

**Australian Health Workforce Advisory Committee**

# **THE AUSTRALIAN ALLIED HEALTH WORKFORCE**

**An Overview of Workforce Planning Issues**

**AHWAC Report 2006.1**

**MARCH 2006.1**

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Enquiries concerning this report and its reproduction should be directed to:

Australian Health Workforce Advisory Committee  
Level 6  
73 Miller Street  
NSW Health Department  
NORTH SYDNEY NSW 2060

Telephone: (02) 9391 9933  
E-mail: [healthworkforce@doh.health.nsw.gov.au](mailto:healthworkforce@doh.health.nsw.gov.au)  
Internet: [www.healthworkforce.health.nsw.gov.au](http://www.healthworkforce.health.nsw.gov.au)

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## **Abbreviations**

AAHCS	Australasian Allied Health Classification System
ASAHP	Association of Schools of Allied Health Professionals
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AHMAC	Australian Health Ministers' Advisory Council
AHMC	Australian Health Ministers' Council
AHWAC	Australian Health Workforce Advisory Committee
AHWOC	Australian Health Workforce Officials' Committee
AIHW	Australian Institute of Health and Welfare
AMWAC	Australian Medical Workforce Advisory Committee
DEST	Australian Department of Education, Science and Training
DEWR	Australian Department of Employment and Workforce Relations
DHA	Australian Department of Health and Ageing
DIMIA	Australian Department of Immigration and Multicultural Affairs
HPCA	Health Professions Council of Australia
NAHAC	National Allied Health Advisory Committee
Nec	Not Elsewhere Classified
Nfd	Not Further Defined
NHWS	National Health Workforce Secretariat
NRRAHAS	National Rural and Remote Allied Health Advisory Service
NT	Northern Territory
NSW	New South Wales
Qld	Queensland
SA	South Australia
SARRAH	Services for Australian Rural and Remote Allied Health
Tas	Tasmania
THPC	Tasmanian Health Professions Council
VET	Vocational education and training
Vic	Victoria
WA	Western Australia

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## **TERMS OF REFERENCE OF THE AUSTRALIAN HEALTH WORKFORCE ADVISORY COMMITTEE**

The Australian Health Ministers' Advisory Council (AHMAC) established AHWAC to assist with the development of a more strategic focus to national nurse, midwifery and allied health workforce planning in Australia and advise on national health workforce matters, including workforce supply, distribution and future requirements.

AHWAC reports to AHMAC, and through AHMAC to the Australian Health Ministers' Conference. AHWAC is one of a number of AHMAC workforce committees, two others being the:

- Australian Health Workforce Officials' Committee; and
- Australian Medical Workforce Advisory Committee.

The Australian Health Workforce Officials' Committee (AHWOC) provides a forum for reaching agreement on key national level health workforce issues requiring government collaborative action and provides advice on health workforce issues to the Australian Health Ministers' Advisory Council (AHMAC). AHWOC also has a central role to play in co-ordinating the implementation of the recommendations arising from the workforce planning analysis undertaken by AHWAC and AMWAC. AHWOC comprises a nominee from the Australian/State/Territory health departments and the Australian Department of Education, Science and Training.

AHWAC provides advice to the AHMAC on a range of nurse, midwifery and allied health workforce matters, including:

- workforce supply and demand in Australia;
- the composition, balance and distribution of the health workforce in Australia; and
- the establishment and development of data collections concerned with the health workforce.

The Australian Medical Workforce Advisory Committee fulfils a similar role to AHWAC but with a focus on the medical workforce.

The three health workforce committees oversee a national health workforce work program of research projects. The work program is designed to inform and guide national health workforce policy. The three committees and the National Health Workforce Secretariat, which supports the committees, are funded from the AHMAC cost shared budget and report to AHMAC. Further information on the workforce advisory committees and the national health workforce work program is available through the Health Workforce Australia website at [www.healthworkforce.health.nsw.gov.au](http://www.healthworkforce.health.nsw.gov.au)

## **MEMBERSHIP OF THE AUSTRALIAN HEALTH WORKFORCE ADVISORY COMMITTEE**

### **Chair**

Mr John Ramsay                      Secretary,  
Department of Health and Human Services, Tasmania

### **Nominee of the Australian Department of Health and Ageing**

Ms Mary Murnane                  Deputy Secretary,  
Australian Department of Health and Ageing

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Ms Brenda McLeod                Principal Allied Health Advisor, New South Wales Health

Ms Sue Norrie                      Principal Nursing Adviser, Queensland Health

### **Nominee of Australian Institute of Health and Welfare**

Dr Ken Tallis                        Head, Resources Division

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Prof. Pauline Nugent              Dean, School of Nursing, Deakin University, Melbourne

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### **Nominee with expertise in consumer issues**

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### **Observers**

Mr Paul Gavel                        Executive Officer,  
National Health Workforce Secretariat

Ms Glenice Taylor                 Head, Labour Force Unit  
Australian Institute of Health and Welfare

Ms Helen Townley                 Executive Officer,  
Australian Health Workforce Officials' Committee

## **NATIONAL HEALTH WORKFORCE STRATEGIC FRAMEWORK**

In April 2004, Australian Health Ministers released Australia's first national health workforce strategic framework (Australian Health Ministers' Conference 2004). The National Health Workforce Strategic Framework provides a vision for the Australian health workforce and a set of principles to guide Australian health workforce policy and planning. The vision is the direction in which national health workforce effort should be focussed, the principles are the underlying fundamentals that will guide workforce strategic action in achieving that vision, and the strategies are the planned actions that will deliver the vision. All AHMAC national health workforce work program projects are undertaken within the contextual settings outlined in the Framework's vision and guiding principles.

A set of goals which underlie the vision for the Australian health workforce of the first part of the 21<sup>st</sup> century might appropriately be to ensure Australia has available a health workforce that is:

- population and health consumer focussed, ie. able to deliver safe, appropriate, quality care that maximises health outcomes, improves the health and well being of the Australian community and accommodates community expectations, all within a population health framework;
- sustainable: in terms of service and financial sustainability, and ensuring there is adequate workforce supply, both now and into the future;
- distributed to achieve equitable health outcomes: to ensure equitable access to health care regardless of location;
- suitably trained and competent: ie. appropriately educated with continuing maintenance and improvement of professional competence;
- flexible and integrated: able to undertake multiple tasks, work in community and/or institution based settings and in multidisciplinary teams, but also that work-life balance is respected;
- employable, ie. optimal use can be made of available skills and new skills taught; and
- valued: ie. career satisfaction is maximised and work is undertaken within a supportive environment and culture.

And the vision that encapsulates this is:

"Australia will have a sustainable health workforce that is knowledgeable, skilled and adaptable. The workforce will be distributed to achieve equitable health outcomes, suitably trained and competent. The workforce will be valued and able to work within a supportive environment and culture. It will provide safe, quality, preventative, curative and supportive care, that is population and health consumer focussed and capable of meeting the health needs of the Australian community."

The guiding principles are the core of the framework and provide a simple set of rules, guidelines and aims which allow all stakeholders to apply them to their own circumstances with a minimum of prescription.

The principles interlink and have been developed to focus on the key action areas that will be essential to the delivery of the vision. These can be summarised as:

- ensuring and sustaining supply (see Principle 1);
- workforce distribution that optimises access to health care and meets the health needs of all Australians (see Principle 2);

- health environments being places in which people want to work (see Principle 3);
- ensuring the health workforce is always skilled and competent (see Principle 4);
- optimal use of skills and workforce adaptability (see Principle 5);
- recognising that health workforce policy and planning must be informed by the best available evidence and linked to the broader health system (see Principle 6); and
- recognising that health workforce policy involves all stakeholders working collaboratively with a commitment to the vision, principles and strategies outlined in this framework (see Principle 7).

Therefore the key to delivery of the vision for the Australian health workforce is for all stakeholders to develop health workforce policy based on the following seven principles:

1. Australia should focus on achieving, at a minimum, national self sufficiency in health workforce supply, whilst acknowledging it is part of a global market.
2. Distribution of the health workforce should optimise equitable access to health care for all Australians, and recognise the specific requirements of people and communities with greatest need.
3. All health care environments regardless of role, function, size or location should be places in which people want to work and develop; where the workforce is valued and supported and operates in an environment of mutual collaboration.
4. Cohesive action is required among the health, education, vocational training and regulatory sectors to promote an Australian health workforce that is knowledgeable, skilled, competent, engaged in life long learning and distributed to optimise equitable health outcomes.
5. To make optimal use of workforce skills and ensure best health outcomes, it is recognised that a complementary realignment of existing workforce roles or the creation of new roles may be necessary. Any workplace redesign will address health needs, the provision of sustainable quality care and the required competencies to meet service needs.
6. Health workforce policy and planning should be population and consumer focused, linked to broader health care and health systems planning and informed by the best available evidence.
7. Australian health workforce policy development and planning will be most effective when undertaken collaboratively involving all stakeholders. It is recognised that this will require:
  - cohesion among stakeholders including governments, consumers, carers, public and private service providers, professional organisations, and the education, training, regulatory, industrial and research sectors;
  - stakeholder commitment to the vision, principles and strategies outlined in this framework;
  - a nationally consistent approach;
  - best use of resources to respond to the strategies proposed in this framework; and
  - a monitoring, evaluation and reporting process.

## **EXECUTIVE SUMMARY**

There has been limited focus on the allied health workforce in Australian health workforce planning. The Australian Health Ministers' Advisory Council (AHMAC) commissioned the Australian Health Workforce Advisory Committee (AHWAC) to undertake an overview of the allied health workforce, with a view to the possible need to commission specific national level workforce planning projects for the allied health workforce.

This paper reports the findings of that review and provides:

1. an overview of the allied health workforce, including an assessment of workforce issues and possible areas for future action; and
2. an audit of allied health data collections.

### **The Australian allied health workforce**

In Australia, there is no clear and consistent agreement on what comprises the allied health workforce at either the stakeholder, jurisdictional or national level. There is also an array of different interpretations of the occupations that comprise the allied health workforce.

Attempts to define the allied health workforce have primarily been approached in two ways; by identifying criteria that define the allied health workforce, and by identifying those professions considered part of the allied health workforce. This has often led to the allied health workforce being defined by what it is not (and in particular being defined as non medicine or nursing, although even some definitions have chosen to include aspects of nursing). Jurisdictional and stakeholder differences are apparent, as are differing inclusions of occupations for various government programs.

It is apparent that there are a 'core' group of health professions which all stakeholders recognise as constituting the allied health workforce. Equally, however, there are a number of health professions that particular stakeholders consider to be allied health professions that other stakeholders do not recognise. It is also apparent that there are some anomalies in the listing of allied health professions proposed by some stakeholders when compared with the definitions provided by stakeholders.

Based on the information provided, it would appear that the health professions that are broadly considered part of the Australian allied health workforce are: audiology; dietetics and nutrition; occupational therapy; orthoptics; orthotics and prosthetics; hospital pharmacy; physiotherapy; podiatry; psychology; radiography; speech pathology; and social work. There also remain health professions that seem to fit most definitions of allied health but which are not usually included in listings of allied health professions, for example chiropractors and optometrists.

However, it is equally apparent that if it is considered desirable and necessary to clearly define the allied health workforce and the professions that constitute that workforce, further work needs to be undertaken.

### **Allied Health Data Collections**

There are a number of data collections on allied health professions. These data collections vary in their usefulness, completeness and timeliness. Reasons for this include:

- there is no clear and consistent consensus of which health professions constitute the Australian allied health workforce;
- registration/licensing requirements vary across jurisdictions and profession;
- data items and definitions vary between data collections, over time and between professional groups; and
- data focuses primarily on workforce supply with little evidence of robust data on workforce requirements and workforce adequacy.

The ABS census provided the most detailed national information for the allied health workforce. The AIHW prepares labour force surveys for several allied health workforces and these surveys provide more detailed information on the workforces than that contained in the census. These workforces are podiatry, physiotherapy, psychology and occupational therapy. Clearly it is not possible to expand the AIHW allied health labour force survey series without additional resources to ensure the timely collection and processing of the data.

Adherence to a minimum data set by all jurisdictions and stakeholders is also required to provide nationally consistent data for health workforce planning purposes. Development of an allied health minimum data set should form part of the national health workforce minimum data set currently being prepared by AHWOC.

### **Characteristics of the Australian allied health workforce**

ABS 2001 census data shows the number of persons employed in health occupations grouped under the category 'allied health workers' was 39,454, an increase of 26.6% from 1996 (ABS/AIHW Health and community services labour force, 2001').

ABS census data shows that in general, the professions grouped under the category 'allied health workers' are relatively young and predominantly female. A number of professions within the allied health workforce are experiencing supply growth. There are some exceptions to this general profile, most noticeably clinical psychologists, orthotists, and optometrists.

### **Allied Health Workforce Issues**

This report details a range of current workforce issues. Issues for possible further investigation and work have also been identified. Future action would depend on the outcomes of work aimed at determining workforce requirements. Without this, it may be difficult to assess priorities for future action. At the national level, any work will be limited by the funding available through the AHMAC health workforce work program and the priorities within that program. It is likely that only one or two priority allied health areas could proceed in any year.

Suggestions for investigation and further work are:

- Examination of issues around defining/classifying the term 'allied health' within the Australian context (stakeholders suggested a variety of approaches – including the

identification of, and agreement on, core professions and associated national data collections).

- Examination the career choices of allied health professionals, which could include why allied health students are not completing their education. This work would be similar to the medical careers project undertaken by AMWAC.
- The workforce prioritised for more detailed workforce planning was podiatry. This was based on jurisdictional and stakeholder feedback and the DEWR listing of workforces in shortage. Any workforce planning in the allied health area needs to be cognisant of the existing capacity to collect data for specific professions. In this regard, at present this would seem to limit any detailed work to the podiatry, physiotherapy, psychology and occupational therapy workforces, given that these are the only workforces where detailed labour force information is collected through the AIHW labour force survey processes.
- Examination of 'leakage' from the allied health professions, including an assessment of employment issues, workforce dynamics, reasons for cessation of practice, how long professionals remain in the workforce, an evaluation of recruitment and retention processes, re-entry, or 'attract back to practice schemes'. This work could also examine options for extending workforce participation for the allied health workforce, although any work in this area would need to link in with the generic projects already underway through the AHMAC health workforce work program.
- Examination of ways to increase Indigenous participation in the allied health workforce. A starting point could be an overview of measures currently being undertaken within jurisdictions to increase the number of Indigenous persons in the allied health workforce. It should be noted that this issue has already been identified within the Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework and ATSIHWWG are co-ordinating implementation of the Framework.
- Examination of 'allied health' service delivery and scope of practice (stakeholders suggested looking at new roles for allied health professionals, the idea of 'generic allied health workers', and the variation between metropolitan and regional/rural areas). It may also be that the best initial approach to national level allied health workforce planning is to develop a project/scoping study that investigates the requirements for allied health services. Linked to this could be work on the provision of sustainable allied health services and viable models for the provision of these services.
- Investigate mentoring and other support programs in rural and remote communities to better support allied health providers in these areas.
- AHWAC re-examine the frequency/timing and coverage of existing national allied health workforce data collections and identify mechanisms for more comprehensive data collections across allied health professions. The registration status of a number of the health professions may enable a broadening of the national health workforce data collections with relatively smooth transition. This recognised, it will also be important to

consider long term options for data collection on professions that do not have clear mechanisms in place such as registration authorities. Issues around minimum data items and standard terminology for the allied health workforce would be addressed as part of the AHWOC national minimum data collection project.

- Better data sets be developed that inform workforce requirements and workforce adequacy of the Australian allied health workforce.
- Allied health professional associations and allied health data collections agencies be encouraged to collect data that is compatible with the outcomes of the AHWOC national minimum data set project.
- Improve the coordination between the government and university sectors regarding university intake levels, with the health sector providing direction to universities on the areas of workforce shortage and recommended intake levels. Work between AHMAC and AESOC can be used to continue to progress this issue in the short term.
- Consider innovative models of education, for example distance learning, in order to address the issues associated with the training and distribution of allied health professionals (for example consolidated courses across disciplines, multidisciplinary training venues, distance learning).
- Examine options to reduce the pressure on clinical placements for the allied health professions. This could include, for example, identifying structures to support the delivery of clinical education, particularly in rural, remote and indigenous communities, facilitate the use of private health services as clinical training sites by reducing barriers to clinical education in such settings, and a re-examination of the requirements for clinical education from accrediting bodies and models of clinical education (for example increased flexibility, outcomes required and recognition of existing skills/current competencies). Any work would need to link in with the national work already underway in relation to clinical placements.
- The training and education of allied health professionals should not be conceptualised solely in the tertiary sector. Consideration should be given to the role of the vocational education and training (VET) sector to alleviate pressure on allied health education and training.
- Utilise the newly established National Allied Health Advisory Committee to facilitate allied health participation in national workforce processes.
- Jurisdictions ensure allied health associations are engaged in health service and health workforce planning processes as appropriate.

## **PROJECT OVERVIEW**

There has been limited focus on the allied health workforce in Australian health workforce planning. The Australian Health Ministers' Advisory Council (AHMAC) commissioned the Australian Health Workforce Advisory Committee (AHWAC) to undertake an overview of the allied health workforce, with a view to the possible need to commission specific national level workforce planning projects for the allied health workforce.

This paper reports the findings of that review and provides:

1. an overview of the allied health workforce, including an assessment of workforce issues and possible areas for future action; and
2. an audit of allied health data collections.

As a starting point, the paper looks at what health occupations are considered by stakeholders to comprise the allied health workforce. Chapter 2 examines existing allied health data collections. Chapter 3 provides an overview of the size and key characteristics of the Australian allied health workforce. Chapter 4 provides an overview of workforce planning for the allied health workforce. Chapter 5 identifies current allied health workforce issues and suggestions for future action.

### **Acknowledgements**

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- Health Professions Council of Australia and its member organisations;
- Jurisdictional Workforce Planners;
- National Allied Health Advisory Committee (discussed in appendix G); and
- Services for Australian Rural and Remote Allied Health and its member organisations.
- Paul Govel, Executive Officer, Australian Medical Workforce Advisory Committee
- Justine Curnow, Deputy Executive Officer, Australian Medical Workforce Advisory Committee

## **CHAPTER 1. THE AUSTRALIAN ALLIED HEALTH WORKFORCE**

The purpose of this section of the paper is to outline what occupations stakeholders consider comprise the Australian allied health workforce. This chapter sets out the various definitions that have been used to define the allied health workforce and seeks to highlight points of agreement. No attempt is made to develop a definition of the Australian allied health workforce.

