Australia</td>
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<tr>
<td>Australian Peak Nursing and Midwifery Forum, comprising Australian Nursing</td>
<td>Medical Deans Australia and New Zealand Inc.</td>
</tr>
<tr>
<td>and Midwifery Council, Congress of Aboriginal and Torres Strait Islander</td>
<td>National Rural Health Students’ Network</td>
</tr>
<tr>
<td>Nurses, Australian Nursing Federation, Royal College of Nursing Australia,</td>
<td>New Zealand Nurses Organisation</td>
</tr>
<tr>
<td>Council of Deans of Nursing and Midwifery (Australia &amp; New Zealand),</td>
<td>NT Mental Health Services, Northern Territory Government</td>
</tr>
<tr>
<td>Australian College of Midwives, and Coalition of National Nursing</td>
<td>NSW Ministry of Health, Government of New South Wales</td>
</tr>
<tr>
<td>Organisations</td>
<td>Nursing and Midwifery Board of Australia</td>
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<tr>
<td>Australian Physiotherapy Council</td>
<td>Pharmacy Board of Australia</td>
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<tr>
<td>Australian Qualifications Framework Council</td>
<td>Physiotherapy, School of Community Health, Charles Sturt University</td>
</tr>
<tr>
<td>Carers Australia</td>
<td>Queensland Health</td>
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<tr>
<td>Committee of Presidents of Medical Colleges</td>
<td>Ramsay Health Care</td>
</tr>
<tr>
<td>Community Services &amp; Health Industry Skills Council</td>
<td>Royal College of Physicians and Surgeons of Canada</td>
</tr>
<tr>
<td>Department of Health and Human Services, Tasmania</td>
<td>San College of Education</td>
</tr>
<tr>
<td>Department of Health, England, United Kingdom</td>
<td>School of Medicine, Flinders University</td>
</tr>
<tr>
<td>Department of Health, Victoria</td>
<td>Services for Australian Rural and Remote Allied Health</td>
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<tr>
<td>WA Health, Government of Western Australia</td>
<td>Skills Australia</td>
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<tr>
<td>Dietitians Association of Australia</td>
<td>Skin and Cancer Foundation Australia</td>
</tr>
<tr>
<td>Faculty of Health, Queensland University of Technology</td>
<td>Society of Hospital Pharmacists of Australia (The)</td>
</tr>
<tr>
<td>Faculty of Health Sciences, The University of South Australia</td>
<td>SA Health, Government of South Australia</td>
</tr>
</tbody>
</table>

3. Glossary of terms

Unless otherwise referenced, this glossary was adapted from ‘Health workforce competency principles: A Victorian discussion paper’, published in March 2009 by the Victorian Government Department of Human Services. Terms defined by our research team are also noted in the glossary.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulation</td>
<td>The key feature of articulation is the existence of pathways that allow graduates of one course of study to progress, or ‘articulate’, to another. The pathways are usually seen as ‘upwards’, especially from vocational education and training (VET) to university, but ‘reverse articulation’ can apply to traffic between higher education and VET. It can also refer to moving between related courses at the same level. Articulation is important because it relates to opportunity and status; ‘dead end’ courses that do not have pathways to opportunities for further study have less status than programs that do provide further study options.</td>
</tr>
<tr>
<td>Capability</td>
<td>The sum of expertise and capacity.</td>
</tr>
<tr>
<td>Capacity</td>
<td>The actual or potential ability to perform.</td>
</tr>
<tr>
<td>Career frameworks</td>
<td>Career frameworks, as defined by our research team, include a number of clearly defined levels at which a role could be performed from initial entry level roles to the more expert of specialist level roles. They can be used to aid workforce flexibility, provide a common currency to map competence portfolios of employees, and identify areas of transferability to other job roles. This allows progression in directions that may not have been identified through traditional routes (National Health Services 2009).</td>
</tr>
</tbody>
</table>
| Competence          | • This generic term refers to a person’s overall capacity to perform a given role, including not only performance but also capability. It involves both observable and unobservable attributes, such as attitudes, values and judgemental ability.  
  • A dynamic combination of knowledge, understanding, skills and abilities. Fostering competences is the objective of educational programs. Competences will be formed in various course units and assessed at different stages (Tuning Educational Structures in Europe 2011). |
| Competency          | • Competency is a component part of competence. It refers to specific capabilities in applying particular knowledge, skills, decision-making attributes and values to perform tasks safely and effectively in a specific health workforce role ( Tilley 2008; Verma et al. 2009).  
  • It is also the ability to consistently perform work activities to agreed standards over a range of contexts and conditions ( Knight and Nestor 2000; Ridoutt et al. 2002).  
  • Competency is the consistent application of knowledge and skills to the standard of performance required in the workplace. It embodies the ability to transfer and apply skills and knowledge to new situations and environments (National Quality Council 2009). |
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency-based career frameworks</td>
<td>Competency-based career frameworks, as defined by our research team, group competencies under ‘domains’ (headings for classifying related competencies) in order to enable practitioners or workers to be assessed, to move up a career pathway or to have their skills and learning recognised for lateral movement. The frameworks may or may not be aligned with remuneration.</td>
</tr>
<tr>
<td>Competency-based education and Training</td>
<td>Competency-based education and training focuses on the ability of students and practitioners to deploy skills, attributes and knowledge to perform specific tasks and, more broadly, a clinical or health care role or function (defined by research team)</td>
</tr>
<tr>
<td>Competency-based education and training frameworks</td>
<td>These frameworks are carefully designed structures for enclosing and supporting sets of concepts, values, assumptions, roles, competencies and/or practices. They are a useful way of arranging curricula and expected learning outcomes. They can guide providers and/or participants in the content and standard of what is to be taught, learned, assessed, demonstrated and/or practised. Many professions and educational providers have published frameworks to specify competencies relevant for registration, assessment of practice and curriculum (defined by research team).</td>
</tr>
<tr>
<td>Competency field</td>
<td>The competency field reflects the way units of competency are categorised in training packages or denotes the workplace sector, specialisation or function. It is an optional component of the unit of competency.</td>
</tr>
<tr>
<td>Core competencies</td>
<td>Core competencies are considered to be essential competencies. They may exist within a workforce role or span across different workforce roles.</td>
</tr>
<tr>
<td>Competency frameworks</td>
<td>This term is used widely in the literature, can have different meanings, and can be found shortened to the term ‘framework’. Sometimes competency standards are called competency frameworks. For example, when units of competency are grouped under ‘domains’ (main headings for grouping related competencies) it may be called a framework. In broader application, competency frameworks can describe and may also map related sets of competency standards that cover the operational level of different roles within a workforce group, such as level 1, level 2, level 3 and level 4 in a particular work role, and nurse practitioner, midwife, division 1 and division 2 in another role.</td>
</tr>
<tr>
<td>Competency standards</td>
<td>Competency standards are groups of competencies specified by the workplace and professional associations that are required to operate effectively in a particular workplace role. They specify what the public can expect from a practitioner. Sometimes related competencies within competency standards are clustered under ‘domains’ that refer to groups of related units of competency. Competency standards are sometimes referred to as competency frameworks.</td>
</tr>
<tr>
<td>Delegated</td>
<td>Individuals working under supervision, for instance, physician assistants and dental therapists (defined by research team).</td>
</tr>
<tr>
<td>Domain</td>
<td>A realm or range of attributes such as personal knowledge or responsibility.</td>
</tr>
<tr>
<td>Educational frameworks</td>
<td>Educational frameworks are carefully designed structures for enclosing and supporting sets of concepts, values, assumptions, roles, competencies and/or practices. They are a useful way of arranging curricula and expected learning outcomes. A framework provides the providers and/or participants a guide in respect to the content and standard of what is to be taught, learned, assessed, demonstrated and/or practised (defined by research team).</td>
</tr>
<tr>
<td>Elements of competency</td>
<td>These elements describe outcomes that contribute to a unit of competency.</td>
</tr>
<tr>
<td>Expertise</td>
<td>Skilfulness by virtue of possessing special knowledge.</td>
</tr>
<tr>
<td>Horizontal substitution</td>
<td>Movement of a discipline outside its traditional boundaries to take on tasks that are normally performed by other health service providers, or interdisciplinary change (Nancarrow and Borthwick 2005).</td>
</tr>
<tr>
<td>Learning objectives</td>
<td>Learning objectives, as distinct from learning outcomes, refer to a line of thought that defines educational outcomes by clarifying the type of behaviour a program of study should develop among students. Attainment is characterised by the behaviour specified.</td>
</tr>
<tr>
<td>Learning outcomes</td>
<td>Statements of what a learner is expected to know, understand and/or can demonstrate after completion of learning. They can refer to a single course unit or module or else to a period of studies, for example, a first- or a second-cycle program. Learning outcomes specify the requirements for award of credit (Tuning Educational Structures in Europe 2011).</td>
</tr>
<tr>
<td>Performance criteria</td>
<td>These are evaluative statements that specify what is to be assessed and the required level of performance. Performance criteria specify the activities, skills, knowledge and understanding that provide the evidence of competent performance.</td>
</tr>
<tr>
<td>Practitioner</td>
<td>An individual accredited, licensed and/or registered as a health professional upon meeting the specified requirements.</td>
</tr>
<tr>
<td>Professional standards</td>
<td>Professional standards relate to systems, procedures and information used by individuals to achieve a level of conformity and uniformity for a particular service provision, for instance running a healthcare service facility.</td>
</tr>
<tr>
<td>Proficiency level</td>
<td>Degree of mastery of a skill or area of knowledge, performance, and attributes (characteristics of person).</td>
</tr>
<tr>
<td>Professional</td>
<td>Individual with the knowledge and/or skills to contribute to the physical, mental and social wellbeing of patients and a community (defined by research team).</td>
</tr>
<tr>
<td>Recognition of prior learning</td>
<td>Recognition of prior learning (RPL) involves assessment of previously unrecognised skills and knowledge that an individual has achieved outside the formal education and training system. RPL is an assessment process that assesses the individual’s non-formal and informal learning to determine the extent to which that individual has achieved the required learning outcomes or competency standards. The outcome of an application is that RPL will be either granted or not granted, and is reported against the relevant Australian Vocational Education and Training Management Information Statistical Standard codes.</td>
</tr>
</tbody>
</table>
### Regulated and unregulated professions

The professions are divided into health worker groups:

- **Regulated professions**—regulated by a nationally consistent legislation and supported by the Australian Health Practitioner Regulation Agency.
- **Partially regulated professions**—regulation is limited to a number of Australian states that will move to national regulation in the future.
- **Unregulated health worker groups**—no regulatory systems in place but may be supported by a professional body (defined by research team).

### Specialist workforce

Individuals whose practice or role has a high degree of focus on a particular skill, area of knowledge and practice or expertise. These individuals are not limited to medical specialists, but to any health worker whose practice or role has a very specifically focused objective (defined by research team).

### Subject matter content

Knowledge, skills, attitudes and attributes.

### Supplementary healthcare workforce

Individuals whose scope of practice is either delegated or who perform assistant roles within the health workforce.

### Taxonomy

Classification system (defined by research team).

### Training packages

Training packages are aligned with the VET sector. They are sets of determined competencies for workforce sectors, designed to support competency-based training and assessment. Training packages are usually developed by workforce sector skill councils and involve employers, government and employee organisations.

### Unit of competency

A unit of competency is a discrete component within competency standards. A unit of competency is the lowest level at which competence can be defined.

### Vertical escalation

Vertical escalation or substitution involves the delegation or adoption of tasks across disciplinary boundaries where the levels of training or expertise are not equivalent between workers, for example, the extension of nursing roles to include prescribing, a role traditionally the domain of the medical profession (Nancarrow and Borthwick 2005).

### Project recommendations

#### 4.1 Australian health workforce

- That HWA further interrogates data describing the full profile of the Australian health workforce as per the categories identified in this report and disseminates information to further enhance whole-of-workforce understanding.
- That HWA undertakes further work to gauge the full extent of the emergent workforce categories, including consultation with key stakeholder groups regarding actual workforce and health service demand with a view to forming a strategic framework to guide increasingly emergent innovations and developments.
- That, at a national level, HWA adopts a whole-of-government coordination role on the allocation of funding and activities of direct relevance to the Australian health workforce.

#### 4.2 Terms and conditions

- That HWA consults, develops and confirms an agreed set of terms and definitions to reduce ambiguity and ensure maximum clarity of communication and meaning across its work portfolio and in its interactions with key stakeholders. The glossary of terms included in this report could be a starting point for undertaking such consultation.

#### 4.3 Competency-based education and training frameworks

- That HWA considers the requirements of competency-based education and training frameworks—for example, clear communication and consultation exercise—to enhance increased understanding of, rationale for, and benefits of developing a whole-of-workforce competency framework. Vocational education and training (VET) sector informants indicated that an extensive communication strategy would not be required for the VET workforce, as the language of this sector is already one of competency.
- That HWA considers three options for a competency-based framework adaptable to a whole-of-workforce application within the Australian context. These options are to start afresh and develop a national workforce competency model; to adapt an existing model identified as having increasing acceptance and update across the workforce; or do nothing, and simply allow current unguided market developments to continue to unfold.

#### 4.4 Competency-based career frameworks

- That HWA notes the potential benefits in developing and implementing a competency-based career framework for the Australian health workforce.
- That HWA notes the case studies and lessons profiled in this report.
- That HWA undertakes further analysis regarding the juncture between development of a competency-based career framework (a 'workforce project') and implementation of a competency-based career framework (an 'industrial project') and that these frameworks are fully explored and understood to optimise successful outcomes for any proposed development activity.
- That HWA notes the New Zealand Let's Get Real case study as an example of a competency-based career framework that has been implemented as a health workforce project without industrial adjustments.
• That HWA notes the Australian experience in reform of the Engineering Industry Award as a possible example of a competency-based career reform project implemented through aligned industrial adjustments (see Annex 6).

• That HWA notes the concept of levels contained within the notion of a competency-based career framework and collaborates with other key national initiatives (for example, Australian Qualifications Authority) to ensure optimal whole-of-government coordination in any developments going forward, so as to avoid frameworks with varying number of levels that do not match.

4.5 Further research
A suite of supporting papers, and a literature review, is being prepared to supplement this report, which together will help to inform ongoing work in the Australian health workforce context. The research team maintains that further research is necessary to provide a stronger evidence base for this work, and recommends further work in the following focus areas.

• Work to develop and enhance common understanding and an agreed glossary of terms associated with competency-based education and training and competency-based career frameworks.

• Interrogation of data describing the full profile of the Australian health workforce as per the categories outlined in this report.

• Work to gauge the full extent of the emergent workforce categories, including consultation with key stakeholder groups regarding actual workforce and health service demand, with a view to forming a strategic framework to guide increasingly emergent innovations and developments.

• Analysis and exploration of the juncture between development and implementation of a competency-based career framework in order to optimise successful outcomes for any proposed development activity.

In addition, the research team believes that significant gaps exist in the contextual literature informing health workforce debates, and has suggested a series of additional research. These are detailed in section 11.6.

5. Project summary
This publication reports on two distinct but closely aligned research projects designed to map health workforce competencies and to develop taxonomy for competency-based standards in health, and to explore evidence-based options for competency-based health career frameworks in Australia. The report is informed by a literature review and by semi-structured interviews with key informants from the health sector. Along with other National Health Workforce Planning and Research Collaboration projects, the outcomes are fundamental pieces of work to inform the development of future workforce innovation and reform initiatives.

5.1 The Australian health workforce
These two particular projects are unique in exploring competency frameworks from a “whole” or “entire” health workforce focus, with the term “health workforce” in this report having a broader formulation than often adopted. Thus, an initial task of the project team was to identify and define the groups that make up the Australian health workforce. Several distinct groupings were identified; namely the following:

- specialist workforce
- regulated health workforce
- unregulated health workforce
- support workforce
- voluntary unpaid and carer workforce
- emergent workforce, including new roles within other categories.

Notably, an increasing number of emergent health worker groups were identified which do not fit easily within the categories above, for example, the newly graduating physician assistants whose lack of formal recognition within the broader health workforce community marks their employable contributions as unclear.

The research team noted two distinct categories of roles within the grouping of emergent health workforce, namely delegated health worker roles (for example, physician assistant and anaesthetic assistant roles) and autonomous health worker roles (for example, nurse practitioner roles). No clear model is apparent for these emerging roles either globally or across Australia. Nor is the workforce modelling underpinning start-up of corresponding courses within educational institutions clear.

It is recommended that HWA further interrogate data describing the full profile of the Australian health workforce as per the categories identified in this report and disseminate information to further enhance whole-of-workforce understanding.

It is recommended that HWA undertake further work to gauge the full extent of the emergent workforce categories, including consultation with key stakeholder groups regarding actual workforce and health service demand, with a view to forming a strategic framework to guide the increasingly emergent innovations and developments.
5.2 Terms and definitions

Another early task of the project group was to source and agree on a range of definitions for key terms used in this project. This emerged as a complex task, with the literature clearly illustrating the difficulty, as highlighted by the many different references to the notion of competence. Specifically, when exploring recent literature on competence, the one commonality is that there is no common definition of competence (Boon and van der Klink 2001; Whiddett and Hollyforde 2003; LeDeist and Winterton 2005; Lans and Mulder 2009; Winterton 2009).

A lack of understanding and agreement around a consensus definition is increasingly apparent to many working in the field of competency-based education and training. Subsequently, initiatives to develop more universally agreed definitions and glossaries of terms are beginning to appear in the literature, for example, those arising from the International Consensus Conference on Competency-based Medical Education and subsequent publications (Frank, Snell et al. 2010).

In the face of the existing definitional complexities, the research team agreed that despite the difficulties, a common understanding of key terms was essential to moving HWA commissioned competency-based projects forward. The research team noted the fully accepted definition of competence within the Australian vocational education and training (VET) sector (National Quality Council 2009); however, commonality of understanding and consensus of definition was not found to be present across both VET and higher education sectors. On this basis, a glossary of terms has been included for the purposes of this document. The terms identified in the glossary may be used in the context of workplace requirements, learning and development of the workforce or to address professional regulatory and accreditation requirements. The research team have produced this glossary table to assist clarity of understanding within this document and as a starting point for ongoing consultation, discussion and consensus.

5.3 Project drivers

Recent health policy (NHHRC 2009) has rightly emphasised the crucial importance of the health workforce to the future ability of Australia’s health system to deliver quality outcomes. This focus on workforce policy arises from:

- a recognition that workforce shortages in some areas and unplanned growth in others impairs the capacity of the health system to meet health service needs and deliver patient/client-focused care
- a need for each nation and regional area to achieve workforce sustainability in its own right, taking into account the increased patterns and ease of global health worker migration
- an understanding that growth in interprofessional and multidisciplinary health teams responding to particular health needs is vital for health service outcomes
- a belief that workforce reform and innovation can embed operational agility and responsiveness in the health system
- an understanding that some currently structured health workforce roles may be unaffordable in the future, with a need to more effectively utilise the scarcer, more highly specialised members of the health workforce team.

A central response to the need to reshape policy thinking on the health workforce has been the idea of a health workforce competency framework which would inform competency-based education and training. Thus, many competency-based developments began as a way to realign education with societal and patient needs by providing greater emphasis of the full range of practitioner roles than technical skills alone. Further, more broadly detailed health workforce competencies have the potential to deliver more integrated cross-professional teams and to ensure that health workers are flexible enough to respond to changing patterns of need and care.

A whole-of-workforce competency framework holds the promise of consistency and portability of education and training provision that connects across the learning and practice continuum and adds value to existing professional competencies. A framework increases accountability by making health workforce roles and functions more explicit. It provides the basis for greater recognition of prior learning and transferability of learning across and between educational institutions. A framework aligns education with health service and patient/client needs.

In addition, a whole-of-workforce competency-based career framework promises that the health workforce can be recruited, developed and retained in a more transparent and coordinated fashion, that individuals within the sector can progress in a more seamless way to greater levels of clinical responsibility (vertical escalation) and for practitioners to deploy their skills across professional boundaries (horizontal integration). A health competency-based career framework can assist in creating the sustainable and quality health workforce Australia needs to meet its health challenges over the next several decades.

A range of key national reports and Australian Government policy responses highlights the need for a coordinated, integrated system-wide approach for planning future workforce requirements inclusive of workforce competence. Of note is the National Health and Hospitals Reform Commission’s final report A Healthier Future for All Australians (NHHRC 2009), the National Preventative Health Taskforce Report, and the National Primary Health Care Strategy.

Included in the priority areas for workforce reform is the enhanced alignment between education and industry, improvements in workforce flexibility, team-based collaborative models of care, and the achievement of a skilled competent workforce, which are enabled by education and training throughout the continuum of health service delivery. In addition to these national initiatives, State and Territory Governments have been progressing workforce innovation and work reform programs that have workforce competence as the key focus of their initiatives. (Many of these initiatives are embargoed, awaiting Director General and/or Ministerial approval.) Similarly, there is congruence between the workforce reform agenda and other reform initiatives, including educational reform and the forward activity of the Australian Health Practitioner Regulation Agency.

It is in this context that the National Health Workforce Planning and Research Collaboration was commissioned to research and report on mapping health competencies, develop taxonomy for competency-based standards in health, and provide evidence-based options for competency-based career frameworks in Australia.

5.4 Framework mapping exercise

This report includes a literature search for existing educational and training frameworks with a view to mapping the frameworks and recommending a national taxonomy or classification system for possible implementation across the Australian health workforce. The task of mapping existing competency frameworks was difficult because of the large number of frameworks that emerged during the literature review. Many more were sourced during the key informant interview process. Frameworks were identified in the higher education and VET sectors as the standards used by professions to provide expectations of practice, and workplace competencies were expressed as capabilities designed to meet the needs of service providers either at the jurisdictional or local level. The search located frameworks for almost every professional grouping, along with most support worker roles and also care giving roles (see Annex 3 for a sample).
There is wide variance in terminology, number of domains and levels of detail utilised. Many frameworks are profession specific and not readily applied to a whole-of-workforce scenario. Multiple frameworks exist, with many under review and many new ones emerging. In short, mapping frameworks is a moveable feast. Even though a large number of frameworks were identified, none included a whole-of-workforce perspective. Results from the work on mapping frameworks are detailed in Annex 4; noting that only a small sample was analysed due to the resources available for the project and the proliferation of frameworks.

Further, we found polarised views in both published literature (Matters and Curtis 2008; Sultana 2009) and among key informants in the definition, purpose and usefulness of competency-based frameworks in general and particularly in developing a framework encompassing a whole-of-workforce approach.

We found that a range of adverse views exist on the notion of competency in higher education (with evidence of alternative frameworks, involving capabilities, roles and outcomes as other current trends). No clear agreement was identified around definitions, structure, parameters or conceptual models. There was widespread divergence of views, but also a surprising degree of endorsement for a greater consistency of approach, with many informants expressing significant support for the concept. It became very clear that progress towards an agreed national framework and taxonomy (classification system) is quite possible and has many potential benefits, but that such progress will require widespread consultation over a longer timeframe than permitted by the timeline of this project.

A key recommendation of this project is that HWA consider the requirements for a whole-of-workforce competency framework, for example, a clear communication and consultation exercise, which would be necessary to enhance increased understanding, along with the rationale for and benefits of developing a whole-of-workforce competency framework. To advance this recommendation, the way forward could include:

- publication of this research report on the HWA website to commence discussion across the sector
- publication of a comprehensive literature review on the HWA website to engender discussion, better inform the sector and increase understanding of key issues associated with competency-based education and training developments and competency-based career frameworks
- production and dissemination of information bites pertaining to key terms and concepts on which there is current debate, ambiguity and variance in understanding, for example, on competence, competency, taxonomy, framework, horizontal integration, competency-based education and training framework, and competency-based career framework
- commencement of consultation with the sector by development of a detailed discussion paper that adopts a workforce approach and outlines opportunities, options, benefits and implementation requirements associated with a whole-of-workforce approach to competency-based education and training and competency-based workforce utilisation and career progression.

5.5 Case studies of competency-based frameworks

This project has identified and profiled a number of case studies to illustrate the benefits and potential for a whole-of-workforce national competency framework and the diversity in existing approaches. Profiled case studies have been chosen from the areas of education, the professional arena and the workplace, and include international examples. This report highlights a number of lessons drawn from the development experiences contained within these case studies, including the following:

- Successful development and implementation is dependent upon adequate preparation and extensive consultation.
- Costing must include costs of development, consultation, implementation (including training of supervisors and students), along with maintenance and updating, as like websites, frameworks must be maintained.
- Moderate levels of specification only are optimal to successful implementation and utilisation and to enable adequate flexibility to cater for region- or workforce-specific needs.
- Overspecification (too many domains and too many levels) impedes implementation and is too costly to maintain and/or upgrade.
- Overspecification interferes significantly with optimal time balances between teaching, supervision and patient care. A competency-based education and training framework is essential for quality assurance purposes but must not detract unduly from time needed for patient care and service delivery.

The Canadian model, called CanMEDS Physician Competency Framework), a high-level matrix framework, has many features suitable and adaptable for whole-of-workforce application within the Australian context. The seven CanMEDS roles can be adapted and equally applied to all categories and levels of worker within the Australian health workforce, including clinical, education, leadership and management roles. Equally, existing frameworks can over time be readily aligned with the overarching domains of the CanMEDS model without detracting from the specificity and uniqueness of existing professional or health worker roles.

In noting the potential of the CanMEDS model, this report highlights three options for consideration by HWA, namely:

- start afresh and develop a national workforce competency model
- adapt an existing model that is identified as having increasing acceptance and update across the workforce
- do nothing, and simply allow current unguided market developments to continue to unfold.

5.6 Health workforce competency-based career frameworks

This report summarises a review of the literature on models for competency-based career frameworks that focus on the purpose and value of a competency-based career framework and its potential place in the Australian health workforce. The report also profiles a number of case studies and identifies a range of lessons learned from the experience of others in developing competency-based career frameworks by highlighting relevant policy lessons.

The initial review process yielded very little information arising from the published literature. Upon subsequent discussion, the National Health Workforce Taskforce (later HWA) agreed to a variation in the project scope for the inclusion of key informant interviews to seek more information to underpin project viability and validity. These interviews proved to be highly valuable, from which emerged significant information in grey literature, including unpublished jurisdictional papers and project reports. Findings sourced through key informant interviews also provided a very different and richer perspective to the project’s rationale. For example, drivers such as workforce planning, pay parity, role clarity, accountability, workforce utilisation, and enablers for increased horizontal and vertical integration were identified.
In response to questions on the purpose and value of a competency-based career framework, jurisdictional employers were very clear about purposes, value and benefits. Jurisdictions reported significant workforce shortages, surpluses and maldistribution. Duplications, inflexibility, role clarity and parity issues between various regulated professions and between professional employees and support workers—with 3000-plus role types reported in some jurisdictions)—were key drivers in the move towards competency-based career frameworks. Many viewed a whole-of-workforce competency-based framework as a possible solution to current workforce flexibility, role and parity issues.

In contrast, other key informants, particularly educators, employees and professional groupings, were often puzzled and uncertain about the concept. Many did not know what a competency-based career framework consisted of or how to describe it. Similarly, a range of informants indicated they did not know what the concept meant, so were unable to comment either positively, negatively or neutrally, with ‘never heard of it’ being a common response. A small number equated a competency-based career framework with the United Kingdom Department of Health’s Skills Escalator, and mostly offered adverse comments in this respect. However, the research team was unable to identify any informants outside of the jurisdictional employers who were fully informed regarding the Skills Escalator development.

Very little evidence is yet available in published literature about competency-based career frameworks for the health workforce. However, discussions with key informants usefully highlighted a range of activities and associated benefits. In particular, Australian health workforce employers believe that some real win-win outcomes would be available through the development and implementation of a competency-based career framework on either a state-, territory- or nation-wide basis.

Perceived benefits include:

- greater clarity and transparency regarding workforce roles and accountabilities
- improved patient and consumer care through increased flexibility in utilising the health workforce, and clear articulation and maintenance of skills and competencies
- clearer career pathways and opportunities for the health workforce
- greater horizontal and vertical flexibility in workforce utilisation
- simplification of complex employment arrangements and control of burgeoning new worker categories
- strong base for maintaining role and remuneration parity between workforce groupings
- minimisation of escalating health workforce costs through more flexible use of the workforce.

A number of lessons were distilled during discussion with key informants who had undertaken the process of career framework development.

Lessons included:

- the essential requirement to consult extensively before starting the process. Insufficient up-front consultation resulted in the Skills Escalator initiative involving allied health workers only. The project had to be halted mid-point to undertake six months of road shows to allay fears and enable continued development
- understanding that consultation must include all key stakeholders with multiple Q&A sessions to allay fears and establish a common platform and agreement for moving forward
- avoidance of complexity. If the framework is too complex, it is highly expensive to develop, maintain and assess, and it becomes counterproductive to the delivery of quality health care, due to time and resources being diverted from care delivery
- that implementation in a federal environment such as Australia may be more complex and will possibly require ‘award simplification’ and ‘award amalgamation’ to enable nation-wide development and implementation.

A degree of parallel activity is occurring, which is conceptually congruent with the notion of a competency-based career framework. However, these developments are not necessarily occurring in tandem across the health and education sectors.

Concurrent work includes:

- review of Australian Qualifications Framework developments
- developments by the Australian Learning and Teaching Council in threshold learning outcomes.

Significant opportunity exists for HWA to align framework developments with the Australian Qualifications Framework and to ensure that the framework develops on the basis of congruent conceptual underpinnings and useful practical alignments, for example, with a matching number of levels.

On the concept of a competency-based career framework for the Australian health workforce, it is the recommendation of this report that HWA:

- note the potential benefits in developing and implementing a competency-based career framework for the Australian health workforce
- note the case studies and lessons profiled in this report
- undertake further analysis regarding the juncture and associated issues between development of a competency-based career framework (a ‘workforce project’) and implementation of a competency-based career framework (an ‘industrial project’) and that these frameworks are fully explored and understood to optimise successful outcomes for any proposed development activity
- note the New Zealand Let’s Get Real case study as an example of an implemented competency-based career framework that has been undertaken as a health workforce project without industrial links
- note the Australian experience in reform of the Engineering Industry Award as a possible example of a competency-based career reform project implemented through aligned industrial adjustments (see Annex 6)
- note the concept of levels contained within the notion of a competency-based career framework and collaborate with other key national initiatives (for example, Australian Qualifications Authority) to ensure optimal whole-of-government coordination in any developments going forward, so as to avoid frameworks with varying number of levels that do not match.
6. Project methodology

This project was informed by two sources: a review of the published and grey literature and by formal semi-structured interviews and informal consultations with key informants across the health care sector. Informants included curriculum developers, employers, representative bodies, regulating bodies and end-user representative bodies. Interviewees were asked questions pertaining to their understanding of competence within education and training, and of a competency-based career framework. Areas covered included benefits, challenges, language, resource implications and scope.

Interviews were digitally recorded. Interview audio files were edited to remove information that could identify interviewees, and transcripts were classified according to the group from which the informants were drawn. Each transcript was given a numerical designation. In addition, a written submission and commentary was received from the Australian Peak Nursing and Midwifery Forum on behalf of their seven member organisations, representing their agreed-upon position. ACT Health responded to the interview by pre-written preparation of a questionnaire response.

The complete set of interview data was analysed by one member of the research team by two complete read-throughs, and by hand coding the data according to identified themes. In addition, Leximancer was used to validate the patterning of the data established by hand coding and analysis. Findings from the data were further validated through a process of peer review, involving a teleconference workshop and opportunity for identified reviewers to make written comments. A detailed methodology, including ethics approval, participant information sheet and consent form, and interviewee question sets, can be found in Annex 1.

7. Profiling the Australian health workforce

7.1 Introduction

Health service delivery and the associated education and training of the health workforce are specialized and labour intensive. Further, demand for health services is increasing as the population grows and ages (NHHRNC 2009). Costs are increasing, driven partly by advances in medical technology and partly by increasingly complex co-morbidities in an ageing population. Against this backdrop, there is an increasing focus on the preparation and flexibility of the health workforce, as education and training of the health workforce takes many years.

The skills, size and distribution of the health workforce therefore have become increasingly important areas for policy investigation and action, particularly over the past decade.

In 2010, ‘health and social assistance’ became the largest employing sector in Australia for the first time, accounting for 1.27 million employees or just over 11% of workers (ABS YEAR ). In 2010,6 the Australian Institute of Health and Welfare (AIHW) analysed census data and found that 548,384 people were employed as health workers. This number had increased by 22.8% from the 2001 census.

Almost a quarter (23.6%) of health workers are in unregulated occupations (AIHW 2006). There are many overlaps with ‘social assistance’ and ‘community service’ workforce categories, for example, in aged and disability care and mental health.

Many government reports, from the Productivity Commission’s influential study, Australia’s Health Workforce (2006), through to the final report of the National Health and Hospital Reform Commission in 2009, A Healthier Future for All Australians, have expressed concern about health workforce shortages, and a variety of remedies have been proposed.

This concern might appear paradoxical given the apparent strong growth in the overall size of the workforce. However, the picture is more complex than it seems. Overall, the clinical workforce is ageing, and increases in workforce supply through the import of overseas labour and an increase in domestic training places have led to bottlenecks and failures to adequately address issues of distribution. Within particular jurisdictions, there are shortages in some workforce categories and locations, but surpluses in others. In Australia, and in comparable countries such as the United Kingdom, there is a significant literature on increasing the career attractiveness of particular professions and specialties, but few studies exist on the career intentions of and possible lateral and vertical pathways in the health workforce.

At the same time, the unregulated and frequently invisible support health care workforce has a large component of less highly skilled labour, including many volunteers and home-based carers whose contributions are not fully understood or recognised.

Social, cultural and economic trends also shape the workforce context. While not fully seamless, labour markets are globalising and fast changing, and unstable economic conditions and the effect of government decisions impact on both the supply and demand for health workers and the degree of workforce mobility (WHO 2005). Career patterns have become relatively more fluid, with a shift to self-direction and autonomy, rather than intra-organisational career development (Lips-Wiersma and Monnierand 2006). Hours worked can vary according to economic conditions, perceived insecurity and differing generational attitudes towards work–life balance (Productivity Commission 2005).

The entrepreneurial activity of both educators and employers, and the market model of health worker demand and supply in an increasingly competitive context for health education providers,
can unwittingly exacerbate surpluses in some worker categories but shortages in others. Many jurisdictions have recognised that simple linear projection models of workforce planning are inadequate. Thus, in a search for solutions a number of initiatives to better utilise existing skills, and to upskill existing workers, have arisen throughout the sector in a relatively uncoordinated manner. The Australian Government’s Review of Australian Higher Education (Bradley et al. 2008) includes extensive reference to commercial and entrepreneurial activity within the education sector. Three years on, the market model has demonstrated duplications and shortages, signalling a need to ongoing monitoring of trends and strategic policy responses across both the health and education sectors.

7.2 Whole of health workforce

The most recent Australian Bureau of Statistics (ABS) quarterly labour force figures show that ‘Health and Social Assistance’ has become the largest category of employment for the first time, accounting for 1.27 million employees or just over 11% of workers.

ABS definitions under the heading of ‘social assistance’ encompass many employees who are not health workers, but the overall number is a valid trend indicator. The Australian Institute of Health and Welfare (AIHW) report, Health and Community Services Labour Force 2006, provides a more useful picture for health policymakers, as it is based on an analysis of census data. AIHW found that 842,615 people were employed within ‘health and community services’ occupations in 2006, of whom 548,384 (65.1%) were health workers (AIHW 2006). The number of health workers had increased by 22.8% between the 2006 and 2001 census years, and by 11.6% between 2001 and 1996. As a proportion of the overall workforce, the health workforce was also increasing, to 6.0% in 2006 from 5.1% in 1996.

The health workforce is much larger than the sum of those workers directly employed by state and territory jurisdictions. It is also larger than the regulated and unregulated categories, usually thought of as core health workers, and which exists across non-government, private and government sectors. AIHW found that almost a quarter (23.9%) of the health workforce were best categorised as ‘other health workers’. Most of these workers would be in the unregulated health workforce.

In 2008 the Council of Australian Governments, or COAG, agreed to create a national registration and accreditation scheme for health professionals, which came into operation on 1 July 2010 and is administered by the Australian Health Practitioner Regulation Agency, or AHPRA. Initially, professions registered in all or majority of states and territories were incorporated into the scheme, and a later call by the Australian Health Ministers’ Advisory Council resulted in the identification of four partially regulated professions for inclusion by 2012: Aboriginal and Torres Strait Islander health workers, Chinese medicine practitioners, medical radiation practitioners, and occupational therapists.

To add to this complexity, people employed within the health sector, but not having an occupational title or qualifications directly related to health, are omitted from the data. For instance, administrators in a state health department without any clinical qualification would not be counted, nor would receptionists at a general practice, even though many administrators are health practitioners and receptionists may be enrolled or registered nurses, which would bring them within an occupational and sectoral classification. In areas such as mental health, aged care, and personal care for people with disabilities or chronic conditions—all of which can be anticipated to grow—there is some overlap with other professional occupations (for instance, social workers) and also a growing number of sometimes ill-defined assistant and workforce categories (for instance, care givers) whose educational and training qualifications are likely to fall outside the ambit of health. The ABS ‘social assistance’ and ‘public administration’ sectoral classifications (to name only the two most obvious), as well as the ‘Community Services’ occupational classifications of the Australian and New Zealand Standard Classification of Occupations used by AIHW, are likely to contain significant numbers of employees whose work falls primarily within the health sector.

Historically, the Australian health workforce has developed around the professions of medicine and nursing, with allied health professions and support health workers later attaining varying recognition. In addition to the previously identified complexity of people employed as health workers are those workers who have combined roles involving one of more of the following: clinical practice, education and training, supervision, management and leadership.

Approaches to workforce planning and supply have addressed the distribution and size of particular professions by seeking to improve supply through an increase in training places and the importation of labour. However, there has been little attempt to conceptualise the health workforce as a whole.

**Educating the health workforce**

Health workers are educated and trained through universities, specialist colleges and vocational education providers and health services. Most higher education continues to be professional in orientation, with interprofessional education only recently appearing on the agenda. However, universities and technical and further education, or TAFE, colleges, have been beginning to offer more generalist health qualifications over the past few years, as detailed in Annex 2. At the vocational education and training, or VET, level, the picture is very structured and detailed, with a plethora of qualifications at diploma- and certificate-level training for various categories of delegated health workers and increasingly for other health workers. The boundaries of health education and training are porous, with some professions (for example, psychologists and social workers) extending beyond health and with some categories of health workers receiving vocational training under the auspices of retail, administration and care.

Recent debates around workforce innovation and reform (Ellis et al. 2006) have often focused on role substitution and the expansion of the scope of practice of existing health professions, for instance, nurses and pharmacists. However, while there may be sound and indeed compelling rationales for expanded scope of practice, this approach does not represent a magic bullet for positioning the capabilities of the existing workforce to be responsive to current and future patient/client health service requirements.

The nursing workforce is the single largest health worker category and is ageing (AIHW 2006). Additionally, across the professions, problems are being encountered with the supply of clinical training places, and the cost of education and training in both monetary and time terms is neither properly quantified nor unaffected by other demands on existing practitioners. There is little firm evidence base for the proposition that role substitution leads to cost savings, with some research in the United Kingdom suggesting that decreased labour costs are outweighed by lower productivity (Laurant et al. 2005; Sibbald et al. 2006).

In parallel with the pressure for more autonomous practice, a delegated model of practice has become attractive. Emergent categories such as physician assistants and physiotherapy assistants have been developed, along with corresponding courses and qualification requirements. Some informants have suggested that the drivers for the creation of assistant categories are based on a belief that some clinical skills are best entrusted to assistant practitioners where their scope of practice is limited and supervised, and entrepreneurialism on the part of educators and jurisdictions. A plethora of workforce categories arise, often on an as-needed basis, with little broader rationale.
Workforce planning has focused largely on the public hospital sector systems in each jurisdiction, and on the supply and projected demand for particular professional groups. However, the health sector comprises a multitude of employers from primary health care practitioner partnerships, through to large private hospitals. Aged care and mental health encompass a wide variety of employers, spread across public, community and private sectors.

Aged care provides a good example of the diversity of the health workforce, with registered practitioners comprising a minority of employees.

Some submissions to the recently announced Productivity Commission Inquiry into Aged Care (Productivity Commission 2010) encapsulate this trend, with tension arising between issues of safety and cost control and a desire of existing professional groups to defend their turf and bring care assistants under the auspices of regulated professions. At the same time, there is a realisation among some jurisdictions that the public interest requires attention to the training and provision of appropriately skilled workers for the entire sector, but many decisions still reflect the power of entrenched interests and a narrow understanding of the workforce as radiating outwards from a core of the professions and specialties.

The experience in the United Kingdom demonstrates that an unintended outcome of even a whole-of-workforce approach can be facilitating the creation of new semi-professional roles with a delegated scope of practice (for instance, rehabilitation assistants and health care assistants). One informant to this project from the United Kingdom commented on the cyclical nature of this dynamic—where professionalisation can lead to the abolition of relatively unskilled workforce categories as they become more expensive to employ and as scope of practice becomes contested, only to see workers fulfilling the same basic functions reinvented as a new category decades later. A similar story can be told of the history of various second-level nurse categories in New Zealand where, over a period of 70-plus years, the second-level nurse evolved from a registered hospital aid, to community nurse, through to enrolled nurse, and then nearing extinction, resulting in the cessation of all but two training programs (Brownie 1993).

Numerous examples exist where upskilling is perceived to lead to the function of care being delegated to other practitioners or workers. In a societal sense, this is indicated by the massive increase in voluntary carers and low-paid care givers, who are often educated only to secondary school or certificate I TAFE level. The research team has been impressed with the argument made by several informants, or respondents, that patients and clients are indifferent to the exact nature of the health workforce categories in New Zealand where, over a period of 70-plus years, the second-level nurse evolved from a registered hospital aid, to community nurse, through to enrolled nurse, and then nearing extinction, resulting in the cessation of all but two training programs (Brownie 1993).

None of this should suggest that appropriate levels of specialisation and clinical skill are not vital and necessary, but rather the research team argues that health workforce debates need to remain focused on the patient/client and their family and the systemic goals of health care delivery. The two areas encompassed by these research projects—a national competency-based education and training taxonomy and a competency-based career framework—must seek to balance appropriate workforce innovation and reform with a whole-of-sector perspective that transcends immediate needs and particular interests and remains firmly focused on patient/client care.

7.3 Summary

This project identifies the Australian health workforce as including several distinct groupings as illustrated in Figure 1, specifically, the following:

- specialist workforce
- regulated health workforce
- unregulated health workforce
- support workforce
- voluntary unpaid and carer workforce.

Figure 1. The Australian workforce comprises distinct groupings (adapted from Nancarrow and Borthwick 2005).

An increasing number of emergent health worker groups were identified that do not fit easily within the current workforce categories, for example, newly graduating physician assistant workers whose lack of national formal recognition within the health workforce marks their employable contributions as currently unclear.