In Australia, there is no clear and consistent agreement on what comprises the allied health workforce at either the stakeholder, jurisdictional or national level. There is also an array of different interpretations of the occupations that comprise the allied health workforce.

Attempts to define the allied health workforce have primarily been approached in two ways; by identifying criteria that define the allied health workforce, and by identifying those professions considered part of the allied health workforce. This has often led to the allied health workforce being defined by what it is not (and in particular being defined as non medicine or nursing, although even some definitions have chosen to include aspects of nursing). Jurisdictional and stakeholder differences are apparent, as are differing inclusions of occupations for various government programs. However, there are clearly professions that by any definition or inclusion process are consistently considered to constitute the 'core' allied health professions in Australia.

The following section provides examples of definitions of the allied health workforce based on:

- stakeholder definitions of the allied health workforce, and or groupings of occupations under the term "allied health"; and
- the process used in the recent investigation to classify the allied health workforce carried out by Services for Australian Rural and Remote Allied Health (SARRAH); which was one of the more exhaustive recent attempts to classify which occupations comprise the allied health workforce and by way of example shows how difficult a process this can be.

Further details are contained in appendix A.

## **Stakeholder definitions of the Australian Allied Health Workforce**

Detailed below are examples of definitions of the Australian allied health workforce. One international definition of the allied health workforce has also been provided.

### **1. Australian Bureau of Statistics (ABS) / Australian Institute of Health and Welfare (AIHW)**

The joint ABS/AIHW publication 'Health and community services labour force, 2001' identified the following occupations under the category 'allied health workers': audiologist, clinical psychologist, dietitian, health professional nec, occupational therapist, optometrist, orthoptist, orthotist, physiotherapist, podiatrist, therapy aide and speech pathologist (described in appendix D). There are separate categories for dental workers, medical imaging workers, and pharmacist workers, which include some occupations considered by other stakeholders to be Australian allied health professions, for example radiation therapists and hospital pharmacists. There is also a separate 'complementary therapies' category that comprises: acupuncturist, chiropractor, naturopath, natural therapy professional, natural remedy consultant and osteopath.

### **2. Australian Department of Health and Ageing (Medicare Plus Allied Health Initiative)**

From 1 July 2004, Medicare has covered services provided by some allied health professionals as part of a general practitioner care plan for treatment of a complex condition. These are conditions that have been present or are likely to be present for at least six months. Complex conditions can include diabetes, heart disease, asthma, cancer and kidney disease, or one or more of a whole range of illnesses. Sometimes health care for these conditions can include appropriate dental treatment. Qualifying allied health professionals are Aboriginal health workers, audiologists, chiropractors, dentists, dietitians, mental health workers, occupational therapists, osteopaths, physiotherapists, podiatrists, psychologists and speech pathologists.

### **3. Health Professions Council of Australia (HPCA)**

The HPCA define allied health professionals as "tertiary qualified providers of mainstream health care and members of the following professions: audiology, dietetics, occupational therapy, optometry, orthoptics, orthotics and prosthetics, pharmacy, physiotherapy, podiatry, psychology, radiography, social work and speech pathology. Allied health professionals are not medical doctors or nurses" (NRRAS/SARRAH 2004)

### **4. Services for Australian Rural and Remote Allied Health (SARRAH)**

SARRAH define allied health professionals as "tertiary trained health practitioners (who are not doctors or nurses) from one of several individual professions who have, for the purpose of presenting a collaborative position, come together to work towards a common goal. Professions represented in any allied health practitioner group vary depending on the goal of their collaborative effort. Professions may include, but are not limited to audiology, nutrition and dietetics, occupational therapy, orthoptics, orthotics, pharmacy, physiotherapy, podiatry, psychology, radiography, social work, and speech pathology".

## 5. Tasmanian Health Profession Council (THPC)

The THPC define allied health professionals as “professions which are involved in health care, other than the disciplines of medicine, nursing and health administration; for which tertiary qualifications exist and which are essential for professional registration or admission to a relevant professional body; and whose professional activities focus on client diagnosis, treatment and /or primary health care.”

## 6. The United States Association of Schools of Allied Health Professionals (ASAHP)

The ASAHP defines allied health as follows: “Allied health professionals are involved with the delivery of health or related services pertaining to the identification, evaluation and prevention of diseases and disorders; dietary and nutrition services; rehabilitation and health systems management, among others” (The Council of International Hospitals “Defining the Allied Health Position – Literature Review 12 April 2004”).

Table 1 provides a summary of the health professions identified within stakeholder definitions as comprising the allied health workforce in Australia. It should be noted that the following examples are shown to indicate stakeholder opinion. They should not be taken as an endorsement of the definition or inclusion by AHWAC.

As a general point it would seem the medical, nursing, dentistry, retail pharmacy and Aboriginal health workforces should not be considered to comprise the allied health workforce. In making this observation it is recognised that on occasions stakeholders accepted definitions of the Australian allied health workforce may be broader than government program objectives would suggest and vice versa. Program funding is linked to stakeholder goals and objectives that are largely based on service need, and the service need may focus attention on specific occupations for particular policy reasons.

The stakeholders included in table 1 include:

- Australasian Allied Health Classification System (AAHCS);
- Australian Bureau of Statistics (ABS);
- Health Professions Council of Australia (HPCA);
- National Allied Health Casemix Committee (NAHCC); and
- Services for Australian Rural and Remote Allied Health (SARRAH).

**Table 1: Allied health professions identified within stakeholders definitions**

Profession	AAHCS	ABS/AIHW <sup>(a)</sup>	HPCA	NAHCC	SARRAH
Aboriginal health workers					
Audiology	X	X	X	X	X
Chiropractors					
Dentists					
Diagnostic radiography			X		X
Dietetics and nutrition	X <sup>(b)</sup>	X <sup>(c)</sup>	X	X	X
Exercise physiology				X <sup>(g)</sup>	
Health professional nec		X			
Medical illustration/photography					
Medical imaging technology			X		X
Mental health workers					
Music therapy				X	
Occupational therapy	X	X	X	X	X
Optometrist		X			X
Orthoptics	X	X	X	X	X
Orthotics and prosthetics	X	X <sup>(d)</sup>	X	X <sup>(i)</sup>	X
Osteopaths					
Pharmacy	X		X <sup>(f)</sup>	X <sup>(h)</sup>	X <sup>(j)</sup>
Physiotherapy	X	X	X	X	X
Podiatry	X	X	X	X	X
Psychology	X	X	X	X	X
Radiation therapy			X		X
Social work	X		X	X	X
Speech pathology	X	X	X	X	X
Therapy aide		X			

Notes (a) Grouped under the term 'allied health workers' in the joint ABS/AIHW publication 'Health and community services labour force survey, 2001' (b) identifies dietetics (c) identifies dietitian (d) identifies orthotist (f) identifies hospital pharmacy (g) identifies exercise and sports science (h) identifies hospital pharmacy (i) identifies orthotics (j) identifies community and hospital pharmacy

Source: AIHW 2003; NRRHAS/SARRAH 2004

### **The SARRAH process used to define the allied health workforce**

One of the more exhaustive recent attempts to classify the allied health workforce was undertaken by SARRAH. A summary of the process used by SARRAH is provided to illustrate the complexities associated with just classifying the Australian allied health workforce. SARRAH found it necessary to:

1. Collate a sample of the general definitions which have been used over the past decade to describe the allied health professions
2. Collate and review the definitions used by a broad range of key stakeholders for 'allied health'/'other health'/'ancillary health'. The disciplines that received majority agreement were included.
3. Consult with stakeholders from the allied health and the rural and remote health sector to gain feedback about the definition

Key stakeholders involved in the SARRAH consultation process were:

1. State and Territory based allied health professional taskforce / advisory groups

The specific agencies include:

- New South Wales Principal Allied Health Advisor
- New South Wales Allied Health Alliance
- Queensland Health Principal Allied Health Advisor (Director General's Allied Health Recruitment and Retention Taskforce)
- Victorian Allied Health Professionals Association
- Allied Health Professional Workforce Planning Group (Tasmanian Department of Health and Human Services)
- Allied Health Workforce Data Collection Project (Northern Territory Health Department)
- Western Australian Rural and Remote Allied Health Workforce (WA Country Services, Department of Health)
- Rural Health Training Unit, South Australia (now the Rural Development Unit, Department of Health)

2. Registration / licensing authorities

Looking at which professions have an established registration board and/or licensing requirement.

3. Allied health professional associations

Allied health profession inclusions were collected from four organisations that specifically represent the interests of allied health professions. These include SARRAH; HPCA (the Australian Rural and Remote Allied Health Task force); NAHCC and the AAHCS project.

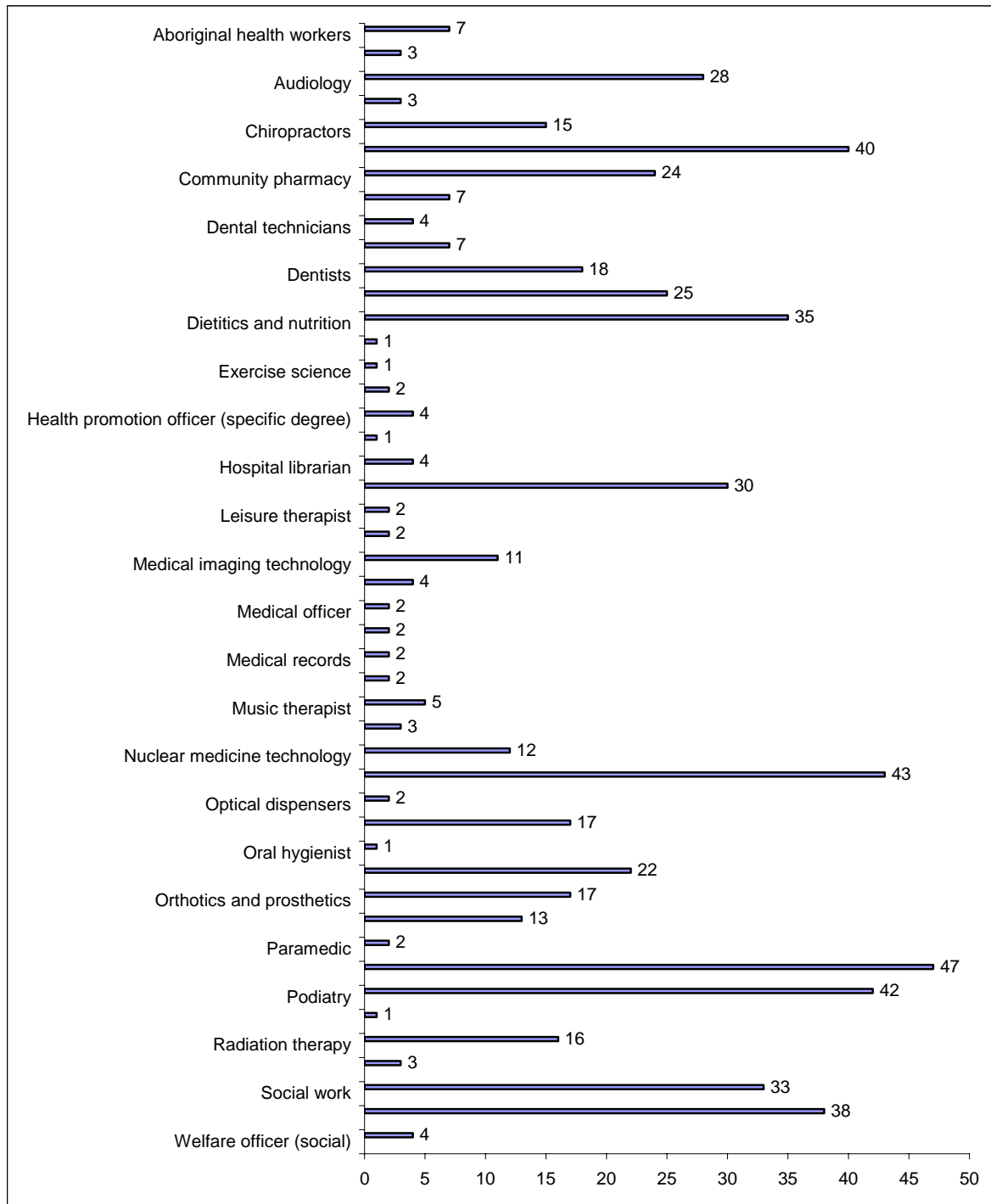
4. Purchasers of health services / professionals (government and private) and those who otherwise have an interest in categorising the health professions

5. Allied health support structures and scholarships available to health professional undergraduates and postgraduates

Health professionals included as being eligible to apply for a variety of state based scholarship and support schemes named for 'allied health' were investigated.

Figure 1 displays the health occupation inclusion results of the SARRAH investigation into the usages of the term “allied health”.

**Figure 1: Summary of allied health inclusions from the SARRAH investigation**



Source: NRRAHAS/SARRAH 2004 (revised by the National Health Workforce Secretariat)

Based on the investigation into the term “allied health”, the SARRAH report identified the following occupations that could be considered clinical and diagnostic allied health professions: audiology, clinical psychology, dietetics, hospital pharmacy, occupational therapy, optometry, orthotics, orthotics and prosthetics, physiotherapy, podiatry, radiography, social work and speech pathology.

It is worth noting that the SARRAH project identified 49 occupations that at least one stakeholder had either considered as an allied health profession or was defined as being an allied health profession.

## **Conclusion**

The information provided in this chapter demonstrates the difficulty in gaining consensus among stakeholders, government and researchers on defining the scope of the Australian allied health workforce and what health occupations constitute that workforce.

It is apparent that there are a ‘core’ group of health professions that all stakeholders recognise as constituting the allied health workforce. Equally, however, there are a number of health professions that particular stakeholders consider to be allied health professions that other stakeholders do not recognise. It is also apparent that there are some anomalies in the listing of allied health professions proposed by some stakeholders when compared with the definitions provided by stakeholders. For example, chiropractors meet the majority of stakeholder criteria for defining the allied health workforce but are rarely included in any listing of allied health professions. Similarly, some occupations have been listed as being considered to be allied health professions that do not seem to fit some of the definitions, for example music therapists.

Reasons for the difficulty in reaching consensus on which professions constitute the Australian allied health workforce include:

- Stakeholders use a variety of methods to identify what constitutes the allied health workforce. Some of the methods identified in preparing this paper include the registration status of health professions and jurisdictional need for a particular profession;
- The term ‘allied health’ attempts to create a homogeneous group out of a disparate range of health occupations;
- Smaller or less ‘influential’ professions aggregating under the banner ‘allied health’ for organisational and policy purposes; and
- Differing inclusions of occupations for various government programs, which can be due to whether the initiative is targeted at a particular population or disease group or at specific health professions or groups of health professions.

Stakeholders identified a number of issues regarding the debate of which professions constitute the Australian allied health workforce:

- Debate often concentrates on being exclusive rather than inclusive. This was seen by stakeholders as being a negative reflection on the allied health workforce that detracts from the valued contribution the Australian allied health workforce make to the health system; and
- Adopting an inclusion/exclusion approach is problematic due to the inequity in size and influence of professional groups.

Achieving a national definition of the Australian allied health workforce is a difficult task, however gaining consensus on the 'core professions' has been most stakeholders starting point and this would seem a useful approach. Likewise the approach adopted by the ABS and AIHW to split the health workforce into a number of core sub groups is also a useful approach.

The information provided in this chapter identified three basic categories:

1. Those professions that are *broadly* considered part of the Australian allied health workforce;
2. Those professions that are *variously* included as part of the Australian allied health workforce; and
3. Those professions that are *generally* not considered part of the Australian allied health workforce.

Based on the information provided, it would appear that the health professions which are broadly considered part of the Australian allied health workforce are:

- audiology;
- dietetics and nutrition;
- occupational therapy;
- orthoptics;
- orthotics and prosthetics;
- hospital pharmacy;
- physiotherapy;
- podiatry;
- psychology;
- radiography;
- speech pathology; and
- social work.

There also remain health professions that seem to fit most definitions of allied health but are not usually included in listings of allied health professions, for example chiropractors and optometrists.

However, it is equally apparent that if it is considered desirable and necessary to clearly define the allied health workforce and the professions that constitute that workforce, further work would need to be undertaken.

## CHAPTER 2. ALLIED HEALTH DATA COLLECTIONS

Robust, reliable and timely data on workforce supply and requirements are essential to successful health workforce planning. If information is not reliable or readily available there is little point in examining a workforce or undertaking a workforce planning exercise.

Data collection work has been undertaken at both the national and jurisdictional level for the medical and nursing workforces to date. The allied health workforce has not been subject to the same level of investment. This has implications for current and future health workforce planning and policy development for the health sector, unless the situation is corrected.

Key information of relevance to any health workforce planning exercise is the number of practitioners in a workforce, their age and sex, their location, hours worked and an indication of the level of service being provided. Information on workforce entry and exit is also a key component, as is the ability to assess if the workforce is adequately meeting the demands that are being made of it.

This section of the report outlines current allied health data collections. The following sources of data have been examined:

- Australian Institute of Health and Welfare
- Australian Bureau of Statistics
- Australian Department of Health and Ageing
- Australian Department of Education Science and Training
- Australian Department of Immigration and Multicultural Affairs
- Australian Department of Employment and Workplace Relations
- Professional Associations
- Registration/licensing boards
- State and Territory health departments

### **Australian Institute of Health and Welfare (AIHW)**

#### Allied Health Workforce Profiles

The AIHW conducts national data collections for a number of the allied health professions. These collections provide a profile of the workforce based on key workforce characteristics. The decision on which allied health professions to include in the national health workforce data collections was made in 1997 when the AHMAC National Health Information Management Group decided that future national health workforce collections would be conducted annually for medicine, biennially for nursing, and on a rolling three year cycle for dentistry, occupational therapy, podiatry, physiotherapy, optometry and pharmacy. The AIHW collections are based around the minimum data set concept, where the focus is on collecting the essential data items for describing a health workforce. The key word here is minimum, which can mean that there will be some data items considered important by stakeholders that are not collected, or not collected in sufficient detail.