The research team noted two distinct categories of roles within the emergent health workforce, namely, delegated health worker roles (for example, physician assistant and anaesthetic assistant roles) and autonomous health worker roles (for example, nurse practitioner). No clear model is apparent for the emergence of these roles or for the workforce modelling underpinning the start-up of corresponding courses within their educational institutions.
A key recommendation of this report is that HWA further interrogate data describing the full profile of the Australian health workforce as per the categories identified in this report and disseminate information to further enhance whole-of-workforce understanding.

Additionally, it is a recommendation of this report that HWA undertake further work to gauge the full extent of the emergent workforce categories, including consultation with key stakeholder groups on actual workforce and health service demand in order to form a strategic framework to guide the increasingly emergent developments.

8. Findings from the literature

While there is a very extensive academic literature on the concept of competence (Grzeda 2005; LeDeist and Winterton 2005), largely concerned with its application to debates around education and training (Jones and Moore 1993), professional requirements, work organisation and human resource management (Cheetham and Chivers 1996; Stoof et al. 2002), there is little published literature on the rationale or the pros and cons for the different types of competency-based frameworks and competency-based health career frameworks. Given the gaps in the published literature, the research team has distilled evidence and findings from both peer reviewed and grey literature to inform this section of the report, rather than simply summarising existing academic publications.

It should also be noted that the research team has not found any rigorous evaluations of either competency-based education or career frameworks in the academic literature. This may be because the former primarily entered the higher education and vocational education and training (VET) sectors in the past 20 years and the latter was primarily a development of the 2000s. There is some evidence about the application of the Skills Escalator and the National Health Service (NHS) career framework in the United Kingdom, which at this early stage of their implementation, are somewhat ambiguous as to their benefits. This will be discussed below and in the case study of the NHS career framework development (section 10.2.4).

The research team confronted both a scant published literature and the need to bring together some quite diverse bodies of knowledge in order to address the research topics. However, confidence in the findings and recommendations increased through validation by the process of interviews with key informants, and the analytical work done by the team. General agreement on the topics was found among the literature, insights from informants, and views formed by the research team as the project developed.

Little has yet been published on the rapid proliferation of competency-based education frameworks within the education and training sectors, professional bodies and health service sectors. In addition there is little firm knowledge of the contribution of competency-based career frameworks (and much misconception about the nature of the Skills Escalator).

8.1 Competency-based education and training frameworks

Different terminologies are used in the literature and in published education and training and career frameworks, including capability, role, standards, competence and competency. While there have been attempts to discern subtle differences in meaning between these terms, they are often interchangeable and the choice of descriptor depends on ideology, fashion or the desire to secure consensus.

Given the diversity of understandings of the terms utilised, and the importance of harmonising and clarifying them in achieving a well-articulated policy goal communicable to all stakeholders, the research team recommends that HWA seek to formulate an agreed-upon and readily understandable set of definitions as a means of structuring further consultations. High-quality work in this area has already been carried out by jurisdictions and professional bodies, which have informed the preparation of the glossary within this report.
8.1.1 History

The concept of competency first arose during the 1960s, and since then has had many definitions and reconceptualisations (Brown 1993; Sandberg 2000; Garavan and McGuire 2001; Stoot et al. 2002; Lans and Mulder 2009). The competency movement had two interrelated objectives: closer specification of tasks performed as part of roles at work and rationalisation of the training system. The first objective had its origins in the scientific management movement of the early 20th century, and in later movements largely termed as ‘personnel management’, such as human relations. Put simply, while the scientific management paradigm of Taylorism sought knowledge about efficiency and time in performing particular tasks (Bahnson 2000), the human relations perspective viewed job design and evaluation through the lens of industrial psychology and social science (Manley and Garbett 2000).

Comparable desires to modernise education, and particularly vocational education and training, coalesced in the concept that a ‘competence’ or ‘competency’ could be a common tool capable of being taught, assessed and utilised across formal educational institutions, workplace training settings and human resource management contexts (Hager and Gonczi 1996). Still later, attempts to render management and leadership more transparent and scientific led to the extension of competence to higher-order work roles (Antonacopoulou and FitzGerald 1996), and various reformist outlooks in public sector management adopted the concept (Horton 2000). As it developed, the competency movement also drew on a range of competing and consolidating insights about the acquisition of knowledge, skills and attributes (Guthrie 2009). Additionally, the movement articulated the desire to make the economy more efficient through better mobility of labour and more productive labour utilisation, a goal that it said could be obtainable through training being comparable across industry and vocational sectors, rather than dominated by the needs of particular workplaces, craft or guild traditions, and/or pedagogical philosophies particular to different education institutions (Smith 2010).

8.1.2 Australian contexts

The current Australian debate on the utility of competency frameworks in health workforce innovation and health education draws both on this broader history and on factors specific to Australian education and training and the health sector.

Following policy debates in the mid-to-late 1980s, the Australian Government made important reforms to the VET sector in the early 1990s (Smith 2010). These reforms standardised vocational education and training (VET) qualifications across the nation, and moved to the use of competency standards through training packages (Allais et al. 2009). These changes envisaged the development of a flexible workforce with a high degree of transferability of skills across workforce categories and needs. Since the initial reframing of qualifications, curriculum and assessment within VET, the shift towards competency standards as a basis for education, accreditation and work evaluation has gathered pace (Allais et al. 2009). Competencies, though often labelled differently and conceptualised as outcomes, are now becoming an important benchmark for higher education standards (ANF 2005; AMA 2010; AMC 2010). Such developments are clearly evident through the activity of the various professional groupings within both health and other sectors and the desire of the Commonwealth to refine the Australian Qualifications Framework to rank all recognised qualifications from certificate I level through to doctoral level (AQF Council 2009).

8.1.3 Health sector contexts: Clinical competencies and minimal competencies

Within the health sector, a number of different trajectories can be distinguished. Across Australia, from the early 2000s onwards, postgraduate medical specialty colleges have increasingly been following the lead of Canadian exemplars and the CanMEDS framework in articulating competency standards for education and practice. A number of professions are either adopting a similar approach or, in the case of nursing and midwifery, have an extensive history in the use of competency frameworks to a point of being possible pioneers in the field (Chiarella et al. 2008). In the case of nursing and allied health professions, the adoption of competency frameworks has often been part of the process of gaining legitimacy as professions, leading and/or following an expansion in scope of practice. Competencies were discussed as desirable for nursing education as early as 1977 (Bueno 1978). Meanwhile, frameworks for interprofessional education and practice have also been growing, again most notably in Canadian jurisdictions.

Concerns about risk, legal liability and safe practice have also driven the competency agenda. These patterns are highly evident across all industries. Development and adoption of various frameworks specifying safety competencies for particular procedures, and/or seeking to ensure public or employee safety, are commonplace in matters pertaining to occupational health and safety, or OH&S, requirements. These include the safe use of equipment; a broad range of emergency procedures, including fire safety; and matters pertaining to public and/or patient safety; such as the safe handling and administration of drugs. Regulatory activity is common in these areas. A number of these competency requirements also align with international frameworks and/or regulatory requirements, for example, the World Health Organization providing health-related examples (WHO 2005) or the airline industry and associated international aviation standards.

Much of the concern articulated in the higher education literature has revolved around a fear that narrowly drawn competencies and the level of task specificity required in VET may compromise capacity to educate and develop higher-order clinical reasoning skills necessary for expert practice—a concept recently described as ‘tacit knowledge’ (AMC 2010). However, CanMEDS and other frameworks that have adapted a similar model seek to counter this perception by adopting a small number of top-level domains that are applicable across a range of practice areas and levels of learning and expertise (Frank, Mungroo et al. 2010). Similarly, educators in Australia argued for years that there is no necessity to the reductionist use of competencies (Gonczi 1998).

8.1.4 The Australian vocational education and training (VET) sector

The Community Services and Health Industry Skills Council, or CS&HISC, is responsible for the definition of a competency framework across the Australian VET health workforce, including defining existing and emergent roles (CS&HISC 2011 ). The national VET competency standards and qualifications for the community services and health industries are agreed to nationally, and reflect roles of about 700,000 Australian workers. The qualifications and standards are located in the HLT07 Health and CHC08 Community Services Training Packages (CS&HISC 2011, 2011 ) and are maintained by the council. These packages house more than 1000 competency standards and 170 qualifications. The packages have been in place since 1999 for community services and 2002 for health. The council updates the qualifications and competency standards based on industry supply and demand drivers captured annually in an environmental scan (CS&HISC 2011 ).

The competency standards describe generic and specialist work, skills and knowledge across different roles and levels extending from certificate I through to vocational graduate diploma. Domains, or areas of work, are used to group and cluster competency standards, and include...
The packages form the basis of VET qualifications and have influenced the formation of job roles and industry classifications across the range of different employer structures. A key feature of these packages is that they influence development of integrated skills and design of services and work, which are driven by industry and client demand at a national level. In theory, if such a model was applied across the whole of the workforce rather than the VET sector only, formation of new and changed work roles could more quickly respond to client and patient demand, and the innovation and reform objective of more integrated and interdisciplinary changes could be significantly realised.

The qualifications and competency standards in CSAHISC’s training packages as positioned against the Australian Qualifications Framework deliver the same function as the Skills Escalator developed as part of the Agenda for Change project initiative for the National Health Service in the United Kingdom over the past decade (Agenda for Change Project Team 2004), although for the VET sector only. However, the packages enable development of competency standards at the highest levels. For example, the Vocational Graduate Diploma of Family Dispute Resolution reflects work undertaken by solicitors, lawyers, barristers, psychologists, mediators or welfare workers. Similarly, the Vocational Graduate Diploma of Community Services (Statutory Child Protection) reflects work undertaken by a university graduate in social work or psychology or a worker with VET qualifications or on the job experience.

The VET sector of the workforce has not been historically organised and recognised in the way the regulated professions have been. Arguably, the benefits of structural flexibility and integration achieved through the packages have been achieved due to the absence of strong professional silos.

The packages are now integral to ongoing discussion of a more integrated workforce and research in relation to potential whole-of-industry competency frameworks. Developments have now reached a juncture where expansion of the VET competency standards (and their potential expansion) is influencing design of the broader health and community services team and service models. New delegation and substitution arrangements are being enabled in key areas such as allied health and aged care through the Certificate IV in Allied Health Assistant and Certificate IV in Aged Care (TGA 2011a, 2011b). The competency standards in these qualifications reflect functions previously recognised as within the domain of degree-qualified professions but are now undertaken as part of the broader team.

The VET competency standards and qualifications framework have clearly been delivering what may be termed ‘innovative’ solutions for the health and community services industry. New service models that focus on clients remaining in community settings will require new combinations of specialist and generic skills working independently and/or in delegated or substituted arrangements across medical, nursing and allied health areas. Opportunity now exists for the policy debates about the relative merits of VET or higher education sectors and between VET and professional roles to move beyond oppositional attitudes and to reposition the debates in support of client demand-driven solutions.

Similarly, opportunity exists for deliberating on and researching all-of-workforce competency frameworks and related policy development and reform, and for this to include detailed consideration of nomenclature and structure, as well as the development and implementation contexts of the VET competency standards—the aim being to better share ‘whole-of-workforce’ learning and developments across both VET and higher education sectors.

8.1.5 Benefits and drivers

This report has already noted many benefits and drivers to support the development and use of competency frameworks. These can be summarised as follows:

- to enhance alignment between education and the needs of industry and related client base
- in the health context, to enhance alignment between education and the needs of individual health consumers and communities
- to facilitate consistent practice standards
- to provide open and equitable assessment of international practitioners
- to regulate a profession
- to guide curriculum development
- to provide a public statement about the profession
- to identify relationships between professions
- to more readily assist processes for the recognition of prior learning
- to increase accountability
- to assist in recruitment
- to facilitate performance review evaluation
- to improve staff morale
- to guide clinical supervision, mentoring and continuing education (PSA 2003; Spencer 2005).

The literature demonstrates that some gains have been made through the facilitation of interprofessional education and translatability of professional skills, as well as workplace planning. Evidence for the contribution that competency-based education frameworks make to ensuring appropriate skill mix for the delivery of care and to staff motivation is less clear-cut.

There are polarised views within the literature over the purpose and usefulness of competency-based frameworks. In particular, educators tend to be suspicious of the implications of the terms ‘competence’ and ‘competency’, fearing that these detract from the broader liberal purposes of higher education and imply assimilation with VET. Related concerns exist among some professions about the difficulty of reducing higher-order clinical decision-making skills, and an ethos of care, to the language of competencies.

A wide range of drivers have been identified in this report for the increased adoption of competency-based education and training frameworks, and their potential utility across the whole of workforce. These are summarised in Section 5.3.
8.1.6 Examples

An important finding of this research project has been a developing awareness of the sheer proliferation of competency frameworks in a range of Australian contexts. This has been revealed from sourcing grey literature and from the views of informants. While terminology differs considerably, competency frameworks have been adopted or are being developed by numerous health stakeholders, ranging from employers, through to professional groups, to educators. Many are concealed under the guise of contemporary terminology, including outcome-based frameworks, capability frameworks, threshold learning outcomes and more. Nevertheless, each defines expectations of skill and competence. Some of the most significant examples of frameworks are highlighted in Annex 4.

In addition, the following three competency-based frameworks are described in detail in section 10.1:

• CanMEDS
• Australian Learning and Teaching Council, or ALTC, Threshold Learning Outcomes Framework
• Hunter New England Capability Framework.

8.1.7 Recent crucial international developments

Three significant publications, all of them very recent, exemplify some of the most advanced insights internationally:

• Frank and colleagues (Frank, Snell et al. 2010) report on an international consensus conference designed to ‘examine competency-based medical education conceptual issues and current debates’. Simultaneously, Frank and co-authors also published a systematic review of published definitions (Frank, Mungroo et al. 2010). Further work is being done internationally to attain consensus about concepts and definitions for the use of competencies in clinical education. This work builds on the impetus of the increasingly widely disseminated CanMEDS model. The research team has identified the possibility that international developments have to some extent outrun the state of the debate in Australia.

• The recent paper, ‘Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world’ (Frenk et al. 2010), representing the findings of a commission of 20 international educational and professional leaders, spells out a transformative vision for health education in the 21st century. The authors identify numerous areas where professional education has failed to meet population health challenges, including a ‘mismatch of competencies to patient and population needs’. The authors argue that ‘laudable efforts’ to redress the disjunction between existing models of professional education and changing social, cultural, demographic and epidemiological conditions have failed due to ‘the tendency of the various professions to act in isolation from or even in competition with each other’. The authors see competencies as integral to their vision for a transformation of the health systems of the world and for renewing health practice in this new century of challenges.

• A major review (Collins 2010) was conducted of the United Kingdom Foundation Programme for postgraduate medical education and workplace training, an initiative that formed part of a suite of measures associated with the Modernising Medical Careers agenda developed since 2003. While the review was detailed and far ranging, Collins found disquiet in several areas of the training program. Much criticism was rightly levelled at overspecified and overly frequent workplace assessments, and their subsequent burden on the core delivery of patient care—importantly illustrating what can go wrong during the implementation of a competency-based curriculum development.

All of these papers provide further validation of the analytical insights and conclusions developed during the process of these research projects.

8.1.8 Resourcing Implications

Our research project has revealed several resource implications for competency-based education and training frameworks.

• Grey literature on the implementation of competency-based education and training frameworks emphasises that resourcing demands are significant.

• The cost of competency development and maintenance is high, as sufficient resources in time and cost need to be devoted to consultation and revision of competencies to ensure their currency.

• Concern has been expressed about the degree to which the use of competency frameworks for assessment within clinical placements and for workplace evaluation can tie up limited human resources, which might otherwise be more appropriately and productively devoted to patient care (Collins 2010).

8.1.9 Lessons

Our research project also noted several important lessons arising from documented projects and case studies in Australia and overseas.

• Overspecification (too many domains, too many levels) impedes implementation and is too costly to maintain and upgrade.

• Adequate preparation, extensive consultation and moderate specification are instrumental to successful implementation and utilisation.

• Costings must cover development, consultation, implementation (including training of supervisors and students) plus maintenance and updates.

• Overspecification interferes significantly with optimal time balances between teaching, supervision and patient care. A competency-based education and training framework is essential for quality assurance purposes but must not detract unduly from the time needed for patient care and service delivery.

8.1.10 Transcending opposed positions: Beyond ‘good tools, used badly’

Examination of the literature, published and unpublished, and discussions with key informants led the researchers in this project team to a view that many of the apparent concerns expressed regarding the validity and value of competency-based frameworks can be reconciled. There is increasing Australian-based acceptance and rapidly expanding international activity highlighting the utility of such frameworks for a range of uses and in a variety of contexts—all of which can be harmoniously aligned if an excessively narrow approach is avoided. Competency frameworks can yield substantial benefits in creating and maintaining a common language among different professional traditions, better aligning education to health service need to deepen the knowledge skills and awareness across the health workforce, and systematising and preparing medical and health education for new challenges, in partnership with jurisdictions, professions and employers.

Much of the concern expressed revolves around the view (mistaken, in principle) that competencies necessarily have to be narrowly task focused and highly specified. Experience has shown that this is a real risk in practice, with some frameworks having too many levels,
and encompassing a far too detailed and specific set of competencies under a proliferation of domains. This could lead to a situation where the part drives out the whole, and exacerbates the significant demands on clinical educators and workplace assessors at the cost of patient care, thus nullifying the aim of well-aligned frameworks.

Because good tools can be used badly, it does not mean that they are bad tools and should be avoided. Professions have already widely adopted competency-based education and training frameworks, and if used well, the worries about a lack of time to develop higher-order clinical skills and tacit knowledge are avoidable.

The research team has framed the recommendations of this report with care. This report aims to underline the lessons learned from the mis-application of frameworks while also emphasising the view that the introduction of well-designed frameworks, including an overarching whole-of-workforce framework, is a far from impossible task, and can bring significant benefits across the workforce and the health sector.

8.2 Competency-based career frameworks

8.2.1 Definitions/Terminology and contexts

Policy impetus for the introduction of a competency-based career framework in Australia derives largely from concerns relating to workforce supply and the impact of shifting patterns of work, career progression and motivation. At the same time, there is a belief that such frameworks will aid in workforce mobility, vertical escalation and horizontal integration. The National Health and Hospitals Reform Commission report, *A Healthier Future for All Australians* (NHHRC 2009), and the Productivity Commission report, *Australia’s Health Workforce* (Productivity Commission 2005), are key contributors to a developing agenda for ensuring that workforce skills can be harnessed effectively to meet current and changing population and patient health needs.

Discussion of a competency-based career framework arises from this policy debate, but as yet there has been no clear articulation of its possible nature and purpose in the Australian context.

International literature does not adequately supplement the paucity of Australian publications on competency-based career frameworks. While a body of literature on changing career patterns exists, a more specific focus on sectoral career frameworks is largely absent. The exception is some literature on the Skills Escalator, which we consider briefly below and in more detail in section 10.2.4.

As noted earlier in this report, the terms ‘competence’ and ‘competency’ have been the subject of a very lively and extensive debate about their meaning (Boon and van der Klink 2001; Whiddett and Hollyforde 2003; LeDeist and Winterton 2005; Lans and Mulder 2009; Winterton 2009). However, there is no comparable body of literature on the nature of career frameworks or competency-based career frameworks.

The research team has defined the concepts based on grey literature, with inference from the scant published literature, and drawing on the views of informants, as follows.

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**Career frameworks** include a number of clearly defined levels at which a role could be performed, from initial entry level roles to more expert or specialist level roles. A career framework can be used to aid workforce flexibility, provide a common currency to map employees’ competence portfolios, and to identify areas of transferability to other job roles. This allows progression in directions that may not have been identified through traditional routes.

**Competency-based career frameworks** group competencies under domains (headings for classifying related competencies) in order to enable practitioners or workers to be assessed, to move up a career pathway, or to have their skills and learning recognised for lateral movement. Such domains may or may not be aligned with remuneration.

As already observed, no paper has sought to conceptualise the purpose and contributions of a competency-based career framework. However, published documents on the conceptualisation, development and implementation of the Skills Escalator and its associations with the NHS Knowledge and Skills Framework in the United Kingdom, and the single job evaluation tool embodied in the Agenda for Change pay modernisation initiative, as well as unpublished grey literature, enable the elucidation of some key points.

- A career framework can rationalise an ever-expanding set of workplace categories and role designations (particularly among the emergent supplementary and delegated practice ‘assistant’ workforces) into a more comparable set of roles that can be defined according to work value.
A career framework may assist in better deployment of skills within multi-skilled teams, interprofessional collaborative teams, and where there are surpluses in some professional categories and deficits in others.

A career framework can unlock hidden skills in the lower-paid proportion of the workforce, and encourage vertical escalation.

A career framework can assist in enabling better utilisation of existing skills, particularly among allied health professions and nursing.

A career framework may encourage recruitment and retention.

A career framework may enable more systematic and evidence-based workforce planning.

The United Kingdom literature also demonstrates that flexible implementation over a few years can build momentum for professions to develop their own frameworks that align with the overall framework, and for the emergence of a more rational and clearer approach to determining appropriate scope of practice among a diverse set of professions and workforce categories. The facilitative nature of the process has also spread its benefits outside the NHS core into the private and not-for-profit sectors.

8.2.2 Examples

Only one attempt has been made to secure and implement whole-of-workforce and whole-of-sector coverage—the suite of initiatives based around the Skills Escalator in the United Kingdom. From the late 1990s, much policy activity occurred within that country around modernisation of the NHS generally, and health careers, job evaluation and skills assessment more specifically. The Skills Escalator is an indicative framework, allowing existing skills to be assessed to facilitate horizontal and vertical movement. It was the basis for an NHS-wide career framework for allied health professionals, published in 2008. However, implementation has been slow, and buy-in was not obtained from nurses and medical doctors. Nevertheless, comparability among existing and emerging roles is facilitated across the NHS by the intersection of pay banding and job evaluation through the Agenda for Change initiative, and a range of tools can be utilised by the employers, or NHS Trusts, for workforce planning and deployment, tools that are maintained and facilitated by the statutory authority, Skills for Health. More recently, some United Kingdom jurisdictions have encompassed social care occupations within the health sector framework, and Skills for Care applies the same principles to these care occupations.

Further detail of the published studies on the career framework experience in the United Kingdom is given in the corresponding case study (section 10.2.4).

Developments for a whole-of-workforce framework have been articulated in New Zealand, but for various reasons (considered in the case study below), the only competency-based career framework to be implemented to date is for a subset of the health workforce, namely mental health.

South Australia has implemented an allied health framework (South Australia Department of Health 2010), tied to awards through the state’s public sector enterprise bargaining process.

8.2.3 Resourcing and barriers/limitations—lessons learnt

The literature (both peer reviewed and commissioned by the Department of Health and the Skills for Health in the United Kingdom) on that country’s experience shows:

- significant resourcing is vital, as is a framework that avoids complexity and promotes flexibility
- a framework may have most effect in enabling the creation of new ‘assistant’ categories of the workforce with delegated rather than autonomous practice, something on which there is a divergence of views among key informants. Specifically, some key informants expressed the view that a number of the new ‘assistant’ categories of workers had very narrowly specified scopes of practice, which quite unintentionally could lead to less, rather than more, workforce flexibility
- the process in the United Kingdom was accompanied by a very significant expansion of public funding for the NHS, and it is unclear how the benefits of the framework will continue in an environment where funding pressure has returned owing to the recent global financial crisis and change of government
- expectations raised about the alignment of pay with skills have often been realised, and this may provide a disincentive for staff to upskill.

8.2.4 Lessons

The United Kingdom literature reveals broader concerns and lessons, which have applications for the development of competency frameworks in Australia.

- Consultation with both unions and professions is essential for successful implementation.
- Consultation must begin before the proposal for implementation of a framework to allay fears and to communicate clarity about the project and its goals and benefits.
- There must be clarity about linkage with remuneration and the industrial system.

A publishable literature review is a deliverable from this project, and will expand on the literature noted in this section.
9. Findings from key informants

As noted in the methodology (section 6 and Annex 1), the research team conducted a rigorous process of qualitative research, involving interviews with key informants from selected groupings, both nationally and internationally. While specifics of the representation of informants’ views will be detailed in this section, it is important to underline by way of introduction that many respondents’ opinions emphasised:

- a lack of readily apparent justification for both a national competency-based education and training taxonomy and a competency-based career framework, with the recurrent question of “Why?” put to the research team by almost every informant.
- a belief that workforce issues have been treated as secondary to other health policy initiatives and that there is an urgent need for whole-of-government coordination and a broadening of focus beyond professions and direct employees of jurisdictions.
- that the recent education-led increases in graduate numbers, new programs and new categories of health workers is not well connected to an understanding of workforce demand, and is exacerbating rather than solving a range of workforce supply issues.
- that solutions to perceived workforce and quality-of-care issues have often been developed in a haphazard nature based on urgent need and that a strategic overview, including the development of appropriate developed frameworks across the whole sector, is an essential task.

9.1 Competency-based education and training frameworks

Consultations conducted by the research team revealed that the idea of a competency-based education and training framework was better understood among most respondents than a career framework. Many respondents were aware of frameworks that were in place within particular professions, for example, the Australian Nursing and Midwifery Council national competency standards, which guide both curriculum and professional assessment (ANMC 2006). Some respondents had been personally involved in the development of such frameworks.

A significant finding of this project is the sheer multiplicity of such frameworks and the varying bodies involved in developing, studying, accrediting or articulating them. Frameworks arose from a wide variety of motivations, often being developed to respond to perceived needs bridging education and practice settings. Agreement on the value of a national framework is broad based, but with some reservations and widely expressed notes of caution. The research team and HWA representatives concluded that it was simply impossible, at this stage, to be definitive about the number of frameworks in use or in prospect.

Respondents from the higher education sector often expressed concern about the introduction of a whole-of-sector framework had still to be made, and a concurrent point was that the process, to date, appeared to be fairly profession-specific. Because many frameworks had been developed either for university or professional purposes, it was not obvious how a national framework would apply to unregulated workers holding post-secondary qualifications obtained (if at all) through the VET sector. One professional informant, for instance, commented that some pharmacy assistants outside the hospital sector were trained under the auspices of retail, not health.

While there was general recognition that a national taxonomy (classification framework) could be of use in facilitating knowledge-sharing and interprofessional collaboration and in avoiding the fragmentation of care—particularly through the refinement and development of a shared language—an understanding about the purpose of a national competency-based education and training framework was less developed than an understanding of the concept of such frameworks.

9.1.1 Benefits

Reflecting the significant activity in the competency-based education and training framework area, an understanding of potential benefits was fairly common across all respondent groups. Further, this commonality emerged as a current topic of discussion throughout much of the sector. Perceived benefits include:

- development of a shared language
- better alignment between education and the industry, that is, the health sector
- opportunities for further understanding and knowledge sharing across different professions and workforce categories
- enhanced understanding among students of the contributions and knowledge base of different professions
- possibility of more seamless articulation and recognition of prior learning, not only between VET and higher education but also within higher education and postgraduate training through colleges
- potential for skills migration within the existing workforce, and better preparation for new and emergent demands on the health system
- potential for less fragmented care, and for more patient-centred practice
- potential for better utilisation of skills in geographical areas and demographics where the full gamut of health specialties and occupations is never likely to be present
- improved planning of workforce, education and training provision, and skill mix, both generally and within particular jurisdictions and employers.

Although respondents identified benefits, this does not mean that respondents believed that achievement of them would be a simple matter, nor that the successful development of a national taxonomy would be a panacea for the health system.

Despite the level of expressed reservation, some professionals, particularly in specialist colleges and allied health professions, were very positive about the possible contribution of competency-based education frameworks, provided they were limited to a range of domains that could apply commonly across all of the health sector without undue complexity.
9.1.2 Limitations and resources

While jurisdiction and employer informants saw potential in a framework that facilitated alignment between education and the health sector, gave more seamless recognition of prior learning, and had potential utility in workforce development, some cautioned that the overall result would not be a decrease in training time, because of the potential increases in workforce assessment time and associated resources.

One of the commonalities of views around competency-based education frameworks is the proposition that supervision and training are already stretched, and that a shift towards competency-based frameworks would exacerbate this problem without a significant injection of resources. Many feared the possibility of an imbalance in the number of work-place assessments that might accompany widespread implementation of competency-based education training frameworks, and viewed the potential for over-assessment as negatively impacting on both the trainee experience and the time available for both supervisor and trainee to deliver patient care.

There was little if any evidence that competency-based education would shorten training across the sector. This was particularly true for registered professional and specialist roles where a framework, and viewed the potential for over-assessment as negatively impacting on both the trainee experience and the time available for both supervisor and trainee to deliver patient care.

A number of points were made about implementation:

- A large number of respondents from the perspectives of curriculum, professions and educators and some jurisdictions and employers heavily emphasised that timeframes, to be realistic, had to be medium term. Five years to 20 years were the figures nominated. Respondents suggested that real inertia has to be overcome gradually, in a systematic and consultative manner. One university respondent observed that the structure of professions and education had developed in an unplanned manner for more than a century. Clearly, time spans of 5–20 years are too long given the workforce issues currently confronting the sector. Despite the historical timeframes associated with change, the authors of this report suggest that well thought-out strategies need to be identified to progress complex agendas of importance in a timely manner to address critical workforce issues.

- Resources were mentioned by almost all respondents. Pressures on clinical supervision are already extreme, and in the eyes of some respondents, the system works on the voluntary donation of time. Where workforce shortages exist, the time required or spent on clinical supervision and assessment can be challenged. A related view was that delivery of patient care must be appropriately balanced with assessment, training and supervision.

- Respondents often emphasised the importance of a strong lead, including a political lead, and that whole-of-government coordination and carriage of any development of a national framework was vital to its realisation.

- For a national framework to be meaningful, numerous respondents recognised that the health sector would need to extend beyond jurisdictions and cover a broader focus than professions and public hospitals. Primary care, aged care, mental health, and the extensive number of unpaid and low-paid workers and carers need to be considered, as do the private and community sectors with their great diversity of employers.

One respondent commented that a cultural change would be required among supervisors, and that well-developed implementation resources as part of a change management program would be essential, for success of competency-based education in the health sector. Another respondent believed that a ‘dogmatic insistence on difference’ among professions would be a major barrier.

Respondents were aware that the alignment of whole-of-workforce competencies with existing professional competency frameworks and other standards would be politically sensitive, and that it was essential to achieve buy-in from professional groups and to avoid the perception of cursory consultations. While many respondents, including from professions, were hopeful about the prospect of breaking down professional ‘silos’ and facilitating interprofessional learning and collaboration, others cautioned that it would be unwise to ignore the barriers stemming from many decades of embedded historical practice in both education and professional identities.

Respondents viewed the alignment of competencies across different university faculties and schools, professional bodies, colleges and VET providers as a very significant exercise. Some respondents were concerned that numerous initiatives (including the Medical Deans Competency Project, the Australian Qualifications Framework review and the development of Teaching and Learning Outcome s) could experience confusion if they proceeded without the overall coordination and policy purpose of competency alignment. However, some respondents emphasised that professional silos were repositories of professional knowledge, and expressed apprehensive about the possible loss of necessary specialist expertise, fearing the introduction of more ‘generic health worker’ categories. Attitudes to issues about task substitution appeared to have influenced respondents’ thinking, but some respondents were confident that a robust professional identity would not be threatened by greater collaboration.
9.2 Competency-based career frameworks

Consultations conducted by the research team revealed that the idea of a competency-based career framework was well understood and supported by jurisdictions and employers, but little understood by other informants, some of whom indicated no prior knowledge of the concept.

Jurisdictions were very clear about the purposes, value and benefits of a framework. A health competency-based career framework would help to create the sustainable and quality workforce that Australia needs for the 21st century. They noted that whole-of-workforce competency-based career frameworks held the promise of more rational and clearer policies, practices and procedures in health workforce recruitment, development and retention. Such frameworks, they noted, more seamlessly progressed individuals in the health sector to greater levels of clinical responsibility (vertical escalation) and more easily allowed practitioners to deploy their skills across professional boundaries (horizontal integration).

A career framework was perceived by employers as a priority, a potential solution, to two related problems:

- difficulties in aligning work value and parity among employees, particularly those in allied health and semi-professions and for support workers
- inability to best deploy skills across professional boundaries.

Recruitment of a future workforce and retention of an existing workforce were also possible contributions to a career framework, but its prime value was seen in rationalising current workforce categories to bring parity, order and structure into planning, costs and management of health needs and delivery.

Other key informants (for instance, educators and professions) were unsure about the nature of a competency-based career framework and, therefore, most often unable to comment either positively, negatively or neutrally. The United Kingdom model was primarily understood through hearsay only. Some respondents were dubious of the model or even hostile, based on their limited knowledge of the Skills Escalator mechanism. Many aspects of contentious debates (such as role or task substitution) around workforce flexibility appeared to have influenced negative perceptions. Some informants were suspicious that development of a competency-based career framework might become an agenda to introduce a ‘generic health worker category’. Of those professionals who did understand the concept, support for the principle of a career framework was stronger in informants from allied health professions, where limitations of clinical career pathways were recognised. Most of the adverse comments came from only some of those informants who had difficulty understanding the nature of competency-based career framework. The greater number of interviewees from categories other than employers and jurisdictions knew nothing or very little about the concept or implications of a competency-based career framework, and did not comment at all or stated that they were not in a position to make an informed comment.

9.2.1 Benefits

While the majority of educational and professional respondents indicated little understanding of the potential benefits of a competency-based career framework, one respondent commented that such a framework might lead to health workers viewing themselves as ‘specialists in care’ rather than in any particular professional grouping. Better translatable skills across disciplines and workplace categories would aid patient focus was a common view among educational and professional respondents.

Several respondents identified benefits around better communication and teamwork, and the promotion of interprofessional practice.

Discussions with Australian health workforce employers provided more detailed insights into the perceived benefits of a competency-based career framework. Those interviewed perceived some real win-win outcomes would be available through the development and implementation of what was commonly described as a ‘single-spine’ workforce framework on either a state-, territory- or nation-wide basis. Perceived benefits include:

- greater clarity and transparency regarding workforce roles and accountabilities
- improved patient and consumer care through increased flexibility in utilising the health workforce, and clear articulation and maintenance of skills and competencies
- clearer career pathways and opportunities for the health workforce
- greater horizontal and vertical flexibility in workforce utilisation
- simplification of complex employment arrangements and control of burgeoning new worker categories
- strong base for maintaining role and remuneration parity between workforce groupings (for frameworks with links to industrial workforce agreements)
- minimisation of escalating health workforce costs through more flexible use of the workforce (for frameworks with links to industrial workforce agreements).

Issues over scope of practice, and any tensions between delegated and autonomous practice, could be resolved more deftly through clear pathways both horizontal and vertical, and by the formulation and dissemination of a shared language in communications based on competency frameworks.

9.2.2 Cautionary note

One respondent cautioned that the translation of professional competencies into workforce banding and work allocation might have the effect of utilising ‘an industrial instrument to put a fence around the profession’.

The issue of specialisation was raised by a range of informants from professions, with concern being expressed that a competency-based career framework might lead to the replacement of the existing workforce with generic health workers and a reduction in specialty practitioners. However, other respondents from professions believed that an appropriate balance between profession-specific and common competencies could be struck. As with sensitivities expressed around the term ‘competency’ in debates over education and training, language was seen as being very important politically and ideologically to discussions about competency-based career frameworks.
9.2.4 A competency-based career framework — the nature of the project

Implementation success. Kingdom and New Zealand contexts highlighted a number of principles, or lessons, for system in the United Kingdom, the Australian system had a much larger proportion of workers case in Australia’s largely federated system of health governance. Also, compared with the health sector. Many believed that the movement towards a competency-based career framework was largely being driven by jurisdictions, and that it tended to only focus on the public sector by spatial workforce. One employer respondent commented that the degree to which private hospitals accounted for beds, surgical cases and share of employment had not really been considered in the development of such a framework. Some respondents believed that the framework concept made most sense for rural and regional practice, where it was unrealistic to expect the whole range of medical and allied health specialties to be present.

9.2.3 Resourcing and implementation

In timeframes for implementation, most respondents suggested that the design and implementation of a career framework would take several years, at best. A respondent familiar with the United Kingdom Department of Health’s Skills Escalator emphasised that the National Health Service, or NHS, in that country had a much more unified governance structure, with closer links and agreements between educators and the department, than was historically the case in Australia’s largely federated system of health governance. Also, compared with the health system in the United Kingdom, the Australian system had a much larger proportion of workers employed in the private sector.

Key informants who had undertaken the process of career framework development in United Kingdom and New Zealand contexts highlighted a number of principles, or lessons, for implementation success.

- The essential requirement is to consult extensively in the developmental phase before implementation. Insufficient up-front consultation in the United Kingdom initiative resulted in only allied health workers being involved in the scheme. The project had to be halted mid-point to undertake six months of road shows to allay fears and enable continued development.
- Consultation must include all key stakeholders with multiple question-and-answer, or Q&A, sessions to allay fears and establish a common platform and agreement for moving forward.
- Complexity should be avoided. If the framework is too complex, it becomes highly expensive to develop, maintain and assess, and counter to quality and safety agendas—specifically, a complex framework requires so much workplace measurement time that it detracts from time available for patient care.

9.2.4 A competency-based career framework— the nature of the project

Industrial relations and the award system were also emphasised by jurisdictions, employers and regulators as an important focus for consideration by those aiming to develop and implement a competency-based career framework, with these issues being identified as both a barrier to and an enabler of implementation.

All informant groups expressed the view that development of a competency-based career framework was a workforce project, while its implementation was largely seen as an industrial project. Further, the view was expressed that implementation is complex in a federated environment such as Australia, and might require ‘award simplification’ and ‘award amalgamation’ to enable nation-wide development and implementation.

However, according to researchers in this project, implementation of a competency-based career framework may or may not be an industrial project. The Australian experience in reform of the award system for the engineering sector in the 1990s is an example of an implemented framework with clear industrial links (see Annex 6). In contrast, the New Zealand mental health framework Let’s Get Real (National Centre of Mental Health Research Information and Workforce Development 2009) is an example of a competency-based career framework (see section 10.2.2) that is nearing full implementation without industrial links.

One respondent described industrial relations as ‘the elephant in the room’, with many others sounding a similar note. A key issue with the NHS Knowledge and Skills Framework in the United Kingdom (see case study in section 10.2.4) was expectations that pay would align with increased qualifications or competencies. The United Kingdom experience, which included the creation of a single job evaluation tool and three common pay spines, is more complex than is sometimes realised. But the principle remains the same—respondents indicated that while great benefits could be reaped from industrial simplification, direct linkage to remuneration would raise enormous political and implementation issues.

The experiences of implementation in the United Kingdom and New Zealand demonstrate in different ways that some gains can be made in rationalising pay bands and in rewarding effort and productivity without imposing a tight linkage between classification of competencies and pay bands. Potential positives exist here for recruitment, retention and motivation for employees, as well as for jurisdictions and employers. However, in the Australian context, frameworks that involve particular classes or groupings of workers (and/or pilot programs or initiatives at the jurisdiction level) may be the optimum way of proceeding. In either instance, clarity as to whether a competency-based career framework is an industrial project or a workforce project (or both), and an understanding of the respective advantages and challenges, is essential.

Implementation processes include substantive, consultation, resourcing and industrial considerations. Thorough planning, along with adequate consultation and resourcing, is essential to the success of workforce reform processes.

Few respondents were aware that there are existing Australian career frameworks, namely, the allied health and nursing occupations in South Australia (through enterprise bargaining), the Sydney Adventist Hospital and the capability framework in the Hunter and New England Area Health Service. Similarly, respondents were unaware of offshore developments, such as the Let’s Get Real framework, produced by the New Zealand mental health organisation Te Pou. One respondent suggested analysing the history of award reforms in Australia’s engineering sector to highlight the value of career frameworks to the country’s health sector. Some respondents suggested a pilot program would be a sensible step in providing an evidence base, dispelling misconceptions and enabling evaluation of benefits (Hunter New England Area Health Service 2009; South Australia Department of Health 2010) before wide-scale development within the Australian context.
10. Framework examples

As previously highlighted, the search for current examples of competency-based frameworks yielded a large number of frameworks (see sample list and content analysis in Annex 4) for which the research team noted various terminologies and descriptors. These include competency-based frameworks, standards-based frameworks, capability frameworks, outcomes-based frameworks, roles-oriented frameworks, and skills and knowledge frameworks. These can be found in varying degrees within the education and training sector, professional bodies and health services sectors.

Not surprisingly, the search for unarguably agreed definitions for frameworks of competency, outcome, standard, capability or skill proved as elusive as the search for agreement on the definition of the competency concept alone. When this difficulty was raised with key informants, their many explanations suggested that the terms were either ‘much the same’ or ‘same but different’ and highly dependent on ‘ideological perspective, changing perspectives, and/or fashion.’ One informant remarked:

> It seems that the changing terminology is really renaming things that already exist... developing finer definitions and new ways of looking at things we already do...

> What we are really doing is defining what we want health professionals to know and do and how we want them to behave. This has been the essence of health professional education over many years. Whether we call them competencies, capabilities or outcomes are not the point... the thing is whether or not we can define, assess and measure performance... we shouldn’t get distracted by the terminology...

Other informants were more passionate about the different terminologies. A number of strong views expressed that competency-based training is the realm of the vocational education and training (VET) sector alone, and that outcomes-based models are gaining popularity within the higher education and professionally regulated sectors.

Subsequently, the research team focused on the identification and case examination of a sample of frameworks associated with various terminologies. The examples, listed in Table 1, indicate terminology variances in current Australian and international health workforce settings. Also in Table 1 is a list of resources and references pertaining to each framework.

### Table 1. Summary of framework case studies—type of framework and key resources

<table>
<thead>
<tr>
<th>Name of framework</th>
<th>Type of framework</th>
<th>Key resources</th>
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10.1 Competency-based frameworks

10.1.1 CanMEDS

Description

The CanMEDS Physician Competency Framework is a roles-based framework developed by the Royal College of Physicians and Surgeons of Canada for use by physicians. It focuses on defining the key roles required of physicians to meet the health care needs of the patients, communities and societies they serve. The framework is centred on seven key roles that form the key framework domains under which a range of competencies and outcomes then flow. CanMEDS is used by educators, teachers and researchers, as a guide to curriculum development, as a basis for clinical teaching, and to inform research in health professions development. The key roles are as follows:

- medical expert
- communicator
- collaborator
- manager
- health advocate
- scholar
- professional.

Development and implementation

The CanMEDS initiative began in the early 1990s as a desire to reform medical education. It was then developed from 1993 to 1996 through extensive consultation with many specialties (Fellows of the Royal College of Physicians and Surgeons of Canada), expert stakeholders and health care organisations. Identification of core competencies and assembly into the roles framework of CanMEDS was facilitated by CanMEDS Roles Working Groups comprising hundreds of member Fellows. The framework itself was initially trialled in 1996–1997 in a number of small pilot projects in faculties of medicine across Canada. CanMEDS was then implemented in 1997–2002, during which time the Office of Education ensured that the CanMEDS roles and competencies were incorporated into all of the standards in residency education. Each specialty was involved in a five-year process to rework the CanMEDS standards specifically for that specialty. In 2003 the framework was revised by groups of expert volunteers, and in 2005 a new CanMEDS framework was approved (Frank 2005).