The AIHW has conducted the following national data collections for allied health professions.

**Table 2: AIHW allied health data collections**

<b>National Data Collections</b>	<b>Year</b>
Pharmacy Labour Force	1992
Podiatry Labour Force	1992
Pharmacy Labour Force	1993
Physiotherapy Labour Force	1993
Pharmacy Labour Force	1994
Podiatry Labour Force	1994
Pharmacy Labour Force	1995
Health and community services labour force	1996
Occupational therapy labour force	1998
Pharmacy Labour Force	1998
Physiotherapy Labour Force	1998
Optometrists Labour Force <sup>(a)</sup>	1999
Podiatry Labour Force	1999
Dental Labour Force	2000
Health and community services labour force	2001
Pharmacy Labour Force	Up to 2001

Note: (a) the optometry publication did not contain any data from an AIHW coordinated survey. It was produced from a composite of sources: Australian Bureau of Statistics (optometrists survey, national health survey, population census), Medicare data, DEST (students and graduates in optometry), DIMIA for migration data. The Health and Community services labour force covers all health workforces using ABS census data for 2001.

Source: Australian Institute of Health and Welfare 2004

A number of professions are currently under review by the AIHW including occupational therapy, pharmacy, physiotherapy and podiatry.

Table 3 provides an overview of the allied health professions published in the AIHW health labour force series, and for which the AIHW manage the data sets. It is noted that as the question wording and categories used to collect data in these surveys has varied over time and across jurisdictions, this is a guide only. Individual questionnaires need to be examined for their differences.

**Table 3: AIHW allied health workforce profile data content**

Data content	Occup. therapy	Pharmacy	Physio.	Podiatry	Psychology
Sex	X		X	X	X
Year of birth	X		X	X	X
Place/country of birth	X	X	X	X	
Indigenous status		X			
Aust citizenship	X	X	X	X	X
Postcode	X	X	X	X	X
Labour force status	X	X	X	X	X
If not working in field, whether looking for work in field	X		X	X	
If not working in field, year last worked					X
If not working in field, main reason					
Where initial qualification obtained	X	X	X		X
Whether undertaken continuing education	X				X
No years worked in this field of allied health	X				
Area of work (clinical, administration, training/education, research, other)	X		X	X	X
Type of employment	X		X	X	X
Position/classification of job	X				
Clinical/specialty areas of work	X		X		
Main area of work (eg aged care, health education, mental health OH&S, school, community, medico/legal)	X				X
Practice waiting time for patients	X		X	X	
Hours per week usually worked (main job and second job)	X		X	X	X
Work settings/type of centre				X	X
Age ranges of patients			X	X	
Main type of client (eg aged, adult, child, community, families)					X
Languages used professionally for patient consultations			X	X	
Level of highest qualification in this field					X
Qualifications obtained: level, year, field			X	X	
No years plans to continue work in this field of allied health				X	
Year of initial registration in Australia					X

Source: Australian Institute of Health and Welfare 2004

There are a number of strengths and limitations associated with the AIHW allied health labour force collections and these are summarised below in table 4.

**Table 4: AIHW labour force data collections**

<b>Strengths</b>	<b>Limitations</b>
Provision of a comprehensive profile of a number of health occupations that could be considered part of the allied health workforce	Profiles have only been conducted on a handful of health occupations that could be considered part of the allied health workforce – this is due to time and cost issues
Cooperation of health registration boards which maximises response and minimises costs	Not all allied health professions require registration across all jurisdictions – which could limit response
The AIHW Act enshrines confidentiality and privacy regulations ensuring complete confidentiality of individual data	

Source: National Health Workforce Secretariat

#### Allied Health Service Information

The AIHW also prepares an annual report on Australian Hospital Statistics, the latest version being 2002-2003, which contains a variety of data pertaining to allied health interventions. This is one of the few potential information sources on the level of allied health service provision.

The allied health interventions in the Australian Hospital Statistics 2002-2003 publication were developed in conjunction with allied health profession representatives of the National Allied Health Casemix Committee (NAHCC). The interventions of 13 allied health professions are represented in ICD-10-AM (3<sup>rd</sup> edition) under the procedure block 1916 (generalised allied health interventions). The general codes and occupations include:

- 95550-00 Allied health intervention, dietetics;
- 95550-01 Allied health intervention, social work;
- 95550-02 Allied health intervention, occupational therapy;
- 95550-03 Allied health intervention, physiotherapy;
- 95550-04 Allied health intervention, podiatry;
- 95550-05 Allied health intervention, speech pathology;
- 95550-06 Allied health intervention, audiology;
- 95550-07 Allied health intervention, orthoptics;
- 95550-08 Allied health intervention, prosthetics and orthotics;
- 95550-09 Allied health intervention, pharmacy;
- 95550-10 Allied health intervention, psychology;
- 95550-12 Allied health intervention, pastoral care;
- 95550-13 Allied health intervention, music therapy; and
- 95550-11 Allied health intervention, other (other extracted from NCCH ICD-10-AM, July 2002, Non-Invasive, Cognitive and Other Interventions, not elsewhere classified).

A key principle of procedure classification is that interventions should be 'provider neutral', that is, the same code should be assigned for a specific intervention regardless of which health professional performs the intervention.

### **Australian Bureau of Statistics (ABS)**

The ABS Census of Population and Housing, National Health Survey and labour related surveys are currently the primary sources of labour force statistics for the allied health workforce.

#### Census of Population and Housing

The ABS conducts the national Census of Population and Housing every five years. Occupational data is collected according to the ASCO 2<sup>nd</sup> edition. As noted, previously, the ABS/AIHW grouped the following professions under the category of 'allied health workers': audiologist, clinical psychologist, dietitian, occupational therapists, optometrist, orthoptist, orthotist, physiotherapist, podiatrist, speech pathologist and therapy aid (AIHW and ABS 2003). In preparation for the 2005 Census the ABS is currently undertaking a review and update of the ASCO.

The census provides the most comprehensive national picture of the Australian allied health workforce. Examples of information collected in the census are:

- age;
- sex;
- location of employment; and
- hours worked.

However stakeholders have highlighted a number of limitations with the data:

- Given the census occurs every five years, data becomes outdated by the time the next census is approaching;
- Census data can cause frustration as it addresses a broad range of information, and as a result, does not "drill" down to the level of specificity desired by stakeholders; and
- Data is presented as a head count which is not reflective of the effective supply of a workforce.

#### National Health Survey

The ABS conducts the National Health Survey every six years, with the most recent survey conducted in 2001. The National Health Survey is designed to obtain national information on the health status of Australians, their use of health services and facilities, and health related aspects of their lifestyle. They can be used to monitor trends in health over time. The surveys cover urban and rural areas across all states and territories, and include residents of both private and non-private dwellings.

#### Allied health industries survey

The collection provides key measures on the performance of the allied health services industry. Published data reflects a range of standard outputs including: activities by type of business, sources of income, items of expenditure, characteristics of employment and selected performance ratios. The scope of the survey covers a number of professions, for example physiotherapy and chiropractic and osteopathy.

The last survey was conducted in 1997-1998 and the next is scheduled for 2004-2005.

### **Australian Department of Education Science and Training (DEST)**

The DEST collects data on university student numbers, which is the key source of information on future workforce supply, and DEST is clearly best placed to coordinate the collection of this type of information. However some stakeholders have noted concerns with some of the terms used by DEST, for example rehabilitation therapies.

In preparing this report, a preliminary review of university student commencements and completions was undertaken for selected health professions using the field of study and field of education classifications. This is provided in chapter 3, and covers the following courses:

- physiotherapy;
- podiatry;
- speech pathology;
- chiropractor and osteopath;
- occupational therapy;
- nutrition and dietetics;
- radiography; and
- pharmacy.

### **Australian Department of Employment and Workplace Relations (DEWR)**

DEWR publish data at state/territory and national level twice a year about skill shortages, employment prospects for various industries, vacancy trends, occupational characteristics, and the jobs prospects market. This is potentially useful information about the adequacy of a health workforce. DEWR currently publish data on a number of health professions that may be considered part of the allied health workforce. An example of the National and State Skill Shortages List published by DEWR is provided in chapter 4, and further detail on the National and State Skills Shortage List and the DEWR Jobs Prospects Matrix is provided in appendix C.

### **Australian Department of Immigration and Multicultural Affairs**

Another key source of workforce supply data is migration movements. This information is collected by the Australian Government Department of Immigration and Multicultural Affairs (DIMIA). It should be cautioned that the key drawback with DIMIA data is that it is not known if the people entering Australia by profession practise in that profession or if the people permanently leaving Australia have been working in that profession.

### **State and Territory Health Departments**

Supply data is collected by all jurisdictions. This information is primarily from departmental and hospital systems. Professional registration board data is also used. Supply information is collected by some jurisdictions using only the AIHW allied health labour force surveys noted above. Allied health workforce vacancy information is collected by four jurisdictions, with only one collecting regular information.

Service data is only available in the broadest context from some of the following information sources:

- health service planning, for example, a plan completed for a particular sector that has gone beyond the usual demand requirements;
- infrastructure, for example, number of beds;
- health service utilisation;
- patient databases; and
- population health (epidemiological information, disease incidence).

### Registration/licensing requirements

Allied health professions in Australia are not uniformly required to be registered to practise. State and territory registration boards provide a mechanism for data collection at the jurisdictional level, and may provide a national picture of the size of a workforce and its key characteristics where registration / licensing is required within all jurisdictions. Table 5 identifies allied health professions registration / licensing requirements by state and territory.

**Table 5: Registration status of allied health professions by state and territory**

Profession	NSW	Vic	Qld	WA	SA	Tas	NT	ACT
Aboriginal health workers							X	
Audiology								
Chinese medicine		X						
Chiropractors	X	X	X	X	X	X	X	X
Clinical psychology	X	X	X	X	X	X	X	X
Community pharmacy	X	X	X	X	X	X	X	X
Dental prosthetics		X	X	X	X	X		X
Dental technicians	X		X					X
Dental therapists/hygienist		X	X			X		
Dentists	X	X	X	X	X	X	X	X
Diagnostic radiography/sonography	X	X	X	X	X	X	X	X
Dietetics								
Hospital pharmacy	X	X	X	X	X	X	X	X
Nuclear medicine technology	X	X	X	X	X	X	X	X
Nursing	X	X	X	X	X	X	X	X
Occupational therapists			X	X	X		X	
Optical dispensers	X							
Optometrists	X	X	X	X	X	X	X	X
Orthoptics								
Orthotics and prosthetics								
Osteopaths	X	X	X	X	X	X	X	X
Physiotherapy	X	X	X	X	X	X	X	X
Podiatry	X	X	X	X	X	X		X
Radiation therapy	X	X	X	X	X	X	X	X
Social work								
Speech pathology			X					

Notes: For Occupational Therapists, Social Workers and Speech Pathologists, professionals are required to obtain specific qualification to be members of their respective professional associations in order to practice in some or all states.

Source: SARRAH 2004 (revised by the National Health Workforce Secretariat and understood to be current at October 2004)

## **Professional Associations**

Allied health professional associations collect information about their members, however it is not mandatory for practice in Australia to be a member of a professional association. Therefore any data collected by professional associations does not normally reflect the workforce in its entirety.

The level of information collected varies across professional associations. Data is collected primarily through membership renewal and ad hoc member surveys. Professional associations are primarily funded through membership subscription, and the collection of 'core' data about the workforce and profession is not always viewed as a priority or financially possible, especially for organisations with a small membership base.

Examples of information collected by professional associations include:

- age;
- sex;
- location;
- areas of employment;
- hours of employment;
- higher qualifications;
- students;
- continuing professional development;
- number of members in private practice;
- place of work;
- specific areas of interest and expertise / special practice interests; and
- sector of main employment.

## **Data collections and health workforce planning**

Workforce planning is dependant on data that enable analysis of workforce supply, workforce requirements and workforce adequacy (AHWAC 2004, AMWAC 2003). Health workforce planning refers to the process of estimating the required supply of health care practitioners to meet an expected future level of service requirement as defined by population need and/or demand and the development of strategies to meet that requirement.

Generally the health workforce planning process is concerned with:

### 1. Describing:

- the unique services provided to the community by a particular workforce and the other service providers and infrastructure required to provide a sustainable service of acceptable quality;
- the current level of supply in terms of workforce numbers, characteristics (age, gender, qualifications), participation (full-time/part-time, hours worked, by age and gender), distribution (by state/territory and other geographic measures, public sector and private sector), productivity, service provision (by type and quantity of service), and skills and tasks;
- recruitment process, including the number, characteristics and training status of people currently undertaking training in Australia, and the number and characteristics of qualified people entering the workforce through migration; and

- current level of wastage due to migration, people choosing an alternative career path, retirement and death.

## 2. Evaluating:

- the adequacy of the current level of workforce supply based on a range of indicators (eg international and national benchmarks, service waiting time, population health status, perceptions of key stakeholders), with a view to quantifying the level of shortage or oversupply if indeed either situation is found to exist;
- the adequacy of the geographic distribution of the workforce using indicators such as level of service provision and population based benchmarks;
- the extent to which other service providers are currently doing some of the work traditionally undertaken by the workforce under review; and
- the extent to which the current workforce is providing services in line with government health goals and priorities.

## 3. Predicting/projecting:

- workforce requirements for a stated period of time (eg next 10 years) using a range of scenarios and requirement projection indicators; population needs based and demand-based and service provision benchmarks;
- workforce supply for a stated period of time using a range of scenarios (e.g. 'no change in the level of recruitment', 'increases/decreases in the number of people undertaking training', 'increases/decreases in the supply of qualified people entering the workforce from overseas', 'increases/decreases in the levels of workforce participation', and 'increases/decreases in attrition rates'); and
- the potential for changes in practice, service delivery and technology which are likely to effect population requirements for services or are likely to alter levels of workforce productivity.

Strategic actions arising from the planning process are usually based around influencing workforce supply through changes to local training program intakes, recruitment of overseas trained professionals, and actions to influence workforce attrition, distribution, skill mix, and productivity. Demand side strategies may also be considered, such as changes in work practices and organisation, referrer and consumer education. In practice, a combination of supply-side and demand-side options may be employed depending on the situation.

Overall, this approach to workforce planning involves supply analysis, requirement analysis, gap (adequacy) analysis, and solution analysis. In turn, each of these analyses relies on the availability of robust and reliable data that is available in a timely manner. Table 6 provides a basic indication of the type of allied health data being collected from existing sources, and shows that the majority of existing data collections for allied health professions focus on workforce supply. Based on the allied health data sets examined above, there is a need for better data sets relating to workforce requirements and workforce adequacy to inform any allied health workforce planning process.

**Table 6: Type of data collected through existing allied health data collections**

<b>Data Source</b>	<b>Supply</b>	<b>Requirements</b>	<b>Adequacy</b>
Australian Institute of Health and Welfare	X	X	-
Australian Bureau of Statistics	X	-	-
Australian Department of Education, Science and Training	X	na	na
Australian Department of Employment and Workplace Relations	na	na	X
State and Territory health departments	X	X	X
Professional associations	X	na	-
Registration/licensing boards	X	na	-

Notes: na – not applicable

Source: National Health Workforce Secretariat

### **Conclusions**

There are a number of data collections on allied health professions. These data collections vary in their usefulness, completeness and timeliness. Reasons for this include:

- there is no clear and consistent consensus of which health professions constitute the Australian allied health workforce;
- registration/licensing requirements vary across jurisdictions and profession;
- data items and definitions vary between data collections, over time and among professional groups; and
- data focuses primarily on workforce supply with little evidence of robust data on workforce requirements and workforce adequacy.

In preparing this report, there was consensus that the frequency and coverage of the national allied health workforce collections overseen by the AIHW be re-examined. Clearly it is not possible to expand the AIHW allied health labour force survey series without additional resources to ensure the timely collection and processing of the data.

Adherence to a minimum data set by all jurisdictions and stakeholders is also required to provide nationally consistent data for health workforce planning purposes. Development of an allied health minimum data set should be guided by the ABS and AIHW collections noted above but form part of the national health workforce minimum data set currently being prepared by AHWOC. In addition, any health workforce planning in the allied health area will need to have as a key consideration the availability of data.

### **CHAPTER 3. CHARACTERISTICS OF THE AUSTRALIAN ALLIED HEALTH WORKFORCE**

This section of the paper provides information on key characteristics of a number of professions that could be considered part of the allied health workforce. Information on allied health university commencements and completions is also provided.

#### **Description of The Australian Allied Health Workforce**

The majority of this information is based on the ABS Census of Population and Housing 2001 as this provides the most recent and comprehensive data set on the Australian allied health workforce. The following tables, taken from the joint ABS/AIHW publication 'Health and community services labour force, 2001', are provided:

- Persons employed in health occupations, Australia, 1996 and 2001;
- Persons employed in health occupations, Australia, 1981 to 2001;
- Persons employed in health occupations, states and territories, 2001;
- Persons employed in health occupations per 100,000 population, states and territories, 2001;
- Persons employed in health occupations, capital city and other regions, Australia, 2001;
- Persons employed in health occupations, sex, 2001;
- Persons employed in health occupations, age, 2001;
- Males employed in health occupations, age distribution (%), 2001;
- Females employed in health occupations, age distribution (%), 2001;
- Persons employed in health occupations by public and private sector, 2001;
- Persons employed in selected health occupations: Indigenous status, 2001;
- Persons employed in health occupations, hours worked, 2001;
- Persons employed in health occupations, sex and hours worked (%), 2001; and
- Allied health professional qualifications 2001.

For practical purposes the information has been presented (wherever possible) in accordance with the workforce groupings used in this publication. Accordingly, data is presented for the following groups:

- allied health workers;
- complementary therapies;
- dental workers;
- medical imaging workers;
- pharmacists; and
- other community services (social workers only)

Table 7 provides the number of persons employed in health occupations in 1996 and 2001. These figures should be interpreted with caution as they are a head count and do not reflect the effective supply of health professionals (as EFT position). Similarly, the data does not identify whether allied health professionals are practising as clinicians or work in administration, research, training etc. For the occupations shown in table 7, the data indicate there were 86,997 non-medical and non-nursing health practitioners in 1996 and 105,033 in 2001.