During the data collection phase of our research project, discussions with informants of the Royal College of Physicians and Surgeons of Canada provided insight into transitions from initial conceptualisation of their project to its current day form, for example, the initial use of 'roles' because of aversion to the concept of 'competencies'; the success of the implementation process, leading to the patenting of the CanMEDS brand, logo and high-level framework; and current moves to more openly define this framework as a 'competency' framework, given increased understanding and broad-based acceptance of competency concepts.

International implementation

In addition to its widespread use in Canada, CanMEDS has also been adopted internationally, with several countries including Denmark, the Netherlands, New Zealand and Australia adapting and using this framework as a model for postgraduate medical and other specialist education (Ringsted et al. 2006). For example, the Royal Australasian College of Surgeons has customised the CanMEDS principles to suit its purposes, expanding the seven CanMEDS roles into nine attributes (RACS 2010). Similarly, developers of the Australian Curriculum Framework for Junior Doctors drew on CanMEDS to define three major areas and six categories (Graham et al. 2007). Evidence exists that the CanMEDS model of competency is gathering increasing acceptance worldwide, and within the Australian context is increasingly being noted as a useful reference point for future framework development and implementation (DHS 2009). Further evidence of its relevance and useability is highlighted in the recent Australian Medical Council (AMC) consultation document, which indicates significant AMC support for the framework, with explicit encouragement regarding its increasing use in the Australian context (AMC 2010).

Success factors

The CanMEDS framework is among the most successful case studies identified by the research team. Its success appears to be based on the following factors.

- The framework was developed 'by the profession for the profession', rather than emerging as an outcome of a centralised policy mandate.
- Extensive and genuine consultation processes were included in the initial stages of development.
- The overarching domains (roles) and associated competency statements and outcome measures remain high level enough for sufficient autonomy for adaptation to local conditions, but avoid the implementation trap of excessive detail.
- The overarching domains are highly logical and equally applicable to all of the sixty postgraduate medical specialist and sub-specialty professions that relate to the Royal College of Physicians and Surgeons of Canada and to the Canadian practice environment.
- Significant research and development effort and resources has been invested in the ongoing quality improvement of the CanMEDS model over the past 15-20 years.

Applicability to Australian health workforce

The CanMEDS model emerges as highly applicable for whole-of-workforce adaptation in the Australian context. This assertion is made on the following basis.

- The seven domains of profession or role, specifically, expert, communicator, collaborator, manager, health advocate, scholar, and professional are equally relevant to all worker categories within the Australian health workforce and could be adapted to all levels of practice within both regulated and non-regulated sectors.
- The model has a substantial research and development base extending back almost two
decades, and therefore many initial development and implementation challenges have been addressed.

- The model is accompanied by extensive implementation and support resources developed over the past two decades, which could also be adapted to encompass the uniqueness of the Australian practice environment and across the full range of professions and support roles within the Australian health workforce.
- A high degree of acceptance is emerging for the model across the Australian health professional workforce, encouraged by key accrediting bodies such as the AMC.
- Strong and effective collaborative relationships already exist between a number of key Australian professional entities and the Canadian development teams.

10.1.2 ALTC Threshold Learning Outcomes Framework

Description

The Australian Learning and Teaching Council (ALTC) completed the Learning and Teaching Academic Standards (LTAS) Project in December 2010. The outcomes of this project have been the identification of threshold learning outcomes (TLOs) for Australian health care disciplines at professional entry level across the different levels of qualification. As part of the project, professional accreditation standards and competencies have been mapped to the developed TLOs. Within each discipline, the TLOs were determined by consensus among academic communities, professional bodies and employers, with reference to existing national and international work, and to existing accreditation standards where appropriate (ALTC 2010). The key themes of the TLOs are professional, assessment, planning and management, promotion and maintenance, activities supporting performance, safety and effectiveness, self-review and reflection, access, and use of evidence-based information.

Development and implementation

Outcomes arising from the TLO project have the potential to inform future national workforce competency work. In turn, this work offers significant opportunity to inform the development of clear and transparent alignment between an education qualification, professional accreditation process and workforce competence. Progressing coordination and collaboration relationships between these key reform initiatives will be essential. From 2011 the TLOs will inform some of the activities within the newly established Tertiary Education Quality and Standards Agency (TEQSA).

Further advancement and monitoring of implementation will be the responsibility of TEQSA, and will include the following activities:

- developing strategy for assuring academic standards (in consultation with disciplines)
- developing guidelines for institutions in consultation with higher education providers
- developing policy for reviewing the context of assuring academic standards
- accrediting and maintaining a register of Australian and international discipline experts who can independently judge samples of assessment tasks and results (ALTC 2010).

This framework is currently in its infancy. To date, challenges identified to the development and implementation of this framework include:

- defining outcomes at an appropriate level, so they are useable, assessable and encourage broad adoption across the higher education sector
- interface with the health workforce sector, as there is significant potential for duplication of effort between health and education, with both sectors initiating developments in state-wide frameworks
  - gaining multi-sector buy-in—ensuring involvement and ownership by all relevant sectors
  - ensuring alignment of the threshold standards with other currently emerging national frameworks (ALTC 2010)
  - envisaging progression from education to employment as the threshold standards are developed for utilisation to the point of graduation from initial undergraduate health qualifications only
  - providing the resources to complete development of the framework and to commence the implementation process.

Threshold learning outcomes, or TLOs, are defined as the ability to:

- practice health care in a professional manner
- assess patient/client health status and to formulate and implement a management plan in consultation with the patient/client/carer/owner
- promote, maintain and/or support patient/client health
- retrieve and evaluate evidence to inform health care practice
- work in a team to deliver safe health care
- reflect on clinical practice and plan ongoing professional development needs for

Applicability for Australian health workforce

The ALTC Threshold Learning Outcomes Framework has the potential to usefully inform future national workforce competency work in the Australian context. This assertion is made on the basis that the framework has been developed on an Australia-wide basis with significant educational and health professional input. However, the framework has significant limitations (highlighted above), the main one being the lack of connection with health service employers during the development stage and the cessation of progression past the point of initial pre-employment undergraduate graduation.

10.1.3 Hunter/New England Capability Framework

Description

The Hunter New England (HNE) Health Workforce Capability Framework is a results- and values-driven framework applicable to all staff of the HNE Area Health Service. The framework describes the capabilities (defined as skills, knowledge and abilities) required of all health service staff to ensure a workforce that will deliver high quality services to the community. This framework establishes a platform to implement capabilities across a range of human resource practices, including learning and development, managing for performance, recruitment, workforce planning, and career development (Hunter New England Area Health Service 2009).

The framework comprises three broad streams (organisational culture, direction and capacity to
10.2.1 A Career Framework for the Health Workforce in New Zealand

The HNE Health framework took for more than five years of ongoing development, and was completed in 2009. During its development, Federal and State Governments were examining the application of workforce competency and capability models, so the framework needed to incorporate both best practice and government directions. The framework was contextualised for use in the health services environment through the joint effort of workforce development staff at both HNE and South East Sydney Illawarra Area Health Services. Key informants indicated that successful development and implementation of the framework was led by two highly supportive CEOs and an ongoing director of workforce. Other key drivers for success included dedicated resources and a majority buy-in by staff.

Applicability for Australian health workforce

The HNE capability framework has the potential to significantly inform future national workforce competency work in the Australian context. This assertion is made on the basis that the framework takes a uniquely whole-of-workforce perspective. Further, it is underpinned by five years of development history, including early implementation experience with strongly attached early evaluations in place. Its limitations, if any, rest around the relatively small geographic development base within a single health jurisdiction in contrast to the wider Australian landscape.

Development and implementation

The HNE Health framework was being developed. In addition to the Public Sector Capability Framework contents, the HNE Health Framework also contains a maturity model to ensure the continued strategic integration of the framework for building sustainable workforce capability.

Applicability for Australian health workforce

The HNE capability framework has the potential to significantly inform future national workforce competency work in the Australian context. This assertion is made on the basis that the framework takes a uniquely whole-of-workforce perspective. Further, it is underpinned by five years of development history, including early implementation experience with strongly attached early evaluations in place. Its limitations, if any, rest around the relatively small geographic development base within a single health jurisdiction in contrast to the wider Australian landscape.

10.2 Competency-based career frameworks

10.2.1 A Career Framework for the Health Workforce in New Zealand

A New Zealand career framework based on a whole-of-workforce model has been proposed to provide a framework for the consistent development of a flexible New Zealand health workforce. The framework was designed for clinical and non-clinical, regulated and non-regulated workforces. Its aim was to enhance understanding of the similarities and differences in various health workforce roles, enable strong branding for specific careers, establish a structure for the unregulated workforce, provide specific career pathways for differing groups within the health workforce, and improve retention and recruitment for the sector (Ministry of Health and District Health Boards New Zealand Workforce Group 2007).

The initial focus of the framework’s development was to engage the health and disability sector in the development of a future workforce more closely based on competency, and less profession specific. Early engagement was seen as important to build a whole-of-workforce conceptual view, raise awareness of the issues, trigger common understandings and language, secure initial buy-in, and to obtain early stakeholder and government support for the concept.

The development group deemed it essential to develop an understanding and acceptance of a career framework for the New Zealand health and disability workforce that the whole New Zealand workforce could understand and own. All parties and individuals involved in the extensive consultation highlighted the importance of not rushing to implementation a concept not yet understood or accepted.

Development History

The proposal for a career framework was first made by the Health Workforce Advisory Committee in 2006. Backed by the New Zealand Ministry of Health and District Health Boards, the original vision included development of a career framework for both the health and disability workforce sectors.

Initial work commenced via three national workshops, which were attended by a wide range of sector representatives. A Career Framework for the Health and Disability Workforce in New Zealand Consultation Document was released 19 June 2007 for a period of six weeks’ consultation that included a series of four public meetings in main cities across the nation.

A key outcome of the consultation was rejection of the notion of a whole-of-workforce framework for the combined health and disability workforces. According to one informant to our research study, the rejection occurred primarily because of an ‘ideological split between health and disability services’. (In New Zealand, all of the disability services and workers are funded via Vote: Health, which is the amount of public money the National Government decides will be spent on health care each year.) Informants explained that the disability workers and associated health professionals had adopted a more ‘sociological language’, including ‘walking alongside’, ‘helping’, ‘supporting’ and the like, and perceived the health workforce as being aligned to principles, activities and language revolving around notions of ‘illness’ and ‘wellness’. The development group was unable to reconcile the ideological differences between the two groups. Disability workers (including carer representatives) insisted that they did not want to be ‘submerged back into the health model’. Thus, the current framework in New Zealand covers the health sector workforce only.

Within the health workforce in New Zealand, the whole-of-workforce model was most readily accepted by the non-regulated workforce, which, during the life of the project, indicated a keenness for clearer career pathways, greater role transparency and improved recognition of skills and capabilities. The regulated professions were reported as being ‘reasonably accepting’ but ‘less enthusiastic’ overall, with nursing seeing the greatest potential benefits and New Zealand midwifery stakeholders the most strongly opposed to the model.
Current implementation status
Informants to our research project described implementation of the New Zealand framework as ‘currently in abeyance’ as a result of the change in government and its recent establishment of Health Workforce New Zealand, which is focusing on new priorities and their detailing.

Key informants indicated that the timing for implementation of the framework was now not optimal (‘not the right time to push it’), as New Zealand and various District Health Boards were in the midst of wage bargaining rounds. The comment was recognition that implementation of a competency-based career framework is as much (if not more) an industrial project than a workforce project.

In the interim, however, the concept is being picked up across New Zealand’s Aged Care and Mental Health sectors. The model is being progressed by the aged care and mental health workforces because, according to the New Zealand informants, these sectors have a larger proportion of non-regulated support staff that can benefit from improved flexibility of career pathways and greater recognition of prior learning. New Zealand-based key informants familiar with the framework suggested that its uptake within the aged care and mental health sectors might also be due to the framework giving many aged care and mental health workers a more formalised identity and clearer role definition that had been previously absent. The Te Pou Let’s Get Real project was highlighted as a whole-of-workforce project across the New Zealand mental health sector (Ministry of Health 2010a, 2010b). This project is described in more detail in the next section.

Enablers to implementation
New Zealand informants highlighted several enablers or essential precursors to implementation of a competency-based career framework, which can be summarised as follows.

- **Secure buy-in:** ensuring adequate up-front consultation and development of a high-level framework and concept to secure early ownership of the concept.
- **Plan, and do not rush implementation:** avoid the obvious pitfalls of implementation during the initial buy-in and producing stage. Plan around known pitfalls, which include resistance due to existing professional boundaries; existing scopes of practice embedded in training programs and existing roles; remuneration issues and existing industrial frameworks; and any restrictions in existing legislative frameworks, based on profession specific roles.
- **Reform legislative and industrial frameworks:** like many countries, New Zealand had legislation governing the practice of specific health professions. This has changed however, as New Zealand has laid the legislative basis for health workforce reform via passage of the Health Practitioners Competency Act, which is now the vehicle for public safety and the regulatory instrument of the health workforce. All health professions are now covered under this one Act, which encourages professions to set up ‘broad scopes of practice’. The Act enables overlaps in scope of practice and increased interdisciplinary activity. It is the enabling legislation for a whole-of-workforce development and reform, including implementation of a whole-of-workforce competency-based career framework. Informants indicated that the next steps are the development of a clear implementation pathway, including alignment of existing professions, links with existing professional development recognition programs, multi-employer collective agreements, and various merit scales (for example, those held by the allied health workforce). A single-spine industrial framework was seen as an important precursor to implementation.
- **Ensure adequate resources:** implementation was noted as a highly resource-intensive process requiring attention to a broad range of issues. An example of what needs to be included in an implementation roll-out can be seen on the Te Pou website (refer to the Let’s Get Real project below) for the entire mental health workforce.

Applicability for Australian health workforce
The New Zealand health workforce career framework might usefully inform a national competency-based career framework in the Australia. The New Zealand case study highlights the need for consultation and awareness raising during the development of a framework and before its implementation on a nation-wide basis. Ongoing discussions between HWA and key informants within the New Zealand Ministry of Health and Health Workforce New Zealand would provide HWA with direct access to the lessons learned on consultation, awareness raising and early implementation processes.

10.2.2 New Zealand Let’s Get Real competencies for the mental health workforce
Description
Let’s Get Real is a whole-of-workforce skills-based career framework covering the New Zealand mental health workforce. The framework includes ‘Seven Real Skills’, which describe the knowledge, skills and attitudes required to deliver effective mental health and addiction services. It is applicable to all people working in these services, irrespective of their role, discipline, type of organisation or population group they service.

The Ministry of Health has mandated Let’s Get Real and ‘Seven Real Skills’ as the foundation framework to support the delivery of mental health and addiction services, and as such, the framework aligns itself with a range of national initiatives. For example, Let’s Get Real skills are complemented by specialist skill sets and other specialist competency frameworks, some in existence before Let’s Get Real, others at different stages of development (Ministry of Health 2010a).

The ‘Seven Real Skills’ are:

- working with service users
- working with Māori
- working with families and whānau (extended family)
- working with communities
- challenging stigma and discrimination
- law, policy and practice
- professional and personal development

Development and implementation
Development of the Let’s Get Real framework began in 2006 and involved initial meetings with key sector stakeholders, a review of existing frameworks, a literature review of methodologies to develop competency frameworks, and establishment of expert advisory and drafting groups. It brought together a decade’s worth of work undertaken by people in the sector on competency and capability frameworks specific to mental health and addiction services (Ministry of Health 2010a).

Let’s Get Real was launched in 2008, following the development of enablers and learning modules extending over a two-year timeframe from 2007 to 2009. These implementation resources include an overview DVD/video, a leaders and managers’ guide, a human resources
During the consolidation phase, it is anticipated that:

The main goals of the transition phase are to ensure that:

- mental health and addiction service providers will have the opportunity to become familiar with the above-mentioned groups will integrate the framework into their policies, processes, systems, course content, and teaching methods.
- workers will have learning opportunities to upskill as necessary.
- organisations will be supported in the development of individual and team ‘Seven Real Skills’.

The Let’s Get Real framework is the only example that clearly demonstrates the extent of resources, investment and change management required for implementation of a whole-of-health workforce framework.

Applicability for Australian health workforce

The Let’s Get Real career framework has the potential to inform future considerations regarding national workforce competency-based career frameworks in the Australian context. The Let’s Get Real framework is the only example that clearly demonstrates the extent of resources, investment and change management required for implementation of a whole-of-health workforce framework. Further, the case study provides a useful example of implementation activities that can occur without significant industrial linkages and/or reforms.

Although confined to the mental health workforce alone, the case study yields a wealth of freely available implementation resources (with appropriate referencing) to provide considerable opportunity for adaptation and utilisation in the Australian context. Further, a range of pre-existing collaborative Australian–New Zealand government department relationships provide fertile ground for ongoing collaborative exchange, including parallel developments and evaluation activity.

10.2.3 Canadian interprofessional competency frameworks

Collaborative care and interprofessional practice

The concepts of collaborative care, interprofessional education, interprofessional teams, horizontal integration, workforce flexibility and cross-sectoral collaboration are fundamental rationales underpinning the move to competency-based frameworks for both education/training and health workforce career development—each of these concepts are noted as key drivers in our research project.

The importance of these concepts is evident in our report through the placing of collaborative roles and competencies as first-order domains within the range of our case study frameworks. For example, the CanMEDS collaborator role and the ALTC threshold learning outcome (an ability to work in a team to deliver safe health care) is also noted in our report, which includes the capability for health practitioners to demonstrate effective interpersonal relations and communication skills, along with an understanding and commitment to interprofessional practice. Against this backdrop, educators, professional bodies and employers are increasingly engaging in activities to better understand, define, teach and assess the fundamentals of interprofessional practice.

Changes in professional practice do not happen by chance. Rather, they are the result of realigned curricula, targeted efforts in continuing professional development, or CPD, and implementation of organisational reform and change processes. Such processes include the introduction of revised quality systems—for example, specifically designed competency frameworks for interprofessional collaboration, of which several Canadian initiatives are particularly noted.

Canadian interprofessional competency frameworks

The British Columbia Competency Framework for Interprofessional Collaboration

Initially, a range of province-based examples were developed within the Canadian context, of which the British Columbia Competency Framework for Interprofessional Collaboration emerged as a well-researched and clearly articulated example (College of Health Disciplines and Interprofessional Network of BC 2008).

The framework was developed by University of British Columbia College of Health Disciplines via the Interprofessional Network of British Columbia, which sought out, compared and contrasted 15 existing frameworks.

The purpose of the development framework is to inform curriculum development in the context of both pre-registration education and post-registration CPDs.

In articulating this purpose, the British Columbian development team referenced the CanMEDS framework and highlighted development of a competency as ‘the process of translating core abilities in effective practice into educationally useful elements’ (College of Health Disciplines and Interprofessional Network of BC 2008).
The view espoused by the development team was that practitioners who can demonstrate their own professional specific competencies plus the interprofessional competencies will have the skills and knowledge deemed necessary to deliver 'optimal, integrated care' (College of Health Disciplines and Interprofessional Network of BC 2008).

Canadian National Interprofessional Competency Framework

The work of the provinces was further expanded by the development of a national interprofessional competency framework.

In 2008 Health Canada provided the Canadian Interprofessional Health Collaborative (CIHC) a funding grant to enable CIHC members to establish a working group with a mandate to:

- review literature related to competencies
- review the literature related to existing province-based frameworks (for example, the British Columbia Interprofessional Competency Framework)
- develop a Canada-wide competency framework for interprofessional collaboration.

CIHC is a consortium consisting of health organisations, educators, health professionals, researchers and students from all across Canada. Over the past three years, the CIHC consortium has worked together to develop a set of well-researched, clearly defined and measurable set of nationally mandated interprofessional competencies.

Published in February 2010 (CIHC 2010), the Canadian National Interprofessional Competency Framework includes six competency domains, specifically, interprofessional communication, patient/client/community-centred care, role clarification, team functioning, collaborative leadership, and interprofessional conflict resolution, as depicted in the following diagram.

**Applicability to the Australian Health Workforce**

The Canadian interprofessional competency frameworks emerge as highly relevant and applicable for whole-of-workforce adaptation in the Australian context. This assertion is made on the following basis:

- Similar to other global health care systems, interprofessional education and integrated collaborative care are of increasing importance to the Australian health service reform and quality care agendas.
- Interprofessional functioning is a critical underpinning to many government health service delivery initiatives, for example, super clinics focused on complex care.
- The new paradigm will not happen across the existing Australian workforce unless focused education and CPD are regarded as essential aids to enhancing interprofessional practice.
- Many excellent initiatives exist within Australian educational and service provision contexts, but these are not yet coordinated at a national level; therefore, opportunity exists to undertake a national consultation exercise and achieve mandates for a series of national interprofessional competencies as highlighted in the Canadian examples included in this report.
- A number of effective partnerships and collaborative agreements are in place between Australian and Canadian professional bodies and government organisations, which provide fertile ground for ongoing collaborative development and evaluative change.

10.2.4 UK Skills Escalator

The United Kingdom has progressively adopted a suite of related measures designed to modernise pay scales, enable interprofessional practice and modernise the health workforce and careers within the National Health Service (NHS), with an overriding goal of the promotion of patient-focused care. The country’s policy initiatives began in the late 1990s, as the Labour Government elected in 1997 sought to ensure that large increases in health spending—designed to better approximate the European average and lift standards of population health and wellbeing—were not diverted largely into higher workforce costs. A substantial phased increase in core funding for health was accompanied by a devolution of governance, namely through the empowerment of Foundation Trusts and, later, Trusts generally (‘Trusts’ are the immediate employing bodies for health workers in particular regions and localities in the United Kingdom). At the same time, a process of political devolution with the inauguration of the Scottish Parliament and Welsh Assembly in 1999, and the subsequent reinstatement of self-governance in Northern Ireland, allowed for further flexibility and innovation across a unified health system responsive to the four Departments of Health.

Pay modernisation under Agenda for Change (flagged in 1999 and implemented from 2004) led to three spines for the health system, but with one method of job evaluation, known as ‘banding’. Accompanying Agenda for Change was the development of a Knowledge and Skill Framework, which would enable employers to assess the comparative value of staff in terms of their skill and knowledge base and to attain parity of skills and costs when rationalising the remuneration of health workers across a large range of job titles and professional and semi-professional occupations. While the principles behind this modernisation agenda are centrally driven, and were negotiated with relevant unions, implementation has been gradual and localised, with several pilots and demonstration programs designed to accompany each phase of change.

The original NHS Knowledge and Skills Framework included the concept of a Skills Escalator, which had the intent of facilitating vertical escalation and horizontal integration and seeking
to produce a win-win for both existing employees and for clinical and workplace planners in matching the deployment of skills to needs (Agenda for Change Project Team 2004). The overall vision was for less rigid professional demarcations, and an articulation of patient care priorities and cost control, efficiency and quality assurance (for instance, through the integration of health and social care in some Trusts, allowing ongoing care for those with chronic conditions to take place in the community but integrated more seamlessly with primary and hospital-based care). A central agency, Skills for Health, later accompanied by Skills for Care, exists to disseminate knowledge and provide tools for workforce planning and job evaluation by employers.

The intention was to design an overall competency-based career framework for the entire NHS to complement the other workforce measures. However, buy-in was not obtained successfully from medical doctors and nurses, and the process was halted for six months to explain the aims and goals of the framework and to dispel misconceptions about its implications. Informants to our research project felt that success would have been more likely had this process taken place before implementation, and if greater effort had been made over a longer period of time to secure support across crucial professions. The result was a Career Framework for Allied Health Professions, published in 2008, which only now is starting to be trialled. With a change of government to a Conservative–Liberal Democrat administration in 2010, and much pressure on public finances as a result of the government’s deficit reduction strategy in the wake of the global financial crisis, it is unclear whether moves towards a whole-of-workforce framework will still proceed. Although the NHS is quarantined from direct budget cuts, it is under renewed financial pressure from a combination of the end of higher-than-inflation phased funding increases delivered by the Labour Government for a decade and the increased health and social care demands likely to flow on from the broader impact of reductions in public spending elsewhere.

Skills for Health has now released a non-prescriptive Career Framework Tool, which enables individual employers to build on the range of measures available within their own specific workplaces. The workforce tools available are linked to education and training through specification of particular competencies from National Vocational Qualifications (NVQ) and tertiary degrees (NVQ are the British equivalent of Australian VET-level certificates and diplomas). Potential interactions between the range of tools and frameworks are best illustrated diagrammatically in Figures 4 and 5:

![Figure 4: The Skills Escalator](image)

![Figure 5: Example of career progression](image)

It is important to note that there is no automatic linkage between the Skills Escalator and the Agenda for Change pay bands. Indeed, some United Kingdom literature suggests that misunderstandings among staff about such connections have been a major challenge to implementation. Expectations have been created that acquisition of additional qualifications or competence modules translates into pay increases, but pay is still dependent on appointment to roles. However, the suite of workforce measures has been used by some Trusts to create new workforce roles to facilitate career progression.

The program for the modernisation of the NHS implemented from 2000 onwards has as one of its key objectives a decreasing reliance on purely hospital-based care and an integration of social care with clinical care. It is in this field that a range of new workforce categories—for instance, rehabilitation assistants—has been created and where allied health professionals from different professional backgrounds can be deployed within teams in coordination, care planning and management roles and with a broader scope of practice. Similarly, within the hospital environment, a range of roles has been developed for health care assistants, assistant practitioners, advanced support workers and general assistants. Importantly, the overall policy has provided a stimulus for the autonomous development of particular professional frameworks (for instance, podiatry, and public health) and for complementary education and curriculum projects.

**Literature on United Kingdom workforce modernisation programs**

While no schematic overview of the modernisation of the entire health workforce in the United Kingdom has been published, a reasonable body of literature exists on aspects of innovations in the country’s health workforce. Some are studies from the perspective of a particular profession or empirical studies on an activity within particular employers or groups of Trusts and regions. Some conclusions can be drawn, but United Kingdom informants to our research project expressed some disappointment about the lack of encompassing views or published evaluations in these studies. Annex 5 summarises a sample of relevant literature examined by our research team.
Applicability to the Australian health workforce

The United Kingdom model provides valuable insights and lessons for the development and implementation of competency-based career frameworks in Australia. The case study is nationwide and extensive, with a range of evaluative material starting to appear in the published literature, and a great deal more available by direct discussion with key informants and access to the grey literature. The assertion of the study’s value in the Australian context is based on the following observations.

• The United Kingdom model strikes a good balance between central policy direction and local adaptability. Governance, however, in the Australian health sector is more variegated and complex, and comparable initiatives would need a stronger whole-of-government lead and focus.

• Although coverage of all professions has not been secured, the United Kingdom experience suggests that gains can be derived from a flexible framework that has the potential for adaptability to various workforce settings and to professional and other workforce categories.

• It is difficult to adopt a workforce model that closely enmeshes primary care, social care and hospital care, but to the degree that Australian policy makers might wish to adopt a whole-of-workforce scope, the UK experience shows promise for delivering a range of flexible and interprofessional roles that can respond to current and developing health needs.

• Utilising the one workforce model for both health and social care (as per the United Kingdom Sector Skills Council model) seems an ideal way to address the lack of a whole-of-workforce focus in the Australian context. More generally, the United Kingdom model has the capacity to extend goals in developing skills and ensuring flexibility beyond the narrow focus of hospital employment contexts and workforce planning based solely around supply entering and graduating from particular professions.

• In particular, the United Kingdom measures, if adapted for an Australian context, might be useful in channelling and rationalising unplanned and "as needed" development of new roles and job titles in supplementary, delegated and assistant categories.

• The United Kingdom case study yields many lessons on the levels of detail and optimality for the development and implementation of a competency-based career framework.

• Difficulties in implementation in the United Kingdom stemmed most prominently from the lack of a clear explanation of the purposes of workforce reform, and insufficient time for consultation and buy-in. Australian policy makers need to avoid these pitfalls, and this report presents recommendations that draw on this experience.

• While the Agenda for Change process in the United Kingdom did not make a direct link between acquisition of skills and increased remuneration, a simplified three-spine model for the whole workforce (negotiated with unions) made it much easier to bring rationality and clarity into cost control and work value parity among a range of workforce categories. The implementation of the workforce change program was accompanied by a very significant injection of financial resources and investment in agencies and tools to support workforce management and planning.

11. Conclusions and recommendations

11.1 Detailing current demographics and innovation activity within the Australian health workforce

This report takes a whole-of-workforce approach, and therefore has included a section detailing the range of health worker categories that make up the entire Australian workforce. Information regarding the full breadth, demographics and interrelationship across the health workforce is not readily available in an easily sourced location. The full breadth of the workforce is not readily understood, and a significant number of the respondents tended to view the workforce as comprising only the historically well-known range of professional groupings plus a small range of support workers and assistants.

However, many issues were raised about workforce shortage, with many references to the concept of workforce innovation. One of the findings of this report has been the unconstrained tendency of emergent workforce categories to be created organically in response to urgent needs.

A combination of attempts to manage optimal delivery of care among a wide range of employers and decision makers within jurisdictions, and responsive entrepreneurial and growth activity by educators, has led to a proliferation of job titles and workforce categories. Some of these emergent and supplementary workforce categories have direct relationships to professions, and seek to embody a delegated scope of practice under supervision (for instance, physician assistants and dental therapists). Others are more generalist or targeted at particular disease classifications, tasks and patterns of patient and population need, without necessary linkage to any one profession. Various other occupational titles and roles are created to facilitate career pathways for less skilled workers. In many instances, a variety of motivations is present and often coalesces between different innovators, for instance, educators, employers and health workers.

Much of this activity appears to be occurring under the justifying banner of innovation. In particular, the creation of intermediate forms of worker under this guise can often attract funding and support. However, the research team has been unable to discern a satisfactory conceptualisation of innovation that recognises the requirement of some form of planning, control, accountability and evaluation in the context of the health sector seeking to meet public needs.

Innovation as a national policy goal normally assumes market discipline as a discriminator between valuable and less valuable initiatives. Entrepreneurial activity in small business, for instance, typically has a failure rate of between 80% and 90%.

Ad hoc innovation in the health and education sectors is a resource intensive activity and materially affects the quality of care and patient safety, and needs a well-articulated discriminator for evaluation and judgement. The concept of health workforce innovation requires both an urgent definition and a guiding framework to help in the establishment of optimal investment and evaluation of scarce publicly funded development resources.

It is recommended that HWA further interrogate data describing the full profile of the Australian health workforce as per the categories identified in this report and disseminate information to further enhance whole-of-workforce understanding.

It is recommended that HWA undertake further work to gauge the full extent of the emergent workforce categories, including consultation with key stakeholder groups regarding actual workforce and health service demand, with a view to forming a strategic framework to guide the increasingly emergent innovations and developments.
11.2 Whole-of-government leadership and coordination

The presence of overlapping and/or duplicative activity became increasingly evident over the course of this research project. Large-scale framework development initiatives were identified at a federal, state and professional level, for example, the Learning and Teaching Academic Standards Project funded by the Australian Learning and Teaching Council, the Medical Deans Competencies Project funded by the Australian Government Department of Health and Ageing, and this project funded by National Health Workforce Taskforce/HWA.

Similarly, a range of new worker categories are emerging from different lead points across health, education and a range of other government departments. Examples include the 20 new worker categories being piloted under the HWA aged care strategy, the physician assistant programs initiated by the educator, and the Personal Helpers and Mentors Program via the Department of Families, Housing, Community Services and Indigenous Affairs.

The researchers in our study do not wish to raise these developments as problematic. Rather, the research team highlights its observation that many of the program and project funders or leaders were frequently unaware of similar or overlapping or even competing initiatives—signalling an opportunity for HWA in its early stages of establishment to prioritise the adoption of a whole-of-government leadership role in health workforce matters.

It is recommended that, at a national level, HWA adopt a whole-of-government coordination role in the allocation of funding and activities of direct relevance to the Australian health workforce.

11.3 Definitions and glossary of terms

Exploration of the literature and discussion with key informants revealed large-scale differences in knowledge base, understandings and opinion regarding word terms central to this project, for example, competence, competency, minimum, outcome, framework, and taxonomy.

Further, we found an ideological aversion by several informants to various terms, with some terms being categorised as ‘taboo’ within certain professional contexts. There was, however, a consistently reported view that the notion of competency and competency-based education frameworks was growing in acceptance and use, with most professional groupings having well-developed and established competency frameworks, expected practice standards and/or training outcomes.

Most respondents highlighted the need for agreement on a set of common terminology, definitions and understandings—signalling this as an essential precursor to discussions across the whole health workforce and the possibility of the development of an overarching national competency framework.

Respondents were further of the view that the work of HWA would be enhanced by the development of an agreed glossary of terms to ensure consistency of communication and understanding across all HWA endeavours—it was seen as important that the organisation did not contradict itself by expressing different understandings of the same term.

A key recommendation of this report is for HWA to consult, develop and confirm an agreed set of terms and definitions to reduce ambiguity and ensure maximum clarity of communication and meaning across its work portfolio and in its interactions with key stakeholders. The glossary of terms included in this report could be a starting point from which such a consultation could be undertaken.

11.4 A competency-based education and training framework for the Australian workforce

The presence of a large number of existing and emerging competency-based frameworks quickly became evident in the early stages of this project. Despite the concerns about the concept of competency-based education and training expressed by a number of higher education and professional informants, there is extensive use of such models within most professions and standard settings organisations. No whole-of-workforce framework was identified by informants.

Against this backdrop, the project funders agreed that a large-scale mapping exercise was not the most useful way to advance discussion about such frameworks. Instead, the project funders requested that our research focus on a number of Australian and international studies and investigate lessons observed from the development and/or implementation of each case study, along with applicability for adaptation to an Australian whole-of-workforce setting.

The Canadian CanMEDS model has many features suitable and adaptable to whole-of-workforce application within the Australian context. The seven CanMEDS roles can be adapted and equally applied to all categories and levels of worker within the Australian health workforce. Equally, existing frameworks over time can be readily aligned with the overarching domains of the framework without detracting from the specificity and uniqueness of existing professional or health worker roles.

Of course, any model would require adaptation and alignment with the unique elements of the Australian context and ideally would involve fully evaluated pilots before widespread roll-out. If the CanMEDS model was adopted, the seven roles would either require review and potential adaptation of existing role descriptors, addition of one or two extra roles in areas such as practice within varying cultural contexts or the increasing need for health workers at all levels of the workforce to possess skills to teach and assess others—although this latter requirement could fit within the existing scholarly role.

This report highlights three options for the consideration of HWA in respect to the development of an overarching competency-based education and training framework for the whole Australian workforce: first, start afresh and develop a centrally regulated model; second, adapt an existing model that is identified as having increasing acceptance and update across the workforce; or third, do nothing and simply allow current unguided market developments to continue to unfold.

The writers of this report support option two, that is, a move towards the development of an overarching framework to guide the entirety of the Australian health workforce. In a similar manner to the Tuning Educational Structures in Europe project (Tuning Educational Structures in Europe 2011), a recommendation of this nature does not seek to direct, prescribe or mandate uniformity of curricula or roles. Rather, the intended benefit is to develop a framework that will enable convergence, points of reference, common understanding and increased flexibility across the Australian health workforce. In no way, however, would development of such a framework seek to restrict the independence and standards setting capacity of various academic institutions and/or professionals, or undermine capacity to undertake adaptations based on local need.

It is recommended that HWA consider the requirements for a clear communication and consultation exercise to enhance increased understanding of, along with the rationale for (purpose) and benefits of, developing a whole-of-workforce education and training framework. To advance this recommendation, the way forward could include:

- publication of this research report on the HWA website to commence discussion across the sector
- publication of a comprehensive literature review on the HWA website to engender
discussion, better inform the sector and increase understanding of key issues associated with competency-based education and training developments and competency-based career frameworks

- Production and dissemination of information bites pertaining to key terms and concepts on which there is current debate, ambiguity and variance in understanding, for example, on competence, competency, taxonomy, framework, horizontal integration, competency-based education and training framework, and competency-based career framework
- Commencement of consultation with the sector by development of a detailed discussion paper that adopts a workforce approach and outlines opportunities, options, benefits and implementation requirements associated with a whole-of-workforce approach to competency-based education and training and competency-based workforce utilisation and career progression. (It should be noted that vocational education and training (VET) sector informants indicated that an extensive communication strategy would not be required for the VET workforce, as the 'language' of this sector is one of competency.)

11.5 A competency-based career framework for the Australian health workforce

As highlighted through this report, the concept of a competency-based career framework emerged as a little understood concept outside of jurisdictional and health service employers. The research team found a paucity of information in the published literature but significant information in the grey literature, including unpublished and unreleased documents within jurisdictions.

The majority of employers indicated that a single-spine framework was essential in the context of an uneven pattern of workforce shortage and/or oversupply, increasing parity issues between various registered and unregistered health workers, unplanned free market, workforce innovations, and the need for enhanced workforce flexibility and more clearly articulated career pathways for health workforce participants.

A case study approach was taken to explore a number of international experiences in the development of competency-based career frameworks. A range of valuable development lessons were expressed by key informants associated with the case studies profiled in this report. These lessons will help to inform HWA’s health workforce innovation and reform agenda going forward.

Regarding the concept of a competency-based career framework for the Australian workforce, it is recommended that HWA:

- note the potential benefits in developing and implementing a competency-based career framework for the Australian health workforce
- note the case studies and lessons profiled in this report
- undertake further analysis regarding the juncture and associated issues between development of a competency-based career framework (a ‘workforce project’) and implementation of a competency-based career framework (an ‘industrial project’), and that these frameworks are fully explored and understood to optimise successful outcomes for any proposed development activity
- note the New Zealand Let’s Get Real case study as an example of an implemented competency-based career framework that has been undertaken as a health workforce project without industrial alignments and links

- note the Australian experience in reform of the Engineering Industry Award as an example of the possibility of an implemented competency-based career reform project with aligned industrial adjustments (see Annex 6)
- note the concept of levels contained within the notion of a competency-based career framework and collaborate with other key national initiatives (for example, Australian Qualifications Authority) to ensure optimal whole-of-government coordination in any developments going forward, so as to avoid frameworks with varying number of levels that do not match.

11.6 Further research recommendations

As highlighted in this report, the research team found few integrated publications on the topics of competency-based education and training frameworks and competency-based career frameworks. Thus, a major project challenge was the identification, distillation and synthesis of disparate and patchy literatures. Much value was added through sourcing key informant insights and a range of grey literature. While this publication provides significant information to inform ongoing work, it is the view of the researchers that further inquiry is needed to more comprehensively inform HWA and the various key informant communities associated with this report.

A suite of supporting papers is being prepared to supplement this report. While this will go some way to providing additional information to inform ongoing work in the Australian context, the research team believes that further research (see Annex 7) is necessary to provide a stronger evidence base for this work.
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Annexes

Annexe 1. Project methodology

Literature search and review

A literature search was undertaken using the terms listed below. Online databases MEDLINE, Web of Science, PsycINFO, PubMed, CINAHL Plus, and the Australian Public Affairs Information Service were searched using the following inclusion and exclusion criteria.

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
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</thead>
<tbody>
<tr>
<td>Term</td>
<td>Education Level</td>
</tr>
<tr>
<td>Competence, competency, competent framework, standard, education, training, career, health, pathway, framework, skills escalator, workforce</td>
<td>High school education</td>
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Of the articles found, the relevance of each article was determined by review of the title and abstract by two individual reviewers, with inclusion on agreement. This search approach yielded in the order of 1200 articles, of which fewer than 10% were considered useful to inform the project. In addition, this search method found none of the grey literature that is essential to understanding the social and political basis of health workforce management. After discussion with Health Workforce Australia (HWA) it was therefore decided to widen the strategy to incorporate more traditional paper-trail methods; in other words, to find significant documents and trawl through their references to find yet more significant documents and trawl again—that is, a recursive search strategy based on peer-reviewed and grey literature publication reference lists.

The research team thought it important to note that systematic review strategies have received criticism (Greenhalgh and Peacock 2005) for being inappropriate or too narrow to provide coverage in complex domains (such as health workforce), and this has been our experience in undertaking this current project.

As the research strategy has further developed, more relevant publications have been identified through further literature searches based on exploration of insights and themes arising from interviews and from analysis by the research team, and through sourcing of grey literature via suggestions from interview respondents and other stakeholders.

An EndNote library has been compiled and will be available to other researchers and stakeholders as an outcome of this project.

Project reference group

The National Health Workforce Taskforce, now HWA, commissioned and supported this project through direct funding via the Australian Health Workforce Institute–PricewaterhouseCoopers partnership agreement. HWA also provided advice on project direction and focus, and assistance in contacting key national, state and territory health jurisdictions.

At the inception of the project, a reference group meeting was convened with senior representatives from three universities and seven disciplines (medicine, nursing and midwifery, physiotherapy, occupational therapy, human movements, speech pathology and education):

- Professor Doune Macdonald, The University of Queensland
- Professor Justin Beilby, University of Adelaide
- Dr Caroline Lawrence, University of Adelaide
- A/Prof Ray Petersen, The University of Queensland
- A/Prof Steve Trumble, University of Melbourne
- Prof Bill Vincenzino, The University of Queensland
- Prof Sylvia Roger, The University of Queensland
- Prof Cathy Turner, The University of Queensland

Discussion with this group clarified the research direction and interpretation of the initial literature review, and helped to identify knowledge gaps and key stakeholders for subsequent interview. The discussion paper for this meeting is included in this annex.

Selection of key informants

In consultation with the reference group and HWA, five central sectoral groups were identified as key informants on the basis of their ability to inform a competency-based education and training taxonomy and a proposed career framework. These groups were selected to sample the breadth of the Australian health care sector, and comprised curriculum developers, employers, representative bodies, regulating bodies and end-user representative bodies. As interviews proceeded, a snowballing technique was used to identify other key informants, as well as to source grey literature of relevance to the project.

Ethics approval

Following the development of the research plan and the meeting with the reference group, an ethics application was submitted to The University of Queensland Behavioural and Social Sciences Ethical Review Committee on 16 May 2010, with approval for a period of 12 months granted on 15 June 2010. The documents related to ethics (the ethics approval form, the information sheet for key informants and the consent form) are included below.
THE UNIVERSITY OF QUEENSLAND
Institutional Approval Form For Experiments On Humans
Including Behavioural Research

Chief Investigator: Professor Helen Chenery, A/Prof Sharon Brownie
Project Title: Project 4: Mapping Health Workforce Competencies,
Developing A Taxonomy For Competency-Based
Standards In Health - 21/06/2010 - AMENDMENT
Supervisor: None
Co-Investigator(s): None
Department(s): Faculty of Health Sciences
Project Number: 2010000637
Granting Agency/Degree: Health Workforce Australia
Duration: 31st December 2010
Comments:

Name of responsible Committee:-
Behavioural & Social Sciences Ethical Review Committee
This project complies with the provisions contained in the National Statement on
Ethical Conduct in Human Research and complies with the regulations governing
experimentation on humans.