**Table 7: Persons employed in health occupations, Australia, 1996 and 2001**

<b>Occupation</b>	<b>1996</b>	<b>2001</b>	<b>Difference</b>	<b>Difference (%)</b>
<b>Allied health workers</b>				
Occupational therapists	4,361	5,353	992	22.7
Optometrists	2,253	2,694	441	19.6
Physiotherapists	8,898	10,246	1,348	15.1
Speech pathologists	2,336	3,005	669	28.6
Podiatrists	1,460	1,765	305	20.9
Dietitians	1,712	1,998	286	16.7
Audiologist	685	805	120	17.5
Orthoptist	348	434	86	24.7
Orthotist	331	364	33	10.0
Health professionals, nec	2,103	2,512	409	19.4
Clinical psychologist	5,252	7,567	2,315	44.1
Therapy aide	1,421	2,711	1,290	90.8
<i>Total</i>	<i>31,160</i>	<i>39,454</i>	<i>8,294</i>	<i>26.6</i>
<b>Complementary therapies</b>				
Chiropractor	1,710	2,072	362	21.2
Osteopath	256	426	170	66.4
Naturopath	1,905	2,502	597	31.3
Acupuncturist	458	667	209	45.6
Natural therapy professionals, nec	355	521	166	46.8
Natural remedy consultant	1,818	2,345	527	29.0
<i>Total</i>	<i>6,502</i>	<i>8,533</i>	<i>2,031</i>	<i>31.2</i>
<b>Dental workers</b>				
Dentist	6,878	7,386	508	7.4
Dental specialist	726	808	82	11.3
Dental associate professionals	—	12	12	n/a
Dental therapist	1,271	1,188	-83	-6.5
Dental hygienist	265	440	175	66.0
Dental technician	2,914	2,952	38	1.3
Dental assistants	11,264	13,098	1,834	16.3
<i>Total</i>	<i>23,318</i>	<i>25,884</i>	<i>2,566</i>	<i>11.0</i>
<b>Medical imaging workers</b>				
Medical diagnostic radiographer	4,714	5,470	756	16.0
Radiation therapist	700	808	108	15.4
Nuclear medicine technologist	397	445	48	12.1
Sonographer	702	1,418	716	102.0
<i>Total</i>	<i>6,513</i>	<i>8,141</i>	<i>1,628</i>	<i>25.0</i>
<b>Pharmacists</b>				
Hospital pharmacist	1,728	1,389	-339	-19.6
Industrial pharmacist	705	483	-222	-31.5
Retail pharmacist	9,878	12,039	2,161	21.9
<i>Total</i>	<i>12,311</i>	<i>13,911</i>	<i>1,600</i>	<i>13.0</i>
<b>Other community services</b>				
Social worker	7,193	9,110	1,917	26.7

Notes: not elsewhere classified

Source: ABS Census of Population and Housing 2001

Table 8 provides additional longitudinal data on the growth in select health occupations between 1981 and 2001 based on the ABS Census of Population and Housing.

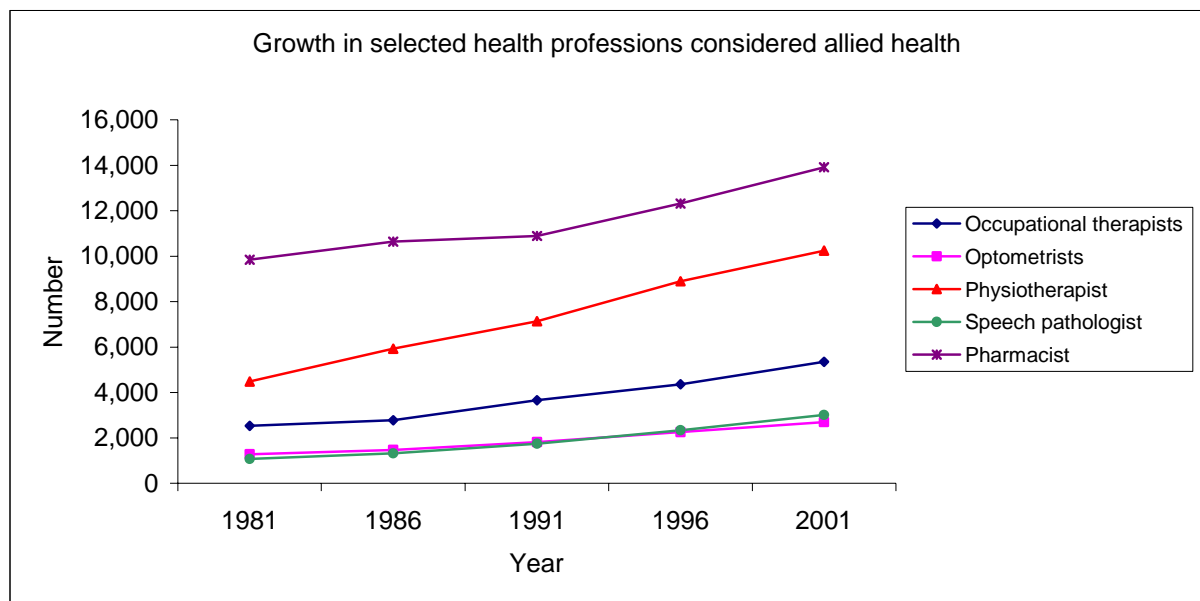
**Table 8: Persons employed in health occupations, Australia, 1981 to 2001**

Occupation	1981	1986	1991	1996	2001
Occupational therapy	2,527	2,770	3,660	4,361	5,353
Optometrist	1,278	1,470	1,820	2,253	2,694
Physiotherapist	4,478	5,930	7,130	8,898	10,246
Speech pathologist	1,075	1,320	1,750	2,336	3,005
Podiatrist	-	980	1,140	1,460	1,765
Dietitian	685	-	-	1,712	1,998
Pharmacist	9,841	10,640	10,880	12,311	13,911

Source: ABS, Census of Population and Housing, 1981 to 2001

Figure 2 shows the growth in health occupations between 1981 and 2001.

**Figure 2: Persons employed in health occupations, Australia, 1981 to 2001**



Source: ABS Census of Population and Housing, 1981 to 2001

Table 9 shows the number of persons employed in health occupations by state and territory in 2001. Table 10 shows the number of persons employed in health occupations per 100,000 population by state and territory in 2001.

**Table 9: Persons employed in health occupations: states and territories, 2001**

Occupation	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
<b>Allied health workers</b>									
Occupational therapist	1,740	1,364	835	746	384	122	91	49	5,331
Optometrist	986	667	523	243	163	55	40	18	2,695
Physiotherapist	3,440	2,522	1,714	1,110	949	224	209	74	10,242
Speech pathologist	895	805	563	323	283	69	43	30	3,011
Podiatrist	486	544	249	185	218	47	35	3	1,767
Dietitian	770	490	300	158	152	29	70	25	1,994
Audiologist	255	248	130	70	52	16	18	6	795
Orthoptist	202	167	33	15	9	3	12	—	441
Orthotist	101	122	49	35	39	18	12	3	379
Health professional, nec	854	575	631	57	250	99	31	12	2,509
Clinical psychologist	2,638	2,222	1,100	794	456	126	183	53	7,572
Therapy aide	620	632	434	605	290	97	20	23	2,721
<i>Total</i>	<i>12,987</i>	<i>10,358</i>	<i>6,561</i>	<i>4,341</i>	<i>3,245</i>	<i>905</i>	<i>764</i>	<i>296</i>	<i>39,457</i>
<b>Complementary therapies</b>									
Chiropractor	710	600	328	166	206	21	26	6	2,063
Osteopath	160	171	31	19	6	12	13	—	412
Naturopath	725	630	607	240	210	48	38	12	2,510
Acupuncturist	304	117	194	23	36	3	15	—	692
Natural therapy professional, nec	193	150	84	52	36	—	6	3	524
Natural remedy consultant	700	718	390	288	145	49	27	15	2,332
<i>Total</i>	<i>2,792</i>	<i>2,386</i>	<i>1,634</i>	<i>788</i>	<i>639</i>	<i>133</i>	<i>125</i>	<i>36</i>	<i>8,533</i>
<b>Dental workers</b>									
Dentist	2,594	1,728	1,337	760	638	109	157	59	7,382
Dental specialist	259	194	150	85	80	15	25	3	811
Dental therapist	196	135	368	281	118	53	15	13	1,179
Dental hygienist	91	84	58	71	110	—	16	3	433
Dental technician	905	730	588	359	224	77	59	21	2,963
Dental associate professional	—	9	—	—	—	—	—	—	9
Dental assistant	4,213	3,027	2,727	1,396	1,170	237	244	71	13,085
<i>Total</i>	<i>8,258</i>	<i>5,907</i>	<i>5,228</i>	<i>2,952</i>	<i>2,340</i>	<i>491</i>	<i>516</i>	<i>170</i>	<i>25,862</i>
<b>Medical imaging workers</b>									
Medical diagnostic radiographer	1,906	1,277	980	544	492	131	86	41	5,457
Radiation therapist	231	221	166	58	74	34	3	—	787
Nuclear medicine technologist	157	139	50	39	38	9	—	—	432
Sonographer	585	305	280	120	84	25	30	6	1,435
<i>Total</i>	<i>2,879</i>	<i>1,942</i>	<i>1,476</i>	<i>761</i>	<i>688</i>	<i>199</i>	<i>119</i>	<i>47</i>	<i>8,111</i>
<b>Pharmacist workers</b>									
Hospital pharmacist	433	383	230	149	108	45	30	3	1,381
Industrial pharmacist	135	222	59	25	26	—	9	—	476
Retail pharmacist	4,209	3,039	2,158	1,190	893	313	179	61	12,042
<i>Total</i>	<i>4,777</i>	<i>3,644</i>	<i>2,447</i>	<i>1,364</i>	<i>1,027</i>	<i>358</i>	<i>218</i>	<i>64</i>	<i>13,899</i>
<b>Other community workers</b>									
Social worker	2,469	2,796	1,300	911	1,183	229	168	74	9,130

Notes: not elsewhere classified

Source: ABS Census of Population and Housing 2001

**Table 10: Persons employed in health occupations per 100,000 population: states and territories, 2001**

Occupation	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Allied health worker</b>									
Occupational therapist	27	29	24	40	26	26	28	27	28
Optometrist	15	14	15	13	11	13	14	10	14
Physiotherapist	54	53	48	60	64	49	65	41	54
Speech pathologist	14	17	16	17	19	15	12	13	16
Podiatrist	8	11	7	10	14	10	11	2	9
Dietitian	12	10	8	8	10	7	24	14	10
Audiologist	4	5	4	4	4	3	5	5	4
Orthoptist	3	4	1	1	—	1	3	—	2
Orthotist	2	3	1	2	2	3	2	2	2
Health professional, nec	13	12	18	3	17	21	11	4	13
Clinical psychologist	41	47	31	43	31	27	58	30	40
Therapy aide	10	13	12	32	20	22	6	9	14
<i>Total</i>	<i>203</i>	<i>218</i>	<i>183</i>	<i>234</i>	<i>218</i>	<i>198</i>	<i>238</i>	<i>157</i>	<i>207</i>
<b>Complementary therapies</b>									
Chiropractor	11	13	9	9	14	5	9	5	11
Osteopath	3	3	1	1	0	3	4	2	2
Naturopath	11	13	17	13	14	10	14	6	13
Acupuncturist	5	2	5	1	2	1	4	—	3
Natural therapy professional, nec	3	3	2	3	2	1	3	—	3
Natural remedy consultant	11	15	11	15	9	10	10	9	12
<i>Total</i>	<i>43</i>	<i>50</i>	<i>45</i>	<i>42</i>	<i>42</i>	<i>30</i>	<i>44</i>	<i>21</i>	<i>44</i>
<b>Dental worker</b>									
Dentist	40	37	37	41	43	23	50	31	39
Dental specialist	4	4	4	5	6	3	8	—	4
Dental associate professionals	—	—	—	—	—	—	—	—	—
Dental therapist	3	3	10	15	8	11	5	7	6
Dental hygienist	2	2	2	4	7	—	6	3	2
Dental technician	14	15	16	19	15	17	18	7	15
Dental assistant	65	63	75	74	79	52	86	43	68
<i>Total</i>	<i>128</i>	<i>124</i>	<i>145</i>	<i>157</i>	<i>157</i>	<i>106</i>	<i>174</i>	<i>90</i>	<i>135</i>
<b>Medical imaging worker</b>									
Medical diagnostic radiographer	29	27	27	29	33	29	30	23	29
Radiation therapist	4	5	5	3	5	7	5	—	4
Nuclear medicine technologist	2	3	2	3	3	2	3	—	2
Sonographer	9	6	8	6	6	5	10	4	7
<i>Total</i>	<i>45</i>	<i>41</i>	<i>41</i>	<i>41</i>	<i>46</i>	<i>42</i>	<i>48</i>	<i>27</i>	<i>43</i>
<b>Pharmacist worker</b>									
Hospital pharmacist	7	8	7	8	7	10	10	3	7
Industrial pharmacist	2	5	2	1	2	—	4	—	2
Retail pharmacist	66	64	60	64	60	66	61	35	63
<i>Total</i>	<i>74</i>	<i>77</i>	<i>68</i>	<i>73</i>	<i>69</i>	<i>76</i>	<i>75</i>	<i>38</i>	<i>73</i>
<b>Other community services</b>									
Social worker	38	58	37	49	80	48	55	41	48

Notes: not elsewhere classified

Source: ABS Census of Population and Housing 2001

Table 11 shows the distribution of health occupations by geographic distribution in 2001.

**Table 11: Persons employed in health occupations: capital city and other regions, Australia, 2001**

Occupation	Persons employed (number)			Persons per 100,000 population		
	Capital city	Other region	Total	Capital city	Other region	Total
Allied health workers	27,867	10,999	38,866	233	162	207
Complementary therapies	5,430	2,875	8,305	45	42	44
Dental workers	17,989	7,364	25,353	150	108	135
Medical imaging workers	5,737	2,277	8,014	48	33	43
Pharmacists	9,959	3,734	13,693	83	55	73

Notes Identification of the occupation 'social work' under 'other community services' was not available

Source: ABS Census of Population and Housing 2001

The ABS data for 2001 also analyses the number of employed persons in health occupations by statistical region of workplace. This data has been provided for each state and territory in appendix E.

Table 12 shows that a number of allied health professions are predominantly female. There are some obvious exceptions, including optometrists and orthotists.

**Table 12: Persons employed in health occupations, sex, 2001**

<b>Occupation</b>	<b>Males</b>	<b>Female</b>	<b>Total</b>	<b>Female (%)</b>
<b>Allied health workers</b>				
Occupational therapist	364	4,967	5,331	93.2
Optometrist	1,589	1,106	2,695	41.0
Physiotherapist	2,764	7,478	10,242	73.0
Speech pathologist	108	2,903	3,011	96.4
Podiatrist	680	1,087	1,767	61.5
Dietitian	181	1,813	1,994	90.9
Audiologist	168	627	795	78.9
Orthoptist	58	383	441	86.8
Orthotist	282	97	379	25.6
Health professional, nec	199	2,310	2,509	92.1
Clinical psychologist	2,145	5,427	7,572	71.7
Therapy aide	261	2,460	2,721	90.4
<i>Total</i>	<i>8,799</i>	<i>30,658</i>	<i>39,457</i>	<i>77.7</i>
<b>Complementary therapies</b>				
Acupuncturist	377	315	692	45.5
Chiropractor	1,510	553	2,063	26.8
Natural remedy consultant	623	1,709	2,332	73.3
Natural therapy professional, nec	239	285	524	54.4
Naturopath	620	1,890	2,510	75.3
Osteopath	235	177	412	43.0
<i>Total</i>	<i>3,604</i>	<i>4,929</i>	<i>8,533</i>	<i>57.8</i>
<b>Dental workers</b>				
Dentist	5,417	1,965	7,382	26.6
Dental specialist	644	167	811	20.6
Dental therapist & hygienist	37	1,575	1,612	97.7
Dental technician	2,372	591	2,963	19.9
Dental assistant	171	12,914	13,085	98.7
<i>Total</i>	<i>8,641</i>	<i>17,212</i>	<i>25,853</i>	<i>66.6</i>
<b>Medical imaging workers</b>				
Medical diagnostic radiographer	1,855	3,602	5,457	66.0
Radiation therapist	188	599	787	76.1
Nuclear medicine technologist	127	305	432	70.6
Sonographer	331	1,104	1,435	76.9
<i>Total</i>	<i>2,501</i>	<i>5,610</i>	<i>8,111</i>	<i>69.2</i>
<b>Pharmacist workers</b>				
Hospital pharmacist	380	1,001	1,381	72.5
Industrial pharmacist	230	246	476	51.7
Retail pharmacist	6,075	5,970	12,045	49.6
<i>Total</i>	<i>6,685</i>	<i>7,217</i>	<i>13,902</i>	<i>51.9</i>
<b>Other community services</b>				
Social worker	1,715	7,415	9,130	81.2

Note: Does not include those who's sex was not stated  
nec – not elsewhere classified

Source: ABS, Census of Population and Housing 2001

Table 13 shows the age profile of health professions based on census data for 2001. Using the professions grouped under 'allied health workers' as an example, the data shows that 68.8% of persons were less than 45 years of age. It should be noted that this is a national age profile and may not reflect the jurisdictional age profile.