Name of Ethics Committee representative:-
Dr Jack Broese
Chairperson
Behavioural & Social Sciences Ethical Review Committee

Date 22/06/10 Signature

THE UNIVERSITY OF QUEENSLAND
Institutional Approval Form For Experiments On Humans
Including Behavioural Research

Chief Investigator: Professor Helen Chenery
Project Title: Project 5: Evidence-Based Options For Competency-
Based Health Career Framework/s In Australia -
02/07/2010 - AMENDMENT
Supervisor: None
Co-Investigator(s): A/Prof Sharon Brownie
Department(s): Faculty of Health Sciences
Project Number: 2010000638
Granting Agency/Degree: Health Workforce Australia
Duration: 31st December 2010
Comments:

Name of responsible Committee:-
Behavioural & Social Sciences Ethical Review Committee
This project complies with the provisions contained in the National Statement on
Ethical Conduct in Human Research and complies with the regulations governing
experimentation on humans.

Name of Ethics Committee representative:-
Dr Jack Broese
Chairperson
Behavioural & Social Sciences Ethical Review Committee

Date 06/07/10 Signature
Participant Information

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Purpose of the studies

Over the last two decades there has been a steady growth in the diversity of different approaches to competencies and competency-based frameworks. As the scope of practice for health workers and providers is redefined there is an ongoing need to define and understand the relationship and use of these frameworks in the Australian health sector to ensure their relevance to learning and best practice across the health care sector.

Furthermore a need has been identified for the development of a national career framework that encompasses training and professional development, encourages flexibility and mobility across positions within the health sector, and allows the definition and assessment of knowledge and skills to be more closely related to health service. appraisal and articulation of the value of such a framework is central to its endorsement and implementation within Australia’s health care sector.

The aims of these studies are 2 fold. Firstly, to map the key health workforce competencies and develop a taxonomy for competency-based standards in health and secondly to explore and articulate the purpose and place of competency-based career frameworks in the health care sector in Australia.

Details of participation

We would like to invite you to contribute to a single one (1) hour recorded semi-structured interview, undertaken by a UQ Research Group team member, either face to face in Brisbane or via teleconference. The information that we collect from your interview will be used to inform a written report to Health Workforce Australia.

You are free to withdraw from this study at any stage and without penalty.

Confidentiality

All information relating to your participation will be treated confidentially. All data will be stored securely with limited access only to the UQ Project Management Group.

Benefits to participants

By participating in this study you have the opportunity to contribute to and inform the report investigating competency-based frameworks, their use in Australia and the development of a taxonomy for use within the Australian Health Sector.

More specifically you will:

- Contribute to the literature and research of relevance to their area of educational and training practice;
- Inform the literature and research of relevance to roles as Health Service Managers and within the professional management and development of their health workforce;
- Contribute to the literature and research of relevance to professional bodies and organisations of relevance to the education, training;
- Have access to related reports made available by Health Workforce Australia.

Further information

Any further questions you have regarding the study may be directed to the project Chief Investigator, A/Prof Sharon Brownie (s.brownie@uq.edu.au), (07) 3346 4979 or to the Project Manager, Lynnette Knowles (l.knowles@uq.edu.au), (07) 3346 5293.

Ethics Clearance Statement

This study has been cleared by one of the human ethics committees of the University of Queensland in accordance with the National Health and Medical Research Council’s guidelines. You are free to discuss your participation in this study with project staff. If you would like to speak to an officer of the University not involved in the study, you may contact the Ethics Officer on 3365 3924.
Semi-structured interviews were carried out with 73 key informants (noted in Acknowledgments). The response rate to requests for interview was about 85% for both national and international invitees. After the first few interviews, it became apparent that the questions needed refining to fully engage with the interviewees’ expertise and knowledge, and because respondents viewed the topics explored in a holistic way. The initial and revised interviewee question sets are included in this annex.

Each interview was digitally recorded using either an Olympus DM-450 Professional Recorder or the teleconference recording service provided by Chorus Call (Brisbane, Queensland). Interview audio files were edited in Adobe Audition to remove identifying comments (for example, names), remove noise where necessary, and optimise levels, before uploading to a transcription service (Pacific Transcription Solutions, Brisbane, Queensland). In line with ethical protocols approved by The University of Queensland, transcripts have been stripped of identifying information. However, given that the interviews sought to encompass the view of a variety of groups of stakeholders, each transcript has been classified according to the group from which the informants were drawn, and each transcript has been given a numerical designation.

Validity of the analysis was ensured through triangulation by:
• two complete read-throughs of all transcripts by one member of the research team
• hand coding of all transcripts according to identified themes
• further coding of transcripts grouped according to nature of informants.

In particular, as the data set resulting from the interviews is a very rich one, Leximancer was used to validate the patterning of the data established by hand coding and analysis, and to understand the varying relations between responses to research questions expressed by stakeholders from particular groups.

Findings from the data were further validated through a progress of peer review, involving the submission of an interim report to HWA and formal peer review through the National Health Workforce Planning and Research Collaboration Research Committee.

Survey Questions National Health Workforce Taskforce

Mapping health workforce competencies and developing a taxonomy for competency-based standards in health

- What is your understanding of competency-based education and training?
- What do you think are the major benefits/pitfalls in adopting a competency-based training approach?
- What are the resource implications for adopting a competency-based training and education framework across the Australian Health Sector?
- Do you think that language/definitions are a potential barrier to the implementation of competency-based frameworks across multiple disciplines?
- How do you think competency-based education and training would most benefit their particular professional group or employment setting?
- If a national framework was to be adopted who do you think should be responsible for its implementation?
- What do you think are the critical sign-off processes in gaining agreement regarding a national competency-based education and training framework for the health workforce?
- Do you think that competency-based education and training is equally relevant to the professional vs VET sector of the health workforce?

Evidence-based options for competency-based health career framework/s in Australia

- Are there any other frameworks of a similar compass to the UK Skills for Health framework?
- Could the UK Skills for Health framework be suitable for the Australian context?
- Are there any apparent difficulties applying the UK model to the Australian health sector?
- What are the core generic capabilities for anyone working in the health sector?
- What are the core capabilities for your particular profession?
- Which professions within the health care sector will find a competency based career framework easiest to implement?
- Which professions within the health care sector will find a competency based framework most difficult to implement?
- How can implementation of competency based career frameworks be facilitated within professions?
- What do you foresee as the primary difficulties in developing mappings between professions?
- How can the development of horizontal mappings between professions be facilitated?
Survey Questions National Health Workforce Taskforce

Mapping health workforce competencies and developing a taxonomy for competency-based standards in health

1. What is your understanding of competency within education and training?
2. What is the evidence for major benefits in adopting a competency-based training approach?
3. What is the evidence for major challenges in adopting a competency-based training approach?
4. What is your personal experience and perspective on the benefits and challenges?
5. If a national competency-based taxonomy was adopted, would you find language a potential barrier?
6. If a national taxonomy was adopted, what terms could be common across all of the Australian Health Sector?
7. What aspects would need to be specific to professions?
8. How could we achieve an agreement across professions for a national taxonomy?
9. How do you think a national taxonomy would benefit your particular professional group or employment setting?
10. In what ways do you think a national taxonomy would impact on interprofessional collaboration?
11. What are the resource implications for adopting a national taxonomy for competency-based training and education across the Australian Health Sector?
12. Who do you think would be responsible for implementing a national taxonomy?
13. Who are the bodies that need to address a national taxonomy for it to be implemented?

Evidence-based options for competency-based health career frameworks in Australia

1. What is your understanding of a competency-based career framework?
2. Do you have any experience in using either nationally or internationally that could have a national scope (UK, EU, USA) for health?
3. In what ways could these frameworks be adapted to the Australian health care sector at a national level?
4. Are there any apparent challenges in applying these frameworks nationally to the Australian health care sector?
5. If a national career framework was to be developed, what would it look like?
6. What problems would a national framework solve or create?
7. What would be the scope of a national competence-based career framework?
8. Could a national career framework make comparison of competency levels between professions easier?
9. Are there any particular professions that may benefit from a national career framework?
10. Are there any particular professions that may be disadvantaged by a national career framework?
11. What impact would a national career framework have on an individual practitioner in the Australian health care sector?

Annexe 2. Sample of generalist health education and training programs

Summary

Provision for an expanding allied and supplementary health workforce is being made in the higher education and vocational training sectors. Universities in all states offer undergraduate degrees in health science, which do not have a clinical component but include the common themes of population health, public health, Indigenous health, nutrition and health services management. These tend to be general degrees that can be used as a stepping stone to graduate master’s programs in the allied health professions, including physiotherapy, pharmacy, speech pathology and occupational therapy. Alternatively, graduates from these degrees can be qualified for a broad range of health-related careers, including health policy and planning, health promotion, health research, community health, sales representatives and clinical trials. In addition, The University of Queensland offers a Master of Physician Assistant Studies, graduates from which are mid-level health care practitioners working under the delegated authority of a medical practitioner. Physician assistants provide continuity of care, increase provider accessibility and improve quality of life for both patients and practitioners, to better meet the long-term needs of the community.

A sampling of technical and further education (TAFE) college course listings has highlighted the wide availability of certificate III and IV courses in allied health assistance and health services assistance. These provide entry-level qualifications for people wishing to take on allied health assistants’ roles, including physiotherapy assistants, occupational therapy assistants and general therapy assistants. A variety of other health sector courses are offered by TAFE colleges, including mental health, aged care, nursing, nutrition and dietetic assisting, dental assisting and health administration.

Course details: tertiary

University of Queensland Bachelor of Health Sciences

http://www.uq.edu.au/study/program.html?acad_prog=2252

See the ‘Bachelor of Health Sciences (BHlthSc)’ page of The University of Queensland website at <www.uq.edu.au/study/program.html?acad_prog=2252>.

Components:

year 1: broad overview of preventive health care and health services management; for example, human anatomy and physiology, physical activity, nutrition, health behaviour change, human disease states, human psychology, population health, health systems, Indigenous health, management and health promotion

year 2: specialise in nutrition, health services management, Indigenous health or population health, and health promotion

year 3: major of health promotion and population health, health services management, Indigenous health or nutrition, plus minor of organisational communication in health services or marketing and advertising in health promotion, then at least 90 hours of work experience at health industry placement sites.

Career opportunities in non-clinical health, clinical health or research may involve further study:

The University of Queensland offers Master of Physician Assistant—mid-level health care practitioner working under the delegated authority of a medical practitioner. At the core of the physician assistant profession is a team approach to patient care. With this approach, a physician assistant can provide continuity of care, increase provider accessibility and improve quality of life for both patients and practitioners, to better meet the long-term needs of the community. Entry requirements are a bachelor degree in biological or health sciences or a related field.

The University of Sydney Bachelor of Health Sciences

Details from the ‘Bachelor of Health Sciences’ page of The University of Sydney website at <www.usyd.edu.au/courses/?detail=1&course_set_id=Bachelor_of_Health_Sciences_920>.

Components:

core: foundations of health science, health science and research, health determinants and interventions, health care resources and systems, and psychology
elective: include health and Indigenous populations, health information science, health service strategy and policy, health ethics and the law, evidence-based health care, research methods in health, international health project, health and lifelong disability, and rural health.

Career opportunities:
- health knowledge manager, and record keeping
- project officer delivering health initiatives in Indigenous communities
- sales representative for a health-related corporation
- health development officer—planning, implementing and evaluating health care projects
- drug and alcohol services coordinator.

Macquarie University Bachelor of Health

Components:
- year 1: drugs across cultures, human biology, demographic fundamentals, and geographies of global change
- year 2: illness and healing, contemporary health issues, geographical perspectives on population, and methods of social research
- year 3: population, health and the environment, care and human services, and health placement.

Career opportunities:
- community development and social planning
- health advocacy
- health policy and planning
- health promotion
- health research
- specialised areas of health, such as multicultural and refugee health, environmental health, and early childhood health.

Monash University Bachelor of Health Science
Details from the ‘Bachelor of Health Science’ page of the Monash University website at <www.monash.edu.au/study/coursefinder/course/3882>.

Components:
- year 1: data evidence and critical thinking in health, foundations of public health, biological bases of health and disease 1, health and social care systems and policy, biological bases of health and disease 2, and global health: opportunities and challenge
- year 2: analysing patterns of health and disease; health promotion: global and local; health, society and culture; research methods in the health sciences; plus majors
- year 3: health law and ethics, disease prevention and control, and health for all in a global world, plus majors.

Major streams: health programs and policy, or clinical and public health sciences.

Career opportunities: include public health/heath promotion programs and policy, and public health sciences, leading to a wide range of careers. It also provides a pathway to postgraduate clinical programs (for example, medicine, social work, nursing and allied health).

La Trobe University Bachelor of Health Sciences

Components:
- year 2 and 3: ergonomics, safety and health, human anatomy and physiology or public health streams.

Career opportunities: include health administration, health promotion, research and evaluation, specialist occupational health and safety and occupational rehabilitation fields, and non-clinical aspects of client management including community-based rehabilitation and case management.

Flinders University Bachelor of Health Sciences
Details from the ‘Bachelor of Health Science’ page of the Flinders University website at <www.flinders.edu.au/courses/undergrad/bhs>.

Components:
- available streams: disability and development education, health education/promotion, health management, life sciences, nutrition and paramedic.

Career opportunities: include administration, nutrition, community health, clinical trials, research and laboratory roles, welfare and advocacy, and human resources.

The University of Adelaide Bachelor of Health Sciences

Components:
- level 1: human biology, public health
- level 2: biology of disease, drugs, chemicals and health, and health sciences courses
- level 3: major in medical sciences, psychology, public health or molecular and biomedical science.

Career opportunities: include laboratory manager, occupational health and safety officer, health administrator, hospital worker, health educator and health officer.

The University of Western Australia Bachelor of Health Science
Details from the ‘Undergraduate’ page of The University of Western Australia website at <www.studyat.uwa.edu.au/programfinder/2011/Undergraduate/Degree/Bachelor+of+Health+Science>.

Components:
- level 1: human biology, public health
- level 2: science and public health studies, plus one science major; for example, microbiology, pharmacology, human biology, anthropology, biochemistry, physiology, genetics, psychology, pathology, biophysics, computer science and geography
- level 3: complete science major, continue with public health major and complete the professional practice unit
- level 4: complete public health major—these units discuss health administration, health economics, health promotion and disease control, and work placement.

Career opportunities: health promotion, health counselling, community health, local government health services, health informatics, health statistics, health planning, epidemiology, health services, clinical trials research, health policy officer, health economist, health care/public health administration, and health technologies.

Edith Cowan University Bachelor of Health Science
Details from the ‘XXX’ page of the Edith Cowan University website at <www.ecu.edu.au/future-students/our-courses/search?szq_content_src=%2BdXJsPWHodHAIM0EiKyYMKz3ZWJzXJz2aWNCxs32WiuZWN1>.
Components:
year 1: population health, personal health, systems physiology, nutrition and public health, health in society, introduction to occupational health and safety, addiction studies and epidemiology
year 2: statistics, health promotion planning and administration, and health research methodology
year 3: Aboriginal communities, health research project, and health sciences professional practices.
Majors: addiction studies, health promotion, nutrition, and occupational health and safety.
Career opportunities: range of workplaces including aged care facilities and hospitals, rural and regional settings, asthma/diabetes/cancer/injury prevention councils, heart foundations, family planning associations, alcohol and other drug agencies, community development and local government organisations, disability services, justice and correctional agencies, research institutes, international aid organisations, and mental health support agencies.

Course details: TAFE
Southbank Institute of Technology
See the ‘Courses and careers’ page of the Southbank Institute of Technology website at <www.southbank.edu.au/site/Programs/CourseProcess.asp>.
Courses:
- Certificate IV in allied health assistance—podiatry
- Diploma of paramedical science (anaesthesia)
- Diploma of nursing (enrolled/division 2 nursing)
- Certificate III in sterilisation services.

Gold Coast Institute of TAFE
Courses:
- Certificate III in health services assistance
- Advanced diploma of nursing.

Northern Sydney Institute of TAFE
Courses:
- Certificate III in allied health assistance
- Certificate III in health services assistance (nursing in acute care).

Sydney Institute of TAFE
See the ‘Course and career finder’ page of the Sydney Institute of TAFE website at <www.sit.nsw.edu.au/courses/?Media_Index_ID=169>.
Courses:
- Certificate IV in mental health
- Certificate IV in health services assistance (nursing in acute care)
- Certificate III in sterilisation services
- Certificate III in nutrition and dietetic assistance
- Certificate II in access to nursing.

Canberra Institute of Technology
Courses:
- Certificate IV in mental health
- Certificate IV in allied health assistance
- Certificate III in health services assistance
- Certificate IV in dental assisting
- Certificate IV in aged care.

North Melbourne Institute of TAFE
See the ‘Find a course’ page of the North Melbourne Institute of TAFE website at <www.nmit.edu.au/courses>.
Courses:
- Certificate III in aged care
- Certificate III in health services assistance
- Certificate IV in mental health
- Certificate III in home and community care.

Central Institute of Technology (WA)
See the ‘Courses’ page of the Central Institute of Technology website at <www.central.wa.edu.au/Courses/Pages/default.aspx>.
Courses:
- Certificate III in allied health assistance
- Certificate III in health services assistance
- Certificate III in health support services
- Certificate III and IV in hospital/health services pharmacy support
- Certificate IV in health administration
- Certificate IV in health science foundations
- Certificate IV in mental health.

Tasmanian Polytechnic
Courses:
- Certificate III in health services assistance
- Certificate IV in allied health assistance
- Certificate III and IV in aged care work.
To give a snapshot of the types of health workforce positions available, we sampled job availability in the non-government, private and government sectors over a two-month period.

### Non-government agencies

<table>
<thead>
<tr>
<th>Job description</th>
<th>Source</th>
<th>Date advertised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic violence specialist worker</td>
<td>Salvation Army website (<a href="http://salvos.org.au">http://salvos.org.au</a>)</td>
<td>30 August 2010</td>
</tr>
<tr>
<td>Caseworker, drug and alcohol</td>
<td>Salvation Army website (<a href="http://salvos.org.au">http://salvos.org.au</a>)</td>
<td>22 July 2010</td>
</tr>
<tr>
<td>Support worker</td>
<td>St Vincent de Paul website (<a href="http://www.vinnies.org.au">www.vinnies.org.au</a>)</td>
<td>31 August 2010</td>
</tr>
<tr>
<td>Settlement caseworker</td>
<td>St Vincent de Paul website (<a href="http://www.vinnies.org.au">www.vinnies.org.au</a>)</td>
<td>31 August 2010</td>
</tr>
</tbody>
</table>

### Private sector

<table>
<thead>
<tr>
<th>Job description</th>
<th>Source</th>
<th>Date advertised</th>
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</thead>
<tbody>
<tr>
<td>Ward receptionist</td>
<td>Ramsay Health, job search website (<a href="http://jobs.seek.com.au">http://jobs.seek.com.au</a>)</td>
<td>1 September 2010</td>
</tr>
<tr>
<td>Pre-admission officer</td>
<td>Ramsay Health, job search website (<a href="http://jobs.seek.com.au">http://jobs.seek.com.au</a>)</td>
<td>1 September 2010</td>
</tr>
<tr>
<td>Sterilising technician CSD</td>
<td>Ramsay Health, job search website (<a href="http://jobs.seek.com.au">http://jobs.seek.com.au</a>)</td>
<td>1 September 2010</td>
</tr>
<tr>
<td>Health information services clerk</td>
<td>Ramsay Health, job search website (<a href="http://jobs.seek.com.au">http://jobs.seek.com.au</a>)</td>
<td>25 August 2010</td>
</tr>
<tr>
<td>Assistant in nursing</td>
<td>Ramsay Health, job search website (<a href="http://jobs.seek.com.au">http://jobs.seek.com.au</a>)</td>
<td>25 August 2010</td>
</tr>
<tr>
<td>Pathology collector</td>
<td>Healthscope website (<a href="http://www.healthscope.com.au">www.healthscope.com.au</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Phlebotomist</td>
<td>Healthscope website (<a href="http://www.healthscope.com.au">www.healthscope.com.au</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Occupational therapy assistant</td>
<td>Healthscope website (<a href="http://www.healthscope.com.au">www.healthscope.com.au</a>)</td>
<td>2 September 2010</td>
</tr>
</tbody>
</table>

### Government

<table>
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<tr>
<th>Job description</th>
<th>Source</th>
<th>Date advertised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalist health worker</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>6 September 2010</td>
</tr>
<tr>
<td>Advanced health worker</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>6 September 2010</td>
</tr>
<tr>
<td>Senior therapy assistant</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>13 September 2010</td>
</tr>
<tr>
<td>Senior health worker</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>6 September 2010</td>
</tr>
<tr>
<td>Health worker coordinator</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>13 September 2010</td>
</tr>
<tr>
<td>Health promotion officer</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>6 September 2010</td>
</tr>
<tr>
<td>Biomedical technician</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>13 September 2010</td>
</tr>
<tr>
<td>Theatre assistants</td>
<td>Queensland Health website (<a href="http://www.health.qld.gov.au/jobs">www.health.qld.gov.au/jobs</a>)</td>
<td>13 September 2010</td>
</tr>
<tr>
<td>Aboriginal health worker</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers">www.health.nt.gov.au/Careers</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Aboriginal community worker</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers">www.health.nt.gov.au/Careers</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Senior dental assistant</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers">www.health.nt.gov.au/Careers</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Aboriginal mental health worker</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers">www.health.nt.gov.au/Careers</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Senior Aboriginal community worker</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers">www.health.nt.gov.au/Careers</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Allied health assistant</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers">www.health.nt.gov.au/Careers</a>)</td>
<td>2 September 2010</td>
</tr>
</tbody>
</table>
The team noted that the frameworks vary considerably in terms of language or terminology, highlighting the competencies is valid on its own.

noted that for this reason some models and frameworks made it explicit that no single domain or unit of its growing acceptance among a number of professions and internationally (Frank 2005).

under broad domains common to various scopes of practice and specialties, and this report has underlined CanMEDS (see case study in section 10.1.1) has been utilised to align a range of skill-based competencies study in section 10.2.3; College of Health Disciplines and Interprofessional Network of BC 2008). Similarly, case study of the British Columbia Competency Framework for Interprofessional Collaboration (see case study in section 10.3).