**Table 13: Persons employed in health occupations, age, 2001**

Occupation	15-24	25-34	35-44	45-54	55-64	65+ yrs	Total	Under			
	yrs	yrs	yrs	yrs	yrs			35 yrs (%)	35-44 yrs (%)	45-54 yrs (%)	55 yrs + (%)
<b>Allied health workers</b>											
Occupational therapist	872	2,060	1,344	812	220	23	5,331	55.0	25.2	15.2	4.6
Optometrist	259	921	860	458	126	71	2,695	43.8	31.9	17.0	7.3
Physiotherapist	991	3,370	3,094	1,975	688	124	10,242	42.6	30.2	19.3	7.9
Speech pathologist	441	1,190	832	406	118	24	3,011	54.2	27.6	13.5	4.7
Podiatrist	202	699	489	222	100	55	1,767	51.0	27.7	12.6	8.8
Dietitian	191	793	513	376	103	18	1,994	49.3	25.7	18.9	6.1
Audiologist	47	331	199	162	40	16	795	47.5	25.0	20.4	7.0
Orthoptist	75	195	99	49	16	7	441	61.2	22.4	11.1	5.2
Orthotist	38	100	122	76	43	—	379	36.4	32.2	20.1	11.3
Health professional, nec	121	342	585	924	460	77	2,509	18.5	23.3	36.8	21.4
Clinical psychologist	226	2,003	1,872	2,325	949	197	7,572	29.4	24.7	30.7	15.1
Therapy aide	459	502	726	739	282	13	2,721	35.3	26.7	27.2	10.8
<i>Total</i>	<i>3,922</i>	<i>12,506</i>	<i>10,735</i>	<i>8,524</i>	<i>3,145</i>	<i>625</i>	<i>39,457</i>	<i>41.6</i>	<i>27.2</i>	<i>21.6</i>	<i>9.6</i>
<b>Complementary therapies</b>											
Chiropractor	70	714	608	366	223	82	2,063	38.0	29.5	17.7	14.8
Osteopath	30	168	95	81	31	7	412	48.1	23.1	19.7	9.2
Naturopath	110	598	680	766	286	70	2,510	28.2	27.1	30.5	14.2
Acupuncturist	23	122	220	233	74	20	692	21.0	31.8	33.7	13.6
Natural therapy professional, nec	6	59	174	183	81	21	524	12.4	33.2	34.9	19.5
Natural remedy consultant	139	393	664	754	324	58	2,332	22.8	28.5	32.3	16.4
<i>Total</i>	<i>378</i>	<i>2,054</i>	<i>2,441</i>	<i>2,383</i>	<i>1,019</i>	<i>258</i>	<i>8,533</i>	<i>28.5</i>	<i>28.6</i>	<i>27.9</i>	<i>15.0</i>
<b>Dental workers</b>											
Dentist	260	1,747	2,156	1,933	941	345	7,382	27.2	29.2	26.2	17.4
Dental specialist	24	102	269	256	120	40	811	15.5	33.2	31.6	19.7
Dental therapist & hygienist	102	506	761	228	15	—	1,612	37.7	47.2	14.1	0.9
Dental technician	313	682	968	663	229	108	2,963	33.6	32.7	22.4	11.4
Dental assistant	4,664	3,824	2,881	1,393	280	43	13,085	64.9	22.0	10.6	2.5
<i>Total</i>	<i>5,363</i>	<i>6,861</i>	<i>7,035</i>	<i>4,473</i>	<i>1,585</i>	<i>536</i>	<i>25,853</i>	<i>47.3</i>	<i>27.2</i>	<i>17.3</i>	<i>8.2</i>
<b>Medical imaging workers</b>											
Medical diagnostic radiographer	704	1,529	1,506	1,274	407	37	5,457	40.9	27.6	23.3	8.1
Radiation therapist	132	305	200	128	22	—	787	55.5	25.4	16.3	2.8
Nuclear medicine technologist	83	195	90	61	3	—	432	64.4	20.8	14.1	0.7
Sonographer	51	537	538	262	44	3	1,435	41.0	37.5	18.3	3.3
<i>Total</i>	<i>970</i>	<i>2,566</i>	<i>2,334</i>	<i>1,725</i>	<i>476</i>	<i>40</i>	<i>8,111</i>	<i>43.6</i>	<i>28.8</i>	<i>21.3</i>	<i>6.4</i>

<b>Pharmacist workers</b>											
Hospital pharmacist	166	348	332	318	171	46	1,381	37.2	24.0	23.0	15.7
Industrial pharmacist	47	215	132	58	21	3	476	55.0	27.7	12.2	5.0
Retail pharmacist	1,253	2,984	2,630	2,240	2,163	775	12,045	35.2	21.8	18.6	24.4
<i>Total</i>	<i>1,466</i>	<i>3,547</i>	<i>3,094</i>	<i>2,616</i>	<i>2,355</i>	<i>824</i>	<i>13,902</i>	<i>36.1</i>	<i>22.3</i>	<i>18.8</i>	<i>22.9</i>
<b>Other community services</b>											
Social worker	554	2,343	2,531	2,722	884	96	9,130	31.7	27.7	29.8	10.7
<b>Total persons</b>	<b>12,653</b>	<b>29,877</b>	<b>28,170</b>	<b>22,443</b>	<b>9,464</b>	<b>2,379</b>	<b>104,986</b>	<b>40.5</b>	<b>26.8</b>	<b>21.4</b>	<b>11.3</b>

Note: Does not include those who's age or sex was not stated  
nec – not elsewhere classified

Source: ABS, Census of Population and Housing, 2001

Table 14 shows the age distribution of males employed in health occupations in 2001.

**Table 14: Males employed in health occupations, age distribution (%), 2001**

<b>Occupation</b>	<b>Under 35 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55 years +</b>
<b>Allied health workers</b>				
Occupational therapist	60.2	22.0	15.4	2.5
Optometrist	33.4	35.7	19.7	11.1
Physiotherapist	52.9	29.8	13.5	3.8
Speech pathologist	47.2	24.1	11.1	17.6
Podiatrist	50.1	30.1	12.6	7.1
Dietitian	49.7	22.7	19.3	8.3
Audiologist	38.7	22.0	25.0	14.3
Orthoptist	79.3	15.5	-	5.2
Orthotist	25.5	35.5	23.8	15.2
Health professional, nec	20.1	24.6	31.7	23.6
Clinical psychologist	17.1	26.1	36.5	20.4
Therapy aide	49.8	23.4	16.5	10.3
<i>Total</i>	<i>38.8</i>	<i>29.1</i>	<i>21.3</i>	<i>10.9</i>
<b>Complementary therapies</b>				
Chiropractor	31.1	29.8	21.2	17.9
Osteopath	35.7	26.4	25.5	12.3
Naturopath	18.9	24.4	36.1	20.6
Acupuncturist	17.2	32.9	34.7	15.1
Natural therapy professional, nec	13.0	32.6	31.0	23.4
Natural remedy consultant	18.3	24.2	30.8	26.6
<i>Total</i>	<i>24.4</i>	<i>28.2</i>	<i>27.8</i>	<i>19.6</i>
<b>Dental workers</b>				
Dentist	21.3	27.7	29.2	21.8
Dental specialist	8.4	32.5	34.8	24.4
Dental therapist & hygienist	56.8	35.1	-	8.1
Dental technician	29.6	32.6	24.6	13.2
Dental assistant	67.8	18.1	7.0	7.0
<i>Total</i>	<i>23.7</i>	<i>29.2</i>	<i>27.8</i>	<i>19.3</i>
<b>Medical imaging workers</b>				
Medical diagnostic radiographer	40.4	28.8	20.6	10.1
Radiation therapist	63.8	24.5	10.1	1.6
Nuclear medicine technologist	65.4	26.8	7.9	-
Sonographer	37.5	42.6	16.3	3.6
<i>Total</i>	<i>43.1</i>	<i>30.2</i>	<i>18.6</i>	<i>8.1</i>
<b>Pharmacist workers</b>				
Hospital pharmacist	27.1	20.5	21.1	31.3
Industrial pharmacist	49.1	25.7	16.1	9.1
Retail pharmacist	26.5	19.8	18.3	35.4
<i>Total</i>	<i>27.3</i>	<i>20.0</i>	<i>18.4</i>	<i>34.3</i>
<b>Other community services</b>				
Social workers	25.2	31.4	32.1	11.4

Notes Does not include those who's age or sex was not stated  
nec – not elsewhere classified

Source: ABS, Census of Population and Housing, 2001

Table 15 shows the age distribution of females employed in health occupations in 2001.

**Table 15: Females employed in health occupations, age distribution (%), 2001**

<b>Occupation</b>	<b>Under 35 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55 years +</b>
<b>Allied health workers</b>				
Occupational therapist	54.6	25.4	15.2	4.7
Optometrist	58.7	26.4	13.1	1.8
Physiotherapist	38.8	30.4	21.4	9.4
Speech pathologist	54.4	27.8	13.6	4.2
Podiatrist	51.5	26.1	12.5	9.8
Dietitian	49.3	26.0	18.8	5.8
Audiologist	49.9	25.8	19.1	5.1
Orthoptist	58.5	23.5	12.8	5.2
Orthotist	68.0	22.7	9.3	-
Health professional, nec	18.3	23.2	37.3	21.2
Clinical psychologist	34.3	24.2	28.4	13.0
Therapy aide	33.8	27.0	28.3	10.9
<i>Total</i>	<i>42.5</i>	<i>26.7</i>	<i>21.7</i>	<i>9.2</i>
<b>Complementary therapies</b>				
Chiropractor	57.0	28.6	8.3	6.1
Osteopath	64.4	18.6	11.9	5.1
Naturopath	31.3	28.0	28.7	12.1
Acupuncturist	25.4	30.5	32.4	11.7
Natural therapy professional, nec	11.9	33.7	38.2	16.1
Natural remedy consultant	24.5	30.0	32.9	12.6
<i>Total</i>	<i>31.5</i>	<i>28.9</i>	<i>28.0</i>	<i>11.6</i>
<b>Dental workers</b>				
Dentist	43.3	33.5	18.0	5.2
Dental specialist	43.1	35.9	19.2	1.8
Dental therapist & hygienist	37.3	47.5	14.5	0.8
Dental technician	49.4	32.8	13.5	4.2
Dental assistant	64.8	22.1	10.7	2.4
<i>Total</i>	<i>59.1</i>	<i>26.2</i>	<i>12.0</i>	<i>2.6</i>
<b>Medical imaging workers</b>				
Medical diagnostic radiographer	41.2	27.0	24.8	7.1
Radiation therapist	52.9	25.7	18.2	3.2
Nuclear medicine technologist	63.9	18.4	16.7	1.0
Sonographer	42.0	36.0	18.8	3.2
<i>Total</i>	<i>43.8</i>	<i>28.1</i>	<i>22.5</i>	<i>5.6</i>
<b>Pharmacist workers</b>				
Hospital pharmacist	41.1	25.4	23.8	9.8
Industrial pharmacist	60.6	29.7	8.5	1.2
Retail pharmacist	44.0	23.9	18.9	13.2
<i>Total</i>	<i>44.1</i>	<i>24.3</i>	<i>19.2</i>	<i>12.3</i>
<b>Other community services</b>				
Social workers	33.2	26.9	29.3	10.6

Notes Does not include those who's age or sex was not stated

nec – not elsewhere classified

Source: ABS, Census of Population and Housing, 2001

Table 16 shows the Indigenous status of persons employed in health occupation. Using the professions grouped under 'allied health workers' as an example, the data shows that 0.3% of persons identified themselves as Indigenous.

**Table 16: Persons employed in selected <sup>(a)</sup> health occupations: Indigenous status, 2001**

Occupation	Indigenous	Non-Indigenous	Not stated	Total	Indigenous (%)
<b>Allied health workers</b>					
Occupational therapist	7	5,319	17	5,343	0.1
Optometrist	5	2,686	7	2,698	0.2
Physiotherapist	29	10,192	27	10,248	0.3
Speech pathologist	4	2,987	6	2,997	0.1
Podiatrist	8	1,749	6	1,763	0.5
Dietitian	18	1,975	8	2,001	0.9
Audiologist	6	791	4	801	0.7
Health professional, nec	22	2,464	20	2,506	0.9
Clinical psychologist	19	7,519	32	7,570	0.3
Therapy aide	15	2,695	8	2,718	0.6
<i>Total</i>	<i>133</i>	<i>38,377</i>	<i>135</i>	<i>38,645</i>	<i>0.3</i>
<b>Complementary therapies</b>					
Chiropractor	4	2,060	9	2,073	0.2
Naturopath	8	2,489	17	2,514	0.3
Natural remedy consultant	12	2,311	16	2,339	0.5
<i>Total</i>	<i>24</i>	<i>6,860</i>	<i>42</i>	<i>6,926</i>	<i>0.3</i>
<b>Dental workers</b>					
Dentist	13	7,338	30	7,381	0.2
Dental therapist	5	1,176	—	1,181	0.4
Dental hygienist	3	432	3	438	0.7
Dental technician	9	2,929	18	2,956	0.3
Dental assistant	125	12,900	71	13,096	1.0
<i>Total</i>	<i>155</i>	<i>24,775</i>	<i>122</i>	<i>25,052</i>	<i>0.6</i>
<b>Medical imaging workers</b>					
Medical diagnostic radiographer	10	5,432	26	5,468	0.2
Sonographer	4	1,425	3	1,432	0.3
<i>Total</i>	<i>14</i>	<i>6,857</i>	<i>29</i>	<i>6,900</i>	<i>0.2</i>
<b>Pharmacist workers</b>					
Retail pharmacist	10	11,997	39	12,046	0.1
<i>Total</i>	<i>10</i>	<i>11,997</i>	<i>39</i>	<i>12,046</i>	<i>0.1</i>
<b>Other community services</b>					
Social worker	166	8,926	33	9,125	1.8

Notes: (a) Includes only those occupations in which some Indigenous people were employed  
nec - not elsewhere classified

Source: ABS, Census of Population and Housing, 2001

Table 17 shows that 45.0% of the allied health professions identified below were employed in the public sector in 2001. The ABS definition of 'public sector' refers specifically to government agencies (national, state/territory and local government).

**Table 17: Persons employed in health occupations by public and private sector, 2001**

<b>Allied health profession</b>	<b>Public sector</b>	<b>Private sector</b>	<b>Public sector (%)</b>
Audiology	416	364	53
Dietetics	1120	857	57
Hospital pharmacy	1723	0	100
Medical imaging	2,956	5,298	36
Occupational therapy	2731	2573	51
Orthoptics	63	358	15
Orthotics	109	254	30
Physiotherapy	3260	6890	32
Podiatry	263	1485	15
Psychology	3724	5531	40
Social Work	5173	3796	58
Speech pathology	1676	1299	56
<b>Total</b>	<b>23,214</b>	<b>28,705</b>	<b>45</b>

Source: SARRAH/NRRAHAS, National Allied Health Workforce Report, 2004

Table 18 shows the distribution of selected health occupations by hours worked in 2001. Using the professions grouped under 'allied health workers' as an example, the data shows that 39.9% of persons worked less than 35 hours per week in 2001.

**Table 18: Persons employed in health occupations: hours worked, 2001**

Occupation	1-15	16-24	25-34	35-40	41-48	49+	Not stated <sup>(a)</sup>	Total
<b>Allied health workers</b>								
Occupational therapist	478	780	700	2,156	589	328	300	5,331
Optometrist	197	165	275	850	614	494	100	2,695
Physiotherapist	1,282	1,340	1,360	3,137	1,155	1,457	511	10,242
Speech pathologist	351	451	425	1,016	367	204	197	3,011
Podiatrist	176	184	248	504	244	333	78	1,767
Dietitian	199	312	249	779	194	149	112	1,994
Audiologist	61	100	94	301	105	94	40	795
Orthoptist	54	73	77	136	48	24	29	441
Orthotist	14	20	19	197	38	65	26	379
Health professional, nec	371	503	644	676	79	107	129	2,509
Clinical psychologist	863	864	970	2,550	805	1,088	432	7,572
Therapy aide	604	613	617	598	71	55	163	2,721
<i>Total</i>	<i>4,650</i>	<i>5,405</i>	<i>5,678</i>	<i>12,900</i>	<i>4,309</i>	<i>4,398</i>	<i>2,117</i>	<i>39,457</i>
% by hours worked	11.8%	13.7%	14.4%	32.7%	10.9%	11.1%	5.4%	100.0%
<b>Complementary therapies</b>								
Chiropractor	146	151	453	600	235	367	111	2,063
Osteopath	25	34	85	140	43	76	9	412
Naturopath	534	364	446	530	196	316	124	2,510
Acupuncturist	126	81	104	161	70	102	48	692
Natural therapy professional, nec	95	80	92	100	48	69	40	524
Natural remedy consultant	966	352	324	272	101	164	153	2,332
<i>Total</i>	<i>1,892</i>	<i>1,062</i>	<i>1,504</i>	<i>1,803</i>	<i>693</i>	<i>1,094</i>	<i>485</i>	<i>8,533</i>
% by hours worked	22.2%	12.4%	17.6%	21.1%	8.1%	12.8%	5.7%	100.0%
<b>Dental workers</b>								
Dentist	351	490	889	2,861	1,221	1,268	302	7,382
Dental specialist	35	46	84	231	132	248	35	811
Dental therapist & hygienist	165	378	277	607	62	25	98	1,612
Dental technician	126	142	203	1,210	337	820	125	2,963
Dental associate professional	—	—	5	2	—	2	—	9
Dental assistant	1,534	1,998	1,858	5,450	1,194	336	715	13,085
<i>Total</i>	<i>2,211</i>	<i>3,054</i>	<i>3,316</i>	<i>10,361</i>	<i>2,946</i>	<i>2,699</i>	<i>1,275</i>	<i>25,862</i>
% by hours worked	8.5%	11.8%	12.8%	40.1%	11.4%	10.4%	4.9%	100.0%
<b>Medical imaging workers</b>								
Medical diagnostic radiographer	387	564	572	2,464	686	492	292	5,457
Radiation therapist	42	82	45	441	101	37	39	787
Nuclear medicine technologist	17	46	30	224	76	38	1	432

Sonographer	121	186	226	587	146	73	96	1,435
<i>Total</i>	<i>567</i>	<i>878</i>	<i>873</i>	<i>3,716</i>	<i>1,009</i>	<i>640</i>	<i>428</i>	<i>8,111</i>
% by hours worked	7.0%	10.8%	10.8%	45.8%	12.4%	7.9%	5.3%	100.0%
<b>Pharmacist workers</b>								
Hospital pharmacist	70	178	135	518	266	124	90	1,381
Industrial pharmacist	27	27	26	227	88	68	13	476
Retail pharmacist	1,200	1,081	1,255	2,790	2,055	3,123	538	12,042
<i>Total</i>	<i>1,297</i>	<i>1,286</i>	<i>1,416</i>	<i>3,535</i>	<i>2,409</i>	<i>3,315</i>	<i>641</i>	<i>13,899</i>
% by hours worked	9.3%	9.3%	10.2%	25.4%	17.3%	23.9%	4.6%	100.0%
<b>Other community services</b>								
Social worker	462	1,078	1,157	4,199	991	600	643	9,130
% by hours worked	5.1%	11.8%	12.7%	46.0%	10.8%	6.6%	7.0%	100.0%

Notes: Includes those who were on leave and worked zero hours  
nec – not elsewhere classified

Source: ABS Census of Population and Housing 2001

Table 19 shows the hours worked by sex in 2001. Using the professions grouped under 'allied health workers' as an example, the data shows that 46.1% of females work less than 35 hours per week compared with 18.3% of males.

**Table 19: Persons employed in health occupations: sex and hours worked (%), 2001**

Occupation	Under 35 hours		35-48 hours		49 hours +	
	Male	Female	Males	Females	Males	Females
<b>Allied health workers</b>						
Occupational therapist	12.6	38.5	69.5	50.2	11.0	5.8
Optometrist	13.3	38.5	57.6	49.5	25.9	7.5
Physiotherapist	14.3	48.0	51.0	38.6	30.6	8.2
Speech pathologist	14.8	41.7	59.3	45.4	8.3	6.7
Podiatrist	18.2	44.5	48.2	38.6	31.0	11.2
Dietitian	25.4	39.4	49.2	48.8	22.1	6.0
Audiologist	14.9	36.7	62.5	47.4	22.6	8.8
Orthoptist	22.4	49.9	48.3	40.7	22.4	2.9
Orthotist	12.8	17.5	66.0	50.5	20.6	7.2
Health professional, nec	44.7	61.9	37.7	29.4	11.6	3.6
Clinical psychologist	22.6	40.8	49.5	42.3	23.6	10.7
Therapy aide	46.4	69.6	48.3	22.1	3.4	1.9
<i>Total</i>	<i>18.3</i>	<i>46.1</i>	<i>52.7</i>	<i>41.0</i>	<i>25.1</i>	<i>7.1</i>
<b>Complementary therapies</b>						
Chiropractor	31.1	50.8	43.1	33.3	20.9	9.2
Osteopath	30.2	41.2	48.5	39.0	20.4	15.8
Naturopath	38.2	58.6	36.0	26.6	21.1	9.8
Acupuncturist	36.1	55.6	38.2	27.6	19.9	8.6
Natural therapy professional, nec	39.3	60.7	33.5	23.9	19.7	7.7
Natural remedy consultant	62.1	73.4	20.4	14.4	9.1	6.3
<i>Total</i>	<i>38.7</i>	<i>62.2</i>	<i>37.2</i>	<i>23.5</i>	<i>18.7</i>	<i>8.5</i>
<b>Dental workers</b>						
Dentist	17.0	41.2	58.5	46.4	20.7	7.5
Dental specialist	14.3	43.7	46.4	38.3	34.5	15.6
Dental therapist & hygienist	8.1	51.9	75.7	40.7	8.1	1.4
Dental technician	12.2	30.6	51.5	55.2	32.4	8.8
Dental associate professional	-	55.6	-	22.2	-	22.2
Dental assistant	42.1	41.2	48.0	50.8	1.8	2.6
<i>Total</i>	<i>15.9</i>	<i>41.8</i>	<i>55.6</i>	<i>49.4</i>	<i>24.5</i>	<i>3.4</i>
<b>Medical imaging workers</b>						
Medical diagnostic radiographer	8.4	38.0	71.5	50.6	15.5	5.7
Radiation therapist	6.4	26.2	79.8	65.4	6.9	4.0
Nuclear medicine technologist	-	30.5	85.0	62.3	15.0	5.9
Sonographer	9.4	45.5	70.7	45.2	12.1	3.0
<i>Total</i>	<i>8.0</i>	<i>37.8</i>	<i>72.7</i>	<i>51.8</i>	<i>14.4</i>	<i>5.0</i>

<b>Pharmacist workers</b>						
Hospital pharmacist	12.1	33.7	65.8	53.3	13.9	7.1
Industrial pharmacist	10.4	22.8	68.7	63.8	18.3	10.6
Retail pharmacist	18.8	40.1	38.7	41.8	38.1	13.6
<i>Total</i>	<i>18.2</i>	<i>38.6</i>	<i>41.3</i>	<i>44.1</i>	<i>36.0</i>	<i>12.6</i>
<b>Other community services</b>						
Social workers	16.2	32.6	69.0	54.0	8.5	6.1

Note: Percentages excludes those whose hours of work was not stated  
nec – not elsewhere classified

Source: ABS Census of Population and Housing 2001

Table 20 has been modified from a table in the National Allied Health Report prepared by SARRAH and is for select health occupations. This shows that the pool of qualified allied health professions is larger than the number represented in the workforce (the methodology used in developing this table is unknown and the figures should be interpreted with caution so not to overestimate through double counting the number of persons that hold qualifications).

**Table 20: Allied health professional qualifications, 2001**

<b>Profession</b>	<b>Number in workforce</b>	<b>Number with undergraduate qualification</b>	<b>Number with postgraduate qualification</b>	<b>Total with qualification</b>	<b>Number working in field as % of number with qualifications</b>
Audiology	797	540	653	1193	66.8%
Dietetics	1996	3012	1906	4918	40.6%
Medical imaging	8322	8583	681	9264	89.8%
Occupational therapy	5339	7952	479	8431	63.3%
Physiotherapy	10249	9963	1693	11656	87.9%
Podiatry	1750	4331	418	4749	36.8%
Psychology	9318	25927	13770	39697	23.5%
Social work	9108	21898	3766	25664	35.5%
Speech pathology	3006	6250	519	6769	44.4%
<b>Total</b>	<b>49,885</b>	<b>88,456</b>	<b>23,885</b>	<b>112,341</b>	<b>44.4%</b>

Source: SARRAH/NRRAHAS, National Allied Health Workforce Report, 2004 (revised by the National Health Workforce Secretariat)

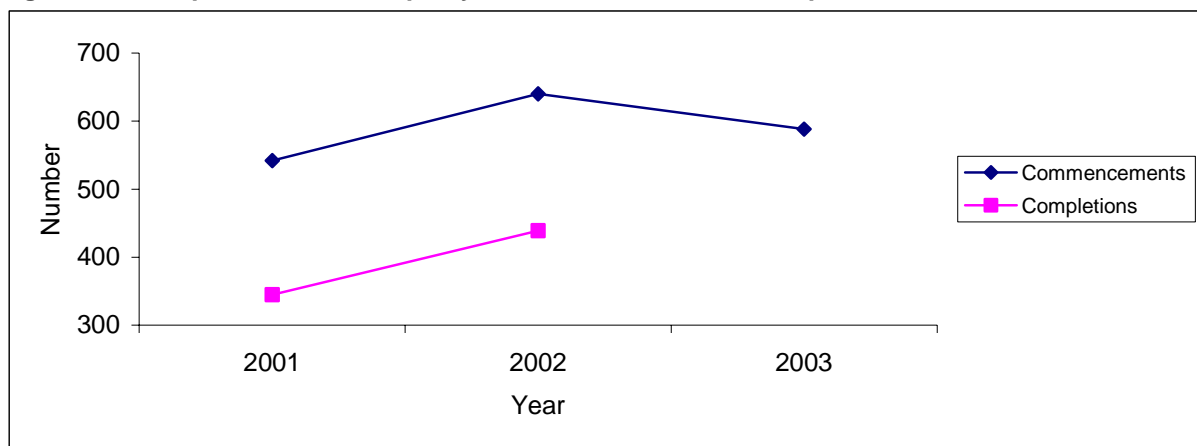
### **Allied Health University Commencements and Completions**

The Australian Department of Education Science and Training (DEST) gathers university commencements and completions from Australian universities according to the category of study. The figures provided below show allied health course commencements and completions by state and territory between 1993 and 2003. The figures provided relate to specific allied health courses, and may not reflect the totality of students commencing or completing allied

health courses. A number of courses conducted by universities are classified under rehabilitation therapies, and may relate to physiotherapy or occupational therapy for example. Similarly, some courses, for example nutrition, speech pathology and radiography, may be coded by the university under a more specific medical or scientific field. Tables containing the number of students and a breakdown by state and territory can be found in appendix D. Appendix D also includes some explanatory notes on how DEST classifies courses and compiles the data.

Figure 3 shows the number of chiropractic and osteopathy university course commencements and completions between 1993 and 2003.

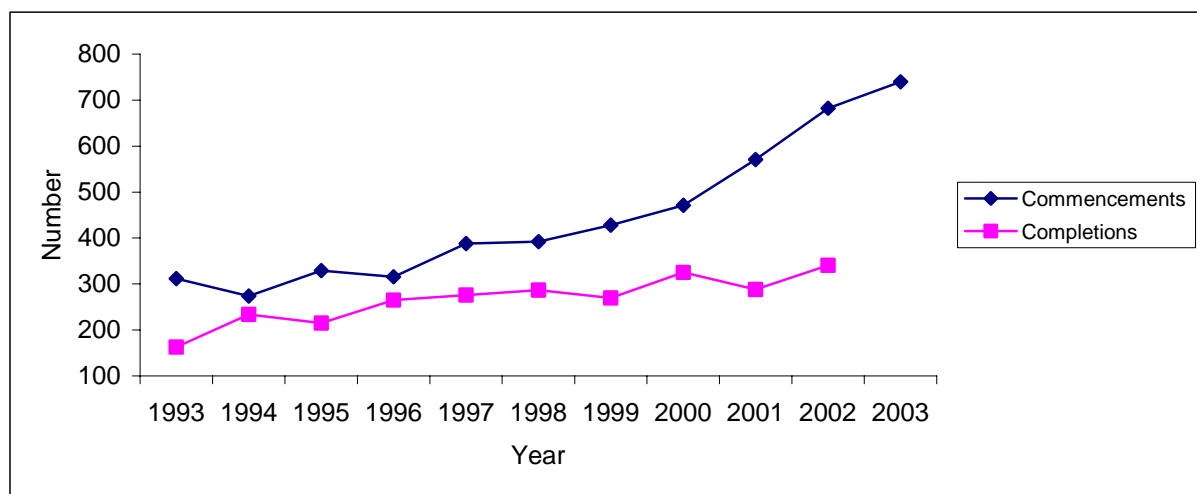
**Figure 3: Chiropractic and osteopathy commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000), ENROL (2001-03), OZUP (1994-2003)

Figure 4 shows the number of nutrition and dietetics university course commencements and completions between 1993 and 2003.

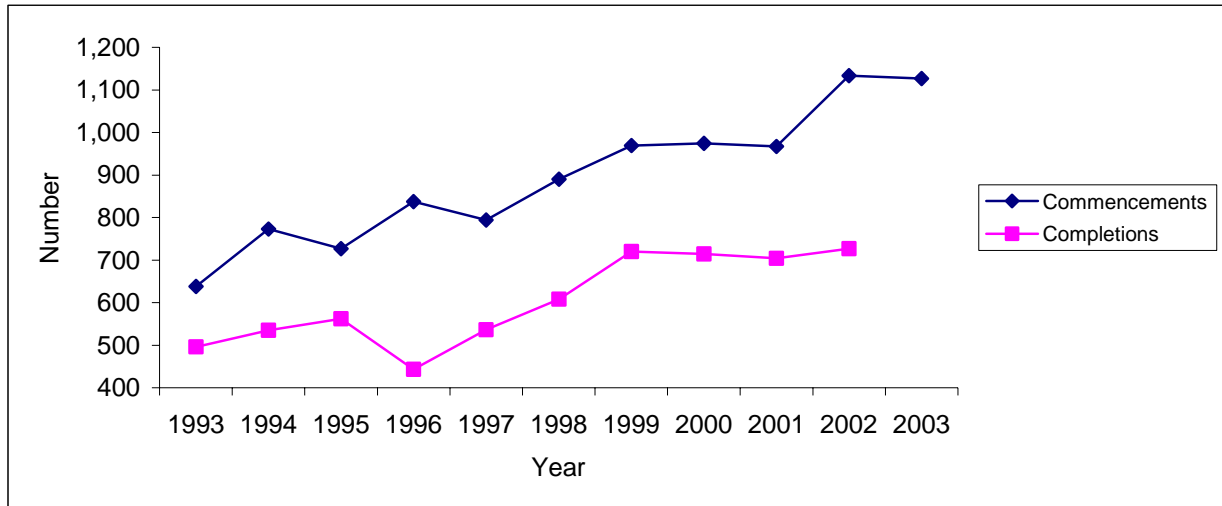
**Figure 4: Nutrition and dietetic commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000), ENROL (2001-03), OZUP (1994-2003)

Figure 5 shows the number of occupational therapy university course commencements and completions between 1993 and 2003.

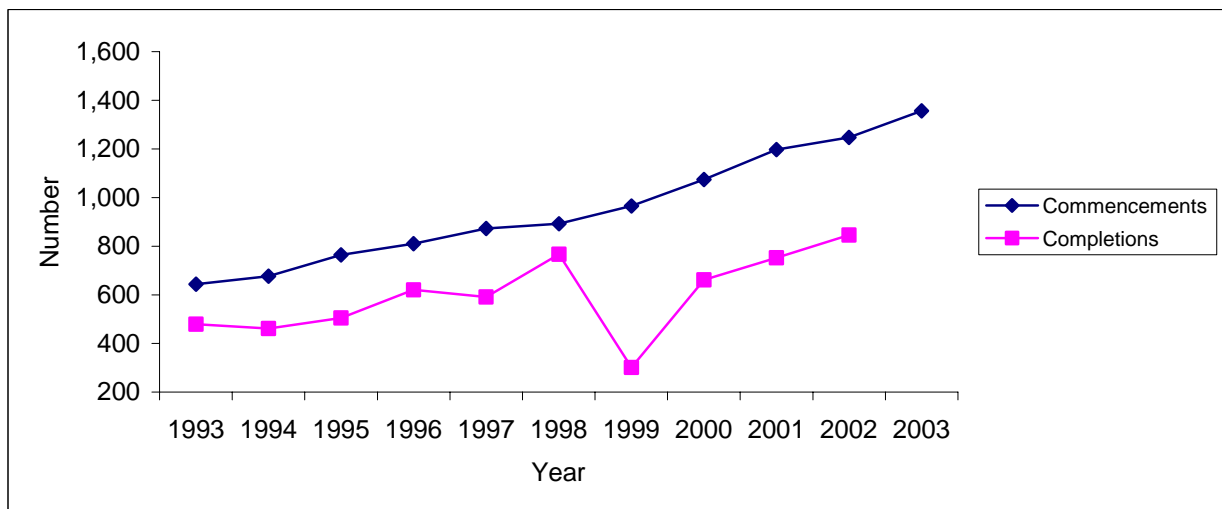
**Figure 5: Occupational therapy commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000), ENROL (2001-03), OZUP (1994-2003)

Figure 6 shows the number of pharmacy university course commencements and completions between 1993 and 2003.

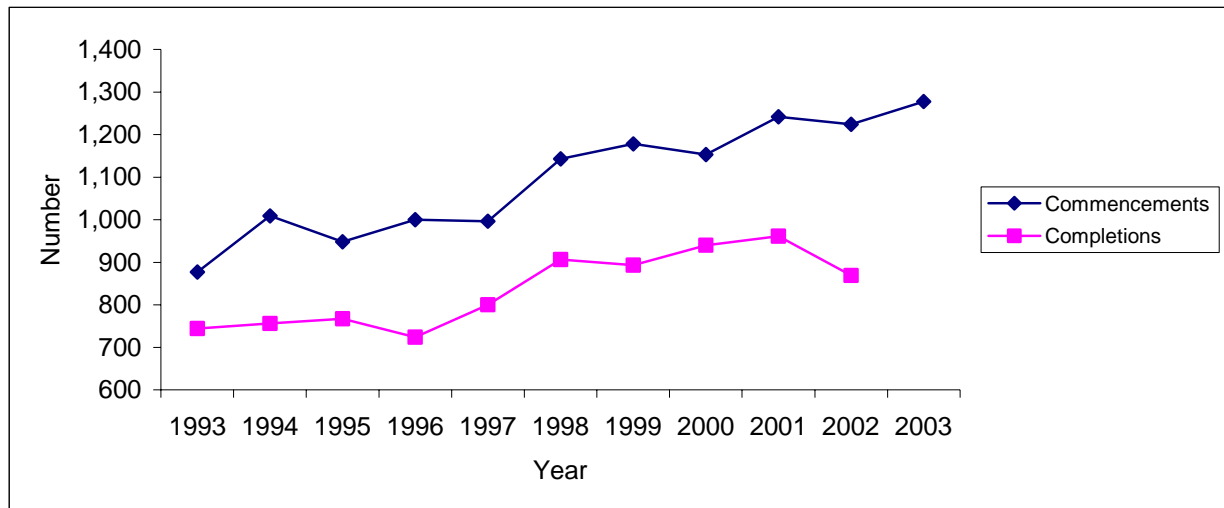
**Figure 6: Pharmacy commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000) ENROL (2001-03), OZUP (1994-2003)

Figure 7 shows the number of physiotherapy university course commencements and completions between 1993 and 2003.

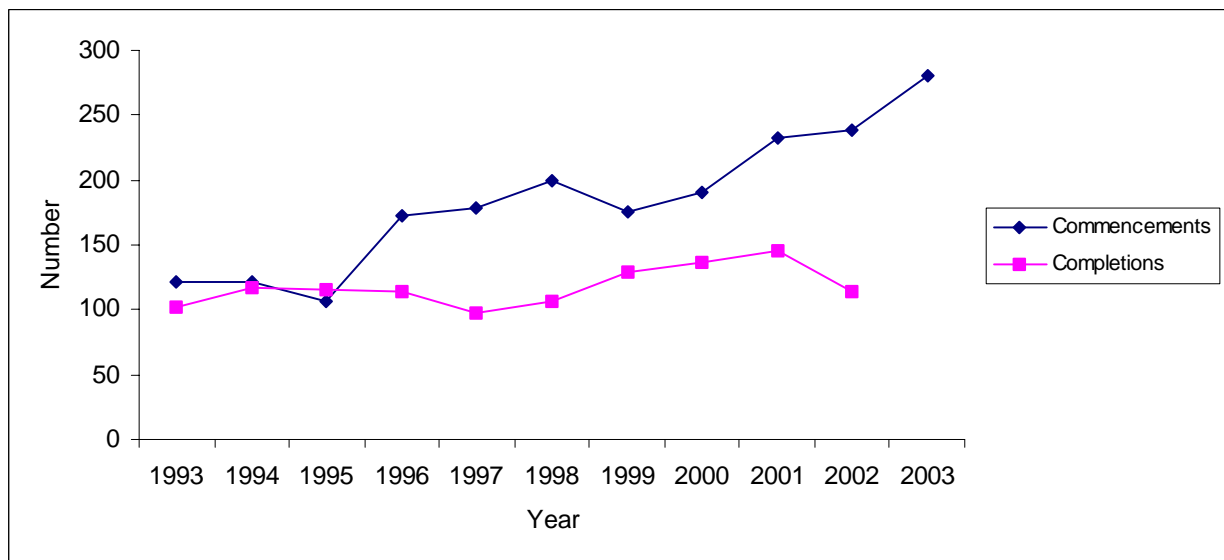
**Figure 7: Physiotherapy commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000) ENROL (2001-03), OZUP (1994-2003)

Figure 8 shows the number of podiatry university course commencements and completions between 1993 and 2003.

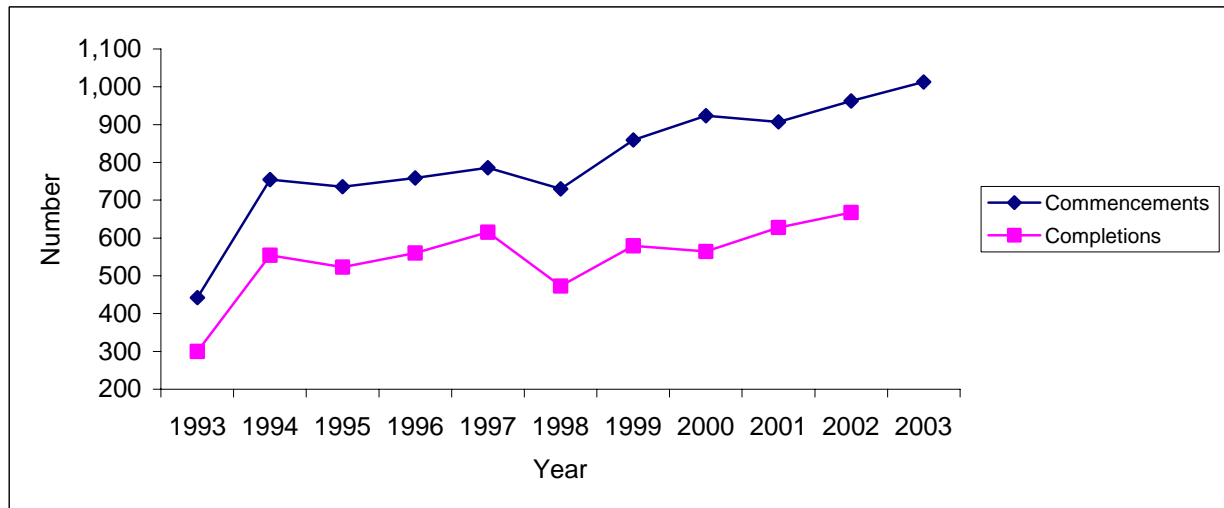
**Figure 8: Podiatry commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000), ENROL (2001-03), OZUP (1994-2003)

Figure 9 shows the number of radiography university course commencements and completions between 1993 and 2003.

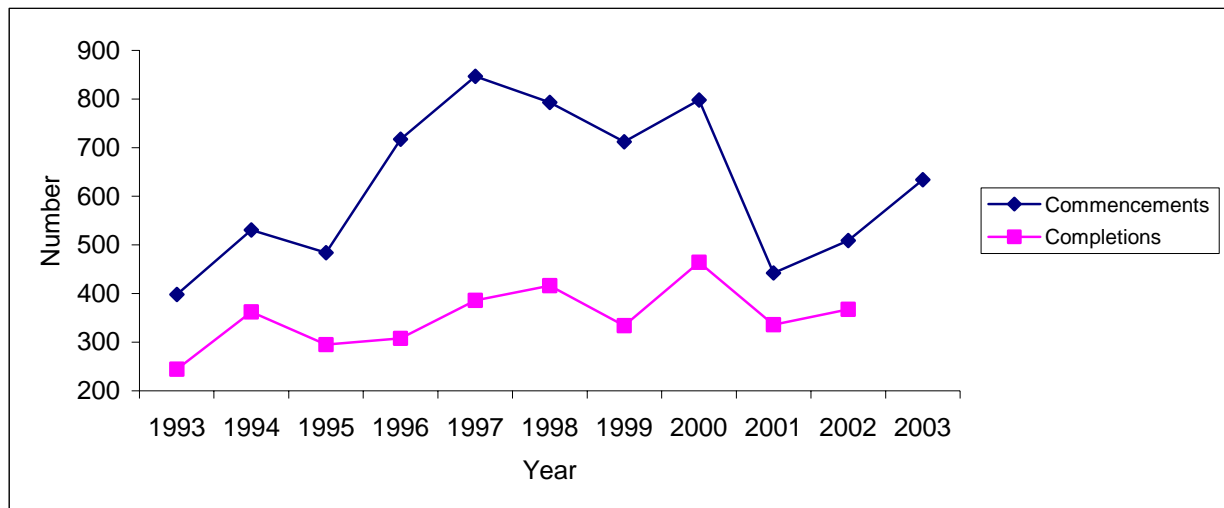
**Figure 9: Radiography commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000) ENROL (2001-03), OZUP (1994-2003)

Figure 10 shows the number of rehabilitation therapies university course commencements and completions between 1993 and 2003.

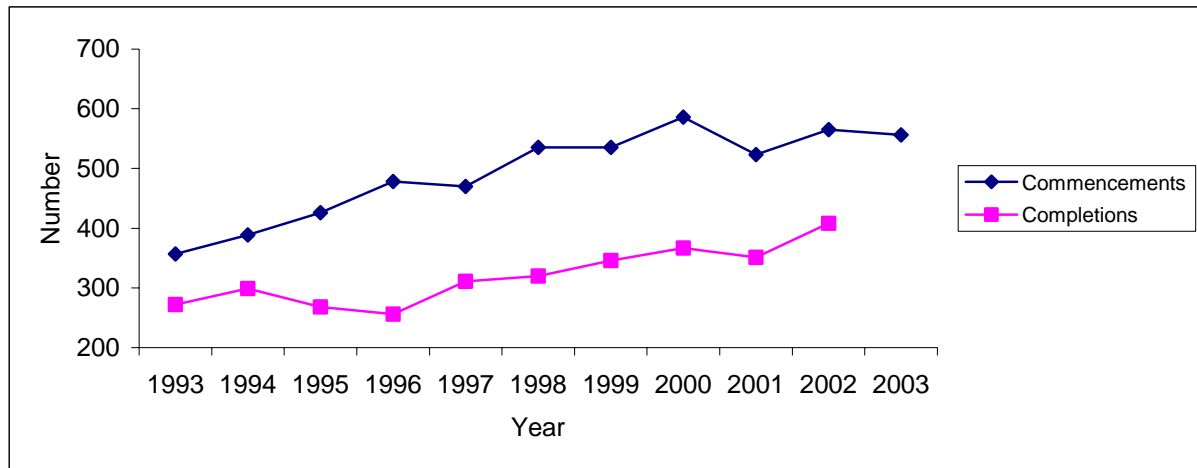
**Figure 10: Rehabilitation therapies commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000), ENROL (2001-03), OZUP (1994-2003)

Figure 11 shows the number of speech pathology university course commencements and completions between 1993 and 2003.

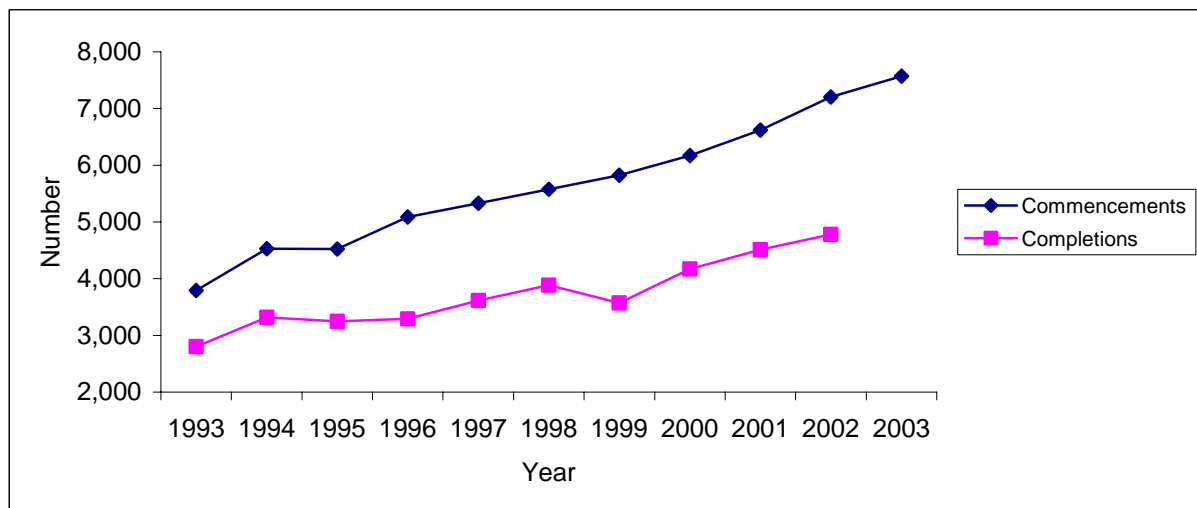
**Figure 11: Speech pathology commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000) ENROL (2001-03), OZUP (1994-2003)

Figure 12 shows the total number of university course commencements and completions for the courses identified between 1993 and 2003.

**Figure 12: Total commencements and completions, 1993 to 2003**



Source: OZUE (1993-2000), ENROL (2001-03), OZUP (1994-2003)

In July 2004, the Australian Government announced additional allied health intakes to commence in 2005. Table 21 provides a summary of the additional health profession university places expected to commence in 2005.

**Table 21: Additional health profession university places expected to commence in 2005**

<b>Discipline</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>SA</b>	<b>WA</b>	<b>Tas</b>	<b>NT</b>	<b>ACT</b>	<b>Total</b>
General nursing	252	191	283	55	68	50	5	40	<b>944</b>
Aged care nursing	145	100	100	25	65	0	5	0	<b>440</b>
Midwifery	60	0	0	25	25	0	0	0	<b>110</b>
Dentistry	0	8	20	35	15	0	0	0	<b>78</b>
Dental hygiene	50	0	0	0	0	0	0	0	<b>50</b>
Oral health	20	0	0	0	0	0	0	0	<b>20</b>
Community health	10	0	0	0	0	0	0	0	<b>10</b>
Environmental health	20	0	0	0	0	0	0	0	<b>20</b>
Exercise and sport	20	0	0	0	0	0	0	0	<b>20</b>
Forensic health	10	0	0	0	0	0	0	0	<b>10</b>
Health promotion	0	0	60	0	0	0	0	0	<b>60</b>
Health science	30	30	0	0	10	10	0	0	<b>80</b>
Human movement	10	0	55	0	0	15	0	0	<b>80</b>
Information management– health	10	0	0	0	0	0	0	0	<b>10</b>
Medical science	57	0	55	0	0	0	15	0	<b>127</b>
Nutrition & dietetics	10	0	0	0	0	0	0	0	<b>10</b>
Occupational therapy	0	70	0	0	20	0	0	0	<b>90</b>
Paramedic	0	15	30	45	0	0	0	0	<b>90</b>
Pharmacy	115	10	70	0	20	12	0	0	<b>227</b>
Physiotherapy	15	65	60	0	20	0	0	0	<b>160</b>
Podiatry	8	0	0	0	30	0	0	0	<b>38</b>
Psychology	5	0	65	0	15	0	0	0	<b>85</b>
Public health	0	0	0	40	0	0	0	0	<b>40</b>
Radiography/ Radiation therapy	50	20	0	0	25	0	0	0	<b>95</b>
Social work	5	15	25	15	25	0	0	10	<b>95</b>
Speech pathology	22	0	20	0	0	0	0	0	<b>42</b>
Vision sciences	5	0	0	0	0	0	0	0	<b>5</b>
<b>Total</b>	<b>929</b>	<b>524</b>	<b>843</b>	<b>240</b>	<b>338</b>	<b>87</b>	<b>25</b>	<b>50</b>	<b>3036</b>

Note: general nursing includes indigenous nursing and mental health nursing

Source: DEST and National Health Workforce Secretariat

**Migration data**

Another key source of workforce supply data is migration movements. This information is collected by the Australian Government Department of Immigration and Multicultural Affairs (DIMIA). Information is provided in Table 22 for occupational therapy, physiotherapy and podiatry. It should be cautioned that the key drawback with DIMIA data is that it is not known if the people entering Australia by profession practise in that profession or if the people permanently leaving Australia have been working in that profession.

**Table 22: Migration movements, selected allied health professions, 2002-03 and 2003-04**

<b>Occupation</b>	<b>2002-03</b>	<b>2003-04</b>
<i>Occupation therapy</i>		
Settler arrivals	49	60
Residents permanently departing	55	49
<i>Physiotherapy</i>		
Settler arrivals	115	160
Residents permanently departing	82	94
<i>Podiatry</i>		
Settler arrivals	8	13
Residents permanently departing	3	1

Source: DIMIA

### **The Rural Allied Health Workforce**

SARRAH has produced a number of profiles on the rural allied health workforce. These profiles are based on ABS Census of Population and Housing 2001 data, and cover the following professions: audiology; dietetics; hospital pharmacy; medical imaging; occupational therapy; orthoptics; orthotics/prosthetics; physiotherapy; podiatry; psychology; social work; and speech pathology.

The following tables are provided:

- Number of allied health professionals by state and territory: major city and 'other' regions;
- Number of allied health professionals by ASGC-remoteness;
- Number of allied health professionals per 10,000 population by ASGC remoteness;
- Age distribution (%) of allied health professions: major city and 'other' regions; and
- Distribution of allied health professionals by sex: major city and 'other' regions.

SARRAH has classified the data using the ASGC of remoteness. This classification is summarised in appendix F.

Table 23 shows the distribution of allied health professionals by major city and 'other' areas ('other' includes 'inner regional', 'outer regional', 'remote', and 'very remote'). The data shows that of the 'allied health' workforces examined, 76% were based within a 'major city' area. There are variations across states and territories.

**Table 23: Number of allied health professionals by state and territory: major city and 'other' <sup>(a)</sup> regions**

State/Territory	Number of allied health professionals total	Number of allied health professionals major city	Number of allied health professionals 'other' <sup>(a)</sup> (%)
NSW	16,869	13,302	3,567 (21)
Victoria	14,223	11,450	2,773 (19)
Queensland	8,404	5,573	2,831 (33.7)
South Aust.	4,579	3,874	705 (15.5)
West. Aust.	5,592	4,610	982 (17.5)
Tasmania	1,193	0	1,193 (100)
North. Terr.	443	0	443 (100)
ACT	1024	1021	N/A
<b>Total</b>	<b>52,327</b>	<b>39,830 (76)</b>	<b>12,497 (24)</b>

Notes: 'Other' regions includes 'inner regional', 'outer regional', 'remote' and 'very remote'.

There is no area classified as 'major city' in Tasmania or Northern Territory under the ASGC-remoteness

Source: SARRAH/NRRAHAS, National Allied Health Workforce Report, 2004 (revised by the National Health Workforce Secretariat)

Table 24 shows the distribution of allied health professionals by ASGC-remoteness. Variations are evident across occupations.

**Table 24: Number of allied health professionals by ASGC-remoteness**

Occupation	Major city	Inner regional	Outer regional	Remote	Very remote	Total	Major city (%)
Audiology	639	127	25	6	0	797	80.2
Dietetics	1,508	302	153	21	12	1,996	75.6
Hospital pharmacy	1,367	241	96	6	3	1,713	79.8
Medical imaging	6,321	1,409	507	69	16	8,322	76.0
Occupational therapy	3,989	900	374	47	29	5,339	74.7
Orthoptics	382	46	6	0	0	434	88.0
Orthotics	288	56	12	0	0	356	80.9
Physiotherapy	7,679	1,693	720	125	32	10,249	74.9
Podiatry	1,323	305	107	15	0	1,750	75.6
Psychology	7,406	1,342	489	64	17	9,318	79.5
Social work	6,823	1,499	674	86	26	9,108	74.9
Speech pathology	2,166	553	233	42	12	3,006	72.1
<b>Total</b>	<b>39,891</b>	<b>8,473</b>	<b>3,396</b>	<b>481</b>	<b>147</b>	<b>52,388</b>	<b>76.1</b>

Source: SARRAH/NRRAHAS, National Allied Health Workforce Report, 2004 (revised by the National Health Workforce Secretariat)

Table 25 shows the number of allied health professionals per 10,000 head of population and ASGC-remoteness in 2001.

**Table 25: Number of allied health professionals per 10,000 population by ASGC-remoteness**

State/Territory	Total	Major City	Inner Regional	Outer Regional	Remote	Very Remote
Audiology	0.42	0.51	0.33	0.12	0.18	0.00
Dietetics	1.05	1.21	0.78	0.76	0.61	0.59
Hospital pharmacy	0.90	1.09	0.62	0.48	0.18	0.15
Medical Imaging	4.39	5.05	3.62	2.52	2.02	0.78
Occupational therapy	2.82	3.19	2.31	1.86	1.37	1.42
Orthoptics	0.23	0.31	0.12	0.03	0.00	0.00
Orthotics/prosthetics	0.19	0.23	0.14	0.06	0.00	0.00
Physiotherapy	5.41	6.14	4.35	3.58	3.65	1.57
Podiatry	0.92	1.06	0.78	0.53	0.44	0.00
Psychology	4.91	5.92	3.44	2.43	1.87	0.83
Social work	4.80	5.45	3.85	3.36	2.51	1.27
Speech pathology	1.59	1.73	1.42	1.16	1.23	0.59
<b>Average</b>	<b>2.30</b>	<b>2.66</b>	<b>1.81</b>	<b>1.41</b>	<b>1.17</b>	<b>0.60</b>

Source: SARRAH/NRRAHAS, National Allied Health Workforce Report, 2004 (revised by the National Health Workforce Secretariat)

Table 26 shows the distribution of allied health professionals by sex by 'major city' and 'other' areas ('other' includes 'inner regional', 'outer regional', 'remote', and 'very remote').

**Table 26: Distribution of allied health professionals by sex: major city and 'other' regions**

Occupation	Male				Female			
	Capital city	Other <sup>(a)</sup>	Total	Other (%) <sup>(a)</sup>	Capital city	Other <sup>(a)</sup>	Total	Other <sup>(a)</sup> (%)
Audiology	136	46	182	25.3	503	112	615	18.2
Dietetics	129	51	180	28.3	1,379	437	1,816	24.1
Hospital pharmacy	400	145	545	26.6	967	201	1,168	17.2
Medical imaging	1,896	664	2,560	25.9	4,425	1,337	5,762	23.2
Occupational therapy	286	81	367	22.1	3,703	1,269	4,972	25.5
Orthoptics	53	9	62	14.5	329	43	372	11.6
Orthotics	229	59	288	20.5	59	9	68	13.2
Physiotherapy	2,143	626	2,769	22.6	5,536	1,947	7,483	26.0
Podiatry	538	144	682	21.1	785	283	1,068	26.5
Psychology	1,983	599	2,582	23.2	5,423	1,313	6,736	19.5
Social work	1,229	473	1,702	27.8	5,594	1,812	7,406	24.5
Speech pathology	70	30	100	30.0	2,096	810	2,906	27.9
<b>Total</b>	<b>9,092</b>	<b>2,927</b>	<b>12,019</b>	<b>24.4</b>	<b>30,799</b>	<b>9,573</b>	<b>40,372</b>	<b>23.7</b>

Notes: (a) Includes ASGC-remoteness categories 'inner regional', 'outer regional', 'remote' and 'very remote'.

Source: SARRAH/NRRAHAS, National Allied Health Workforce Report, 2004 (revised by the National Health Workforce Secretariat)

Table 27 shows the age distribution of allied health professionals by 'major city' and 'other' areas ('other' includes 'inner regional', 'outer regional', 'remote', and 'very remote').

**Table 27: Age distribution (%) of allied health professions: major city and 'other' regions**

<b>Occupation</b>	<b>Under 35 years</b>	<b>35-44 years</b>	<b>45-54 years</b>	<b>55 years and above</b>
<i>MAJOR CITY</i>				
Audiology	47.7	24.9	21.0	6.4
Dietetics	49.1	24.9	20.0	6
Hospital pharmacy	38.0	23.6	22.7	15.7
Medical imaging	45.2	28.0	20.4	6.3
Occupational therapy	57.1	23.6	14.6	4.7
Orthoptics	62.0	21.2	11.5	5.2
Orthotics	38.5	30.9	18.1	12.5
Physiotherapy	44.3	29.3	18.5	7.9
Podiatry	50.9	27.2	13.6	8.2
Psychology	31.6	24.9	29.4	14.2
Social work	33.6	27.3	28.4	10.7
Speech pathology	53.7	27.9	14.1	4.2
<b>Total</b>	<b>42.4</b>	<b>26.7</b>	<b>21.9</b>	<b>9.0</b>
<i>OTHER<sup>(a)</sup></i>				
Audiology	53.8	25.9	18.4	1.9
Dietetics	48.0	28.3	16.2	7.6
Hospital pharmacy	25.4	24.3	26.3	24.0
Medical imaging	37.9	30.7	24.0	7.3
Occupational therapy	48.6	30.1	17.0	4.3
Orthoptics	48.1	23.1	17.3	11.5
Orthotics	22.1	38.2	26.5	13.2
Physiotherapy	36.9	32.8	22.0	8.3
Podiatry	53.2	29.3	7.3	10.3
Psychology	27.0	23.5	33.9	15.5
Social work	26.0	28.9	34.0	11.1
Speech pathology	56.0	26.9	12.0	5.1
<b>Total</b>	<b>37.0</b>	<b>29.0</b>	<b>24.5</b>	<b>9.6</b>

Notes: (a) Includes ASGC-remoteness categories 'inner regional', 'outer regional', 'remote' and 'very remote'.

Source: SARRAH/NRRHAS, National Allied Health Workforce Report, 2004 (revised by the National Health Workforce Secretariat)

## Hospital data

Table 28 shows the number of separations for the procedure block 1916 (generalised allied health interventions) for admitted patients in public and private hospitals by state and territory in 2002-2003. This information has been sourced from the AIHW national hospital statistics database, and is one of the few data sources on allied health service provision.

**Table 28: Separations<sup>(a)</sup>, ICD-10-AM procedure block 1916, by public and private hospitals, states and territories, 2002-2003**

Procedure block 1916	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Public</b>									
Gen. Allied health interventions	258,671	199,810	112,592	68,341	59,466	13,374	11,769	5,912	729,935
<b>Private</b>									
Gen. Allied health interventions	91,091	79,367	63,873	21,963	31,946	n.p.	n.p.	n.p.	298,967
<b>Total</b>	<b>349,762</b>	<b>279,177</b>	<b>176,465</b>	<b>90,304</b>	<b>91,412</b>	<b>13,374</b>	<b>11,769</b>	<b>5,912</b>	<b>1,028,902</b>
Per 100,000 population	5,231	5,677	4,648	4,626	5,985	2,803	3,645	2,980	5,176

Notes: (a) Separations for which the care type was reported as Newborn with no qualified days, and records for Hospital boarders and Posthumous organ procurement have been excluded. Separations per 100,000 excludes private hospital data for Tasmania, Australian Capital Territory and Northern Territory; n.p. not published; total for Australia in 2003 includes other territories comprising Jervis Bay territory, Christmas Island and the Cocos (Keeling) Islands

Source: AIHW, Australian Hospital Statistics 2002-2003; ABS category number 3101.0

Table 29 shows the number of procedures for the procedure block 1916 (generalised allied health interventions) for admitted patients in public and private hospitals by state and territory in 2002-2003.

**Table 29: Procedures<sup>(a)</sup>, ICD-10-AM procedure block 1916, by public and private hospitals, states and territories, 2002-2003**

Procedure block 1916	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Public</b>									
Gen. Allied health interventions	470,475	423,052	184,720	114,019	94,677	23,695	21,673	9,515	1,332,311
<b>Private</b>									
Gen. Allied health interventions	136,384	116,054	82,074	35,688	39,882	n.p.	n.p.	n.p.	423,986
<b>Total</b>	<b>606,859</b>	<b>539,106</b>	<b>266,794</b>	<b>149,707</b>	<b>134,559</b>	<b>23,695</b>	<b>21,673</b>	<b>9,515</b>	<b>1,756,297</b>
Per 100,000 population	9,076	10,963	7,027	7,668	8,810	4,966	6,712	4,796	8,835

Notes: (a) Separations for which the care type was reported as Newborn with no qualified days, and records for Hospital boarders and Posthumous organ procurement have been excluded. Procedures per 100,000 excludes private hospital data for Tasmania, Australian Capital Territory and Northern Territory; n.p. not published; total for Australia in 2003 includes other territories comprising Jervis Bay territory, Christmas Island and the Cocos (Keeling) Islands

Source: AIHW, Australian Hospital Statistics 2002-2003; ABS category number 3101.0

Table 30 provides the number of separations for the procedure block 1916 (generalised allied health interventions) by sex and major age group for public and private hospitals in 2002-2003. The data shows that the 63.2% of total separations for generalised allied health interventions in

all hospitals were for persons aged 55 years and above. By contrast, persons aged 55 years and above represented 23.0% of the population.

**Table 30: Separations <sup>(a)</sup> by sex, ICD-10-AM procedure block 1916, by age group, all hospitals, 2002-2003**

Age (years)	Male	Female	Persons	% of total separations	% of total population
< 4 years	15,800	13,005	28,805	2.8	6.4
5-14 years	11,544	9,083	20,627	2.0	13.7
15-24 years	24,493	32,492	56,985	5.5	13.8
25-34 years	29,976	65,460	95,436	9.3	14.5
35-44 years	35,450	47,833	83,283	8.1	15.0
45-54 years	46,270	47,101	93,371	9.1	13.6
55-64 years	65,730	58,565	124,295	12.1	10.2
65-74 years	89,516	83,705	173,221	16.8	6.8
75-84 years	103,714	129,453	233,167	22.7	4.5
85 years +	39,796	79,882	119,678	11.6	1.5
<b>Total <sup>(b)</sup></b>	<b>462,295</b>	<b>566,583</b>	<b>1,028,868</b>	<b>100.0</b>	<b>100.0</b>

Notes (a) separations for which the care type was reported as Newborn with no qualified days, and records for hospital borders and posthumous organ procurement have been excluded

(b) Includes separations for which age was not reported.

Source: AIHW, Australian Hospital Statistics 2002-2003; ABS Australian Demographic Statistics category number 3222.0

## CHAPTER 4. WORKFORCE PLANNING FOR THE ALLIED HEALTH WORKFORCE

There has been little workforce planning on the allied health workforce done at the jurisdictional level, and no workforce planning conducted at the national level. Stakeholders identified a number of factors that are likely to impact on the demand for allied health services, and necessitate the need for workforce planning to be conducted for this sector of the workforce:

- a growing and ageing population;
- increasing levels of disease incidence (for example diabetes);
- increasing focus on preventative, rehabilitation medicine and provision of comprehensive primary health care; and
- increasing consumer knowledge of allied health interventions that could result in service substitution across professional groups (e.g. from doctors to allied health professionals).

A project carried out by the Jurisdictional Workforce Planners Group in 2003 under the auspice of the Australian Health Workforce Officials' Committee (AHWOC) identified jurisdictional investment in the health workforce by broad professional grouping and the nature of the work being conducted (AHWOC 2003). This work is summarised below to highlight the types of health workforce policy and planning being undertaken by jurisdictions. It is recognised that this is a summary as at December 2003 and that since then some of the programs may have changed or ceased and new programs been added.

In assessing jurisdictional investment in the health workforce, jurisdictions were asked to describe the aim and objectives of each project, and to answer questions that might be analysed by a particular theme across all jurisdictions. The questions centred on:

- the type of project — workforce planning, recruitment, retention, re-entry and retraining, up-skilling and training or other type of project;
- target group — what, if any, group the particular project targeted;
- reason for the initiative — whether the project was based on a particular workforce shortage or a recent report; and
- if the initiative was a workforce planning project, what methodology was used.

To promote consistency in responses, the survey offered simple definitions of most terms, and the respondents could select multiple categories. For example, in identifying the type of project, respondents could select both recruitment and retention. Project responses for each occupational group provide a breakdown of:

- reasons behind the projects;
- type of project;
- project target groups; and
- methodology.

Health workforce initiatives have traditionally focused on particular occupational groups. Table 31 shows the project distribution by occupational group. Stakeholders noted the apparent disparity in the number of projects being conducted on the 'allied health' workforce compared with the medical and nursing workforces. At a jurisdictional level, it would appear that there was parity across occupational groups in only Queensland and Victoria.

**Table 31: Project distribution by occupational group**

Description	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust	National Total
Nursing	2	29	3	7	4	6	14	13	6	84
Medical	0	22	0	9	5	1	23	5	25	90
Dental	0	3	0	0	3	0	3	0	0	9
Allied health	1	1	1	10	0	1	17	2	0	33
Vocational providers	2	21	0	3	24	1	10	1	31	93

Source: Jurisdictional workforce planners 2003

Table 32 shows the type of projects conducted at the jurisdictional level related to the 'allied health' workforce. The survey responses reported 33 allied health projects, conducted by six jurisdictions.

**Table 32: Types of projects for the allied health profession**

Description	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust	Total
Workforce planning	0	0	1	0	0	1	12	1	0	15
Recruitment	0	1	1	4	0	1	3	1	0	11
Retention	0	0	1	8	0	1	4	2	0	16
Re-entry/Retraining	0	0	1	0	0	0	1	0	0	2
Up skilling / Training	0	0	0	4	0	1	4	0	0	9
Other	0	0	0	4	0	0	4	0	0	8
<b>Total of projects</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>17</b>	<b>2</b>	<b>0</b>	<b>33</b>

Source: Jurisdictional workforce planners 2003

### Overview of allied health projects

Key themes of responses included:

- most projects relate to multiple allied health professions, for example, all allied health professions in an agency (22);
- only four relate to specific allied health professions or groups of professions (two to physiotherapists, one to speech pathologists and one to allied health professions working in mental health);
- seventeen projects have a retention component, ranging from explicit recruitment and retention projects (2) to projects with a retention component (14), such as a project to introduce flexible work practices, or recognise and encourage advanced clinical practice;
- nine projects have a rural and remote focus, including three undergraduate and postgraduate scholarship projects, an internship project, a project to prepare staff to work in a remote area, a continuing professional development project and two mentoring schemes; and
- at least seven projects include preparation for, or support in practice, ranging from student induction (1), to graduate programs (1), to professional development including preparation to work in a remote area (5).

### Reason for initiative

Sixteen projects were developed for an identified workforce shortage. Fifty per cent of the projects' aims and objectives focused on assisting students through scholarships or mentoring programs. Twenty-five per cent developed key recommendations and future work plans. The remaining twenty-five per cent focused on communication and promotion of the allied health sector.

Six projects were identified as a key part of the rural workforce. These also focused on assisting students in rural and remote areas through mentoring and internship programs and scholarships. Eight projects were for professional development. The main focus of all projects was on improving clinical career paths and creating mechanisms for allied health staff to improve and update skills. Three projects were based on work practice change, in the areas of flexible work hours and reducing the administrative burden on staff.

As part of the project identifying jurisdictional investment in the health workforce, the Jurisdictional Workforce Planners Group also gathered jurisdictional priorities for allied health profession data collections. Aggregate rankings were calculated according to the number of 'high' scores awarded to each profession. High scores were given when a state or territory answered 'yes; 1; 2; 3; continue' as a data collection priority. In addition to providing feedback on the list of "core" health professions, many states suggested that additional professions and support roles be included in data collection discussions. Table 33 lists the jurisdictions suggestions for prioritising allied health data collections.

**Table 33: Jurisdictional priorities for allied health data collections**

<b>Profession</b>	<b>National Ranking</b>	<b>States Registered</b>	<b>Collection frequency</b>
Pharmacists	1	All	Annual
Dentists	2	All	2 yearly
Physiotherapist	2	All	Annual
Radiation Therapists	2	VIC, QLD	Annual
Medical Imaging Technicians	3	VIC, QLD	2 yearly
Clinical Psychologist	4	All	Annual
Nuclear Medicine Technicians	4	VIC, QLD	2 yearly
Occupational Therapist	4	QLD, SA, WA, NT	Annual
Podiatrist	4	All (except NT)	Annual
Speech Pathologist	5	QLD	Annual
Audiologist	6		Annual
Dietitian	6		Annual
Prosthetist / Orthotist	6		Annual
Social Workers	6		Annual
Chiropractor	7	All	5 yearly
Optometrist	7	All	5 yearly
Orthoptist	7		5 yearly
Osteopath	7	All	5 yearly

Source: Jurisdictional workforce planners 2003



**Podiatrist:** a national assessment was made for Podiatrist and separate state/territory ratings are not available. Shortages are considered to be widespread, and the occupation is considered to be in national shortage.

**Speech Pathologist:** Victoria: Shortages of speech pathologists are particularly evident in paediatrics, education, disability services, locum positions and regional and outer metropolitan areas.

**Diagnostic Radiographer:** NSW: Shortages especially for Diagnostic Radiographers with experience in MRT, mammography and CT.

The information provided in this chapter, most noticeably the data relating to jurisdictional investment in the health workforce, provides a broad overview of jurisdictional initiatives for the allied health workforce. The outcomes of the initiatives have not been reported in this document, however such an evaluation may be a useful approach to the development of evidence based planning and development for the allied health workforce.

## CHAPTER 5. ALLIED HEALTH WORKFORCE ISSUES – SUMMARY OF FINDINGS

Detailed below is a summary of the key issues that emerged in preparing this report. Findings have been grouped into broad categories. Issues for possible further investigation have also been identified. Future action would depend on the outcomes of further work aimed at determining workforce requirements. Without this, it may be difficult to assess priorities for future action. At the national level, any work will be limited by the funding available through the AHMAC health workforce work program and the priorities within that program. It is likely that only one or two priority allied health areas could proceed in any year.

### Workforce

- The allied health workforce consists of a broad range of professions. The professions that are considered part of the allied health workforce vary according to a variety of issues identified in chapter 1. A number of stakeholders held the view that reaching agreement on what professions constitute the allied health workforce is an important prerequisite to any planning for the 'allied health workforce'.
- ABS 2001 census data shows that a number of professions within the allied health workforce are experiencing supply growth. In 2001, the number of persons employed in occupations grouped under the category 'allied health workers' was 39,454, an increase of 26.6% from 1996 (based on grouping in the publication 'Health and community services labour force, 2001').
- ABS census data shows that in general, the professions grouped under the category 'allied health workers' are relatively young and predominantly female. There are some exceptions to this general profile, most noticeably clinical psychologists, orthotists, and optometrists (Health and community services labour force, 2001).
- Stakeholders suggested that the potential pool of qualified allied health professionals is much larger than the number currently employed within the discipline in which they are qualified. Stakeholders identified a number of possible explanations for this apparent drift away from practising within an allied health profession, including a lack of clinical pathways and little or no recognition of clinical skills and postgraduate education.
- Lack of Indigenous participation in the 'allied health' workforce is of concern. It is noted that a number of jurisdictional programs have been implemented, particularly in the Northern Territory and Queensland, to create pathways for Indigenous persons into the allied health professional workforce.
- There has been comparatively little allied health workforce planning conducted, and none at the national level.
- Jurisdictional stakeholders identified limited, or in some cases, no suitable allied health positions established in organisations that are appropriate for new graduates, as well as the absence of support structures for new graduates, as a contributing factor to employment difficulties.

### Possible Further investigation

- Further examination of issues around defining/classifying the term 'allied health' within the Australian context (stakeholders suggested a variety of approaches – including the identification of, and agreement on, core professions and associated national data collections).
- Examination of the career choices of allied health practitioners, which could include why allied health students are not completing their education. This work would be similar to the medical careers project undertaken by AMWAC.
- The workforce prioritised for more detailed workforce planning was podiatry. This was based on jurisdictional and stakeholder feedback and the DEWR listing of workforces in shortage. Any workforce planning in the allied health area needs to be cognisant of the existing capacity to collect data for specific professions. In