A good example of a framework specifically designed for interprofessional practice has been provided in the contexts.

typical framework structure is useful for translating different languages characteristic of different professions ability to perform in the profession or role (Hager and Gonczi 1991). Additionally, the hierarchical nature of a assessment of competencies and help individuals identify their strengths and weaknesses regarding their competencies numbered from as few as one and up to 12 in some cases. Reference to the literature highlighted the fact that a hierarchical levelling structure can assist in the number of domains in each tier. Some frameworks contained as few as three domains within the first tier, with others comprising up to 12. Similarly, in lower levels of each hierarchy, the number of points or competencies numbered from as few as one and up to 12 in some cases. All of the frameworks analysed used hierarchical structuring where first-level domains were identified as functional areas of the professions. Second-level elements covered units of competencies, which were then broken down into smaller, third-level units containing performance criteria, ranges of variables and evidence guides suited to assessment. Within the hierarchical structure, the frameworks varied considerably in the number of domains in each tier. Some frameworks contained as few as three domains within the first tier, with others comprising up to 12. Similarly, in lower levels of each hierarchy, the number of points or competencies numbered from as few as one and up to 12 in some cases. Reference to the literature highlighted the fact that a hierarchical levelling structure can assist in the assessment of competencies and help individuals identify their strengths and weaknesses regarding their ability to perform in the profession or role (Hager and Gonczi 1991). Additionally, the hierarchical nature of a typical framework structure is useful for translating different languages characteristic of different professions for interprofessional practice and planning and deployment of skill-mix in varying workplace and clinical contexts.

A good example of a framework specifically designed for interprofessional practice has been provided in the case study of the British Columbia Competency Framework for Interprofessional Collaboration (see case study in section 10.2.3; College of Health Disciplines and Interprofessional Network of BC 2008). Similarly, CanMEDS (see case study in section 10.1.1) has been utilised to align a range of skill-based competencies under broad domains common to various scopes of practice and specialties, and this report has underlined its growing acceptance among a number of professions and internationally (Frank 2005).

While concern is often expressed that frameworks can be reductionist, this is not necessarily so. The team noted that for this reason some models and frameworks made it explicit that no single domain or unit of competencies is valid on its own.

The team noted that the frameworks vary considerably in terms of language or terminology, highlighting the

<table>
<thead>
<tr>
<th>Job description</th>
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<th>Date advertised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong women worker</td>
<td>Northern Territory Government Department of Health website (<a href="http://www.health.nt.gov.au/Careers/">www.health.nt.gov.au/Careers/</a>)</td>
<td>2 September 2010</td>
</tr>
<tr>
<td>Rural allied health assistant</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>8 September 2010</td>
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<tr>
<td>Aboriginal environmental health officer trainee</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>8 September 2010</td>
</tr>
<tr>
<td>Youth health worker</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>9 September 2010</td>
</tr>
<tr>
<td>Sterilising technician</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>17 September 2010</td>
</tr>
<tr>
<td>Nuclear medicine technologist</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>13 September 2010</td>
</tr>
<tr>
<td>Child protection counsellor</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>3 September 2010</td>
</tr>
<tr>
<td>Occupational therapy assistant</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>3 September 2010</td>
</tr>
<tr>
<td>Female Aboriginal health education officer</td>
<td>NSW Health website (www7.health.nsw.gov.au/healthjobs)</td>
<td>10 September 2010</td>
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<tr>
<td>Youth worker</td>
<td>SA Health website (<a href="http://www.sahealth.tmpw.com.au/">www.sahealth.tmpw.com.au/</a>)</td>
<td>10 September 2010</td>
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<tr>
<td>Aboriginal family worker</td>
<td>SA Health website (<a href="http://www.sahealth.tmpw.com.au/">www.sahealth.tmpw.com.au/</a>)</td>
<td>17 September 2010</td>
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<tr>
<td>Anaesthetic technician</td>
<td>WA Health website (<a href="http://www.jobs.health.wa.gov.au/">www.jobs.health.wa.gov.au/</a>)</td>
<td>6 September 2010</td>
</tr>
<tr>
<td>Support services officer</td>
<td>Tasmania Health (<a href="http://www.jobs.tas.gov.au/">www.jobs.tas.gov.au/</a>)</td>
<td>3 September 2010</td>
</tr>
</tbody>
</table>

Annexe 4. Sample of competency-based education and training frameworks

This annex provides a sample of the extensive range of frameworks in use or under development in the health sector. Those highlighted by an asterisk (*) were analysed in detail to identify their similarities and differences in structure and content. The summary of this analysis is as follows.

A very significant finding of this research has been twofold: there is a large number of competency frameworks in use and in development across the health sector this fact has not been previously apparent—the research team was unable to locate any substantive published literature highlighting this point in the Australian context.

Subsequently, the research team could not readily map all frameworks in use or in contemplation—the scenario involved an extensively moving target as frameworks are continually being developed, updated, expanded and/or retired.

The important implication of this finding is that frameworks are and have been proliferating across the sector. In the Australian health sector, numerous competency-based frameworks have been implemented or are under development, a sample of which is tabulated below in this annex.

In practical terms it was inadvisable, if not impossible, to harmonise every existent framework into a single taxonomy without substantive further research, consultation and additional resourcing. Given the large number of frameworks located and the constantly changing status of the frameworks, it was quickly agreed that the resources within this project were simply insufficient to attempt a mapping exercise as originally envisaged. Subsequently, discussion took place with the project funders, who agreed that a smaller scale mapping of selected frameworks was the optimal approach to inform this project.

The team analysed 10 frameworks (highlighted by an asterisk *) in the list of frameworks in this annex to identify their similarities and differences in structure and content. Purposeful sampling was used to select frameworks for analysis. Selection was made on the basis of the ability of the selected framework to illustrate salient points that had been identified in the research process regarding the nature of competency frameworks in the health sector and the way in which frameworks are developed for a number of purposes by differing stakeholders (for instance, professional bodies and jurisdictions).

All of the frameworks analysed used hierarchical structuring where first-level domains were identified as functional areas of the professions. Second-level elements covered units of competencies, which were then broken down into smaller, third-level units containing performance criteria, ranges of variables and evidence guides suited to assessment. Within the hierarchical structure, the frameworks varied considerably in the number of domains in each tier. Some frameworks contained as few as three domains within the first tier, with others comprising up to 12. Similarly, in lower levels of each hierarchy, the number of points or competencies numbered from as few as one and up to 12 in some cases.

Reference to the literature highlighted the fact that a hierarchical levelling structure can assist in the assessment of competencies and help individuals identify their strengths and weaknesses regarding their ability to perform in the profession or role (Hager and Gonczi 1991). Additionally, the hierarchical nature of a typical framework structure is useful for translating different languages characteristic of different professions for interprofessional practice and planning and deployment of skill-mix in varying workplace and clinical contexts.

A good example of a framework specifically designed for interprofessional practice has been provided in the case study of the British Columbia Competency Framework for Interprofessional Collaboration (see case study in section 10.2.3; College of Health Disciplines and Interprofessional Network of BC 2008). Similarly, CanMEDS (see case study in section 10.1.1) has been utilised to align a range of skill-based competencies under broad domains common to various scopes of practice and specialties, and this report has underlined its growing acceptance among a number of professions and internationally (Frank 2005).

While concern is often expressed that frameworks can be reductionist, this is not necessarily so. The team noted that for this reason some models and frameworks made it explicit that no single domain or unit of competencies is valid on its own.

The team noted that the frameworks vary considerably in terms of language or terminology, highlighting the
fact that there is no nationally agreed format for competency standards, including the terminology used. For example, competencies are variably referred to as competencies, performance criteria statements, capabilities and standards.

It is also apparent that competency statements acquire their meaning in the context of specific professions, and are not necessarily meaningful across professions. That is, they need to be interpreted in context by the user, and only the individual profession can fully ‘decode’ profession-specific competencies.

In general, the themes of the domains of each framework could be loosely grouped into four categories: professional, technical, social and operational competencies.

All models contained some component of professional competencies, either in a single first-level domain, in several first-level domains, or integrated within technical task-based domains of the profession. They included areas such as accountability and responsibility, operation within scope of practice, reflective practice, maintaining standards and improvement of practice. Most frameworks described a list of technical competencies undertaken by professions in the treatment of the patient/client. In addition to activity-based competencies, some frameworks listed knowledge and skills that are required for the job in the technical competency category. These lists are diverse and include descriptive tasks, outcomes (for example, patient safety, collaborative care), standards or management of practice (for example, adverse event, emergencies).

Social competencies relate to ways in which health professionals collaborate and interact with people and their environment; hence, there is some degree of overlap between social and professional competencies. This overlap is evident in that some frameworks listing social competencies under professional attitudes and behaviours, while other frameworks integrated them with technical/functional competencies or listed them in separate single domains constituting overall competence. Operational competencies relate to how individuals operate in an effective, efficient and safe manner. They are context specific and dependent on settings of practice; hence, operational competencies vary greatly among frameworks. They include management of practice, use of information technology to enhance own practice, management of patient records, workplace safety and self-management of workload.

The conclusion that can be drawn from this analysis is that competency frameworks have exhibited a range of classificatory strategies depending on context. It is also notable that the process of mapping and aligning competency frameworks is rendered more complex by the variance in the number of domains and hierarchical tiers employed. The team is confident that this analysis of a sample of frameworks, while not aligning competency frameworks is rendered more complex by the variance in the number of domains and hierarchical tiers employed. The team is confident that this analysis of a sample of frameworks, while not aligning competency frameworks is rendered more complex by the variance in the number of domains and hierarchical tiers employed. The team is confident that this analysis of a sample of frameworks, while not aligning competency frameworks is rendered more complex by the variance in the number of domains and hierarchical tiers employed.

### Sector/Profession Frameworks/Projects Location/References

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<tr>
<th>Sector/Profession</th>
<th>Framework/Projects</th>
<th>Location/References</th>
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<tbody>
<tr>
<td>Health professionals</td>
<td>Audiotherapists</td>
<td>The ASA professional standards of practice for audiotherapists (1997)</td>
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<tr>
<td></td>
<td>Australian and New Zealand medical practitioners</td>
<td>Committee of Presidents of Medical Colleges: LEAP framework - <a href="http://www.racgp.org.au/LEAP/practice/index.shtml">www.racgp.org.au/LEAP/practice/index.shtml</a></td>
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<td>Sector</td>
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<th>Sector</th>
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<th>Frameworks/Projects</th>
<th>Location/References</th>
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</thead>
<tbody>
<tr>
<td>Multidisciplinary</td>
<td>Including health sciences</td>
<td>Australian Learning and Teaching Council Academic standards project</td>
<td>Australian Learning and Teaching Council, [<a href="http://www.altc.edu.au/standards/team%3E">www.altc.edu.au/standards/team&gt;</a> accessed DAY MONTH YEAR</td>
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Annex A.5. Select literature on implementation and implications of the United Kingdom programs

<table>
<thead>
<tr>
<th>Reference</th>
<th>Key findings</th>
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<td>Manley and Garbett 2000</td>
<td>Described the aims of the National Health Service (NHS) human resource management strategy as: equity and fairness through paying people for what they do rather than titles; breaking down professional boundaries; identifying essential work competencies for delivering care; articulating career progression to pay and performance; and increasing access through more flexible pathways into the professions.</td>
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<tr>
<td>McBride et al. 2004</td>
<td>Evaluated role redesign in the NHS and identified management culture, remuneration, and education and training as key to implementation.</td>
</tr>
<tr>
<td>Meadows et al. 2004</td>
<td>Described the development and validation of a competency framework for advanced pharmacy practice and noted the NHS modernisation programs as a driver.</td>
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Annex 6. Award restructuring as a case study of aligning workforce with industrial projects

A range of informants, particularly but not limited to jurisdictions, commented that implementation of a competency-based career framework would require significant industrial reform to derive its optimal potential benefits. The research team has chosen to conceptualise this issue analytically by distinguishing between the formulation of a career framework as a ‘workforce project’ and its full implementation as also involving an ‘industrial project’. This annex elucidates the reasoning behind this distinction, and draws lessons from both the United Kingdom Skills for Health experience and the process of award restructuring under the Keating Federal Labor Government around the Engineering Award as a model for aligning remuneration and classification with competencies (a case study suggested as highly pertinent by a number of informants).

From the point of view of health workers, a career framework should enable both a shift to a skill-mix more relevant to existing or prospective practice (horizontal movement) and, if desired, vertical movement to either an enhanced scope of practice or to another health workforce category. For instance, a career framework should enable nurses to move between different areas of practice (perhaps from aged care to oncology or theatre) or to an enhanced scope of practice, which may not be a simple vertical progression to a nurse practitioner or the like, but may involve recognition of prior learning and competencies enabling a more seamless shift to another health profession.

From the point of view of employers, managers and planners, a competency-based career framework should enable a more fine-grained deployment of skill-mix, better articulation between different forms of care or sites of practice, and a finer understanding of costs of care, particularly given the shift to a case-mix model of funding.

From the point of view of the public and of patients and clients, the design of the health workforce and its supply and disposition should enable care to be delivered in a timely fashion with expertise and empathy, and in the most holistic manner possible.

As discussed earlier in the United Kingdom case study, some implementation issues entailed:

- an expectation among workers that the gaining of additional competency-based qualifications or certification of higher competencies would automatically lead to increased pay; this expectation was often not met, as pay was still largely tied to roles, but it sometimes led to the creation of new workforce categories more through pressure for career pathways than from an assessment of their potential value in workforce and care needs.
- difficulties in achieving the full range of goals set for the competency-based career framework through lack of understanding and clarity and its limitation to particular professions or workforce categories.

However, as also previously noted, rationalisation of multiple pay spines and the creation of well-resourced tools for defining and evaluating work value—and thus aligning competencies and remuneration bands—have contributed to the achievement of the intention behind the introduction of a competency-based career framework.

In Australia, our jurisdictional informants have told the research team that:

- a huge number of job titles and the often unplanned emergence of new workforce categories (as a result of entrepreneurial activity among educators and sometimes managers and professions) impedes an optimal deployment of the workforce and rational management of demand and supply of entrants.
- complexity within jurisdictions in job titles and workforce categories is reflected in the industrial arena, with single jurisdictions having a number of enterprise bargaining agreements, each encompassing multiple underlying awards.
- the alignment of workforce supply and care and patient needs is complicated by different industrial instruments operating in public, private and community sectors.
- the work value (and cost) of existing workforce categories and emergent categories is quite often unclear, and parity can be difficult to assess because of historical discrepancies compounding.

All this both highlights the potential value of a competency-based career framework, and the complexities and challenges of implementation.
As mentioned, a number of respondents pointed to the award restructuring process, which began in 1989, as having pertinent lessons. The then Labor government and trade unions (along with many employers) sought to link qualifications and skills much more closely to remuneration bands, in order to encourage greater flexibility in the workforce and to provide incentives for maximising skills and productivity. It was envisaged that workers would be able to move between different employers, and undertake differing roles in organisations, while maintaining linkage between skills and remuneration banding.

Before the introduction of enterprise bargaining, the Engineering Award was chosen as something of a model or test case, partly because relativities within the centralised industrial system had traditionally been set in relation to the Metal Trades awards. A consultative process, stretching over several years, involved close liaison between unions, the Australian Council of Trade Unions, government and employers, supported by research, policy and analytical capability within the public service and universities. The bands within the award were to reflect the reforms to vocational education and training, and align with the first iteration of the Australian Qualifications Framework. After the Industrial Relations Reform Act of 1993, and the consequent introduction of enterprise bargaining, it was anticipated that underlying award classifications would continue to reflect attainment of skills, but could be tailored to the needs of particular employers and employees through bargaining for over-award remuneration in each enterprise or workplace.

However, over time, there has been a tendency for the classifications denoted by bands in awards to be disaggregated through uncoordinated bargaining activity across different workplaces, and thus for the alignment of competencies, training and remuneration to decay. Shifts in the architecture of training, both in terms of the entry of a large number of private providers and the proliferation of qualifications and training packages too narrowly focused on limited skills, have compounded this tendency. The recent reform process to the Australian Qualifications Framework, and the coordinating activity and policy initiatives of Industry Skills Councils and Skills Australia, are designed to restore an appropriate level of planning and comparability in the education and training system, and to better articulate outcomes and workplace productivity.

While the award modernisation process undertaken by Fair Work Australia over the past three years has been designed to simplify the vast number of awards and to restore integrity to the award system, the same level of linkage with skills and competencies has yet to be achieved. Within the health sector, this is complicated by awards that are sometimes particular to particular subsectors interacting with other awards that are profession or occupation specific, and industry or single employer awards. In aged care, for instance, some workers fall under the Nurses Award, while others are covered by the Social and Community Award, or other awards that are profession or occupation specific, and industry or single employer awards. The proliferation of qualifications and training packages too narrowly focused on limited skills, have compounded this tendency. The recent reform process to the Australian Qualifications Framework, and the coordinating activity and policy initiatives of Industry Skills Councils and Skills Australia, are designed to restore an appropriate level of planning and comparability in the education and training system, and to better articulate outcomes and workplace productivity.

However, the research team believes that it is essential to reflect the views of key informants, and to note that these views find support in the literature related to the implementation of a competency-based career framework in the United Kingdom.

Annex 7. Further research recommendations

Depending on stakeholder feedback and forward articulation of HWA priorities, there are areas where HWA may wish to commission or undertake further work; for example:

• Defining and evaluating innovation: conceptual work needs to be done on the adequacy of innovation in the health workforce context. It should not be assumed that any initiative described in this way is automatically positive. Criteria for evaluation and measurement should be developed, and innovations should be evaluated within a whole-of-workforce and sector context.

• Understanding the development of new health qualifications: it would be helpful to develop a greater insight and understanding of the processes by which universities and educators launch new qualifications, leading to a supply of graduates in workforce categories with unclear career paths and employability.

• The workforce and health outcomes contributions of unregulated and voluntary workers and carers: a better understanding of the contribution and existing competencies and deployment of unregulated workers and voluntary workers is essential. The full implications of the contributions of around 2.4 million carers and volunteers need exploring, particularly as the population ages. While the National Health and Hospitals Reform Commission recommended a range of strategies for increasing health knowledge in the general population, more work must be done in this increasingly important area.

• Career paths and intentions across the whole workforce: much of the literature scanned to inform these projects on health careers focused on retention and workplace exit (particularly among nurses), choice of specialty among medical students and junior doctors, and incentives for health professionals of all descriptions to enter and remain in rural and regional practice. Very little, if any, work has been done on the attractors for the unregulated workforce, and on the potential for prospective and existing workers to view their career progress in terms of health as a whole.

• Anticipated savings from task and role substitution: a number of findings from the literature suggest that task and role substitution may not result in cost savings. Such findings need further exploration and should inform developments in this area in the Australian context.

• Processes for developing common language across professions: the process involved in developing common terminologies for interprofessional practice should be explored more extensively.

• Development and implementation lessons from existing Australian frameworks: further research regarding a range of frameworks located in the grey literature and consultations for this report (for example, the Medical Deans project and the South Australian Allied Health Framework) could provide useful insights in a range of areas; for example, implementation lessons.

• Development, implementation and change management issues for resourcing frameworks: further research on the processes involved in the development of resources underpinning and supporting frameworks, and costs and change management issues arising, would be informative.

• Deepening understanding of international pilots: further research on pilots undertaken in comparable international jurisdictions (for instance, the United Kingdom, Canada and New Zealand) should precede any implementation.

• Agreed upon definitions for interprofessional education competencies: attention needs to be given to the ongoing process, initiated in Canada, to agree upon definitions and language of competency-based education through international consensus conferences.

• Health professionals as educators: increasingly, all health professionals are expected to be educators, taking responsibility for clinical training and assessment within workplaces. Yet the responsibility for developing these competencies appears to lie mainly with employers. Research needs to occur to determine the optimal way to develop competencies as tools for trainers, assessors and supervisors within all undergraduate curricula.

• Research into optimal balance in first-level competency domains: this report recommends use of a CanMEDS type framework to provide a range of role or competency domains that could form a national whole-of-workforce competency framework. Further work is needed to identify the optimal levels to
be included in a framework. The experience of the United Kingdom Skills Escalator demonstrates that a balance is needed between specification of detail and the juncture at which a national framework provides the overarching guidance and where it then leaves the rest to professional and/ or regional autonomy to define the further layers.

- **Sustainable approaches for a national approach to competency-based framework development:** further research and a whole-of-government approach is also required to ensure funding of the implementation of a competency-based framework in Australia is efficient and there is no duplication between agencies and jurisdictions (CS&HISC 2007, 2008).

- **Alignment of competency-based education and training and workplace assessment:** similarly, further research is needed to understand the optimal alignment of competency-based education and training and workplace assessment. The recent United Kingdom Evaluation of the Foundation for Excellence medical postgraduate training program should be noted in this regard; particularly its findings that overly detailed specification of clinical competencies led to a surfeit of assessment and evaluation points. As emphasised in this report, a balance is needed between achieving the aims of a competency framework and tools that are sensitive to the key role of clinicians to deliver patient care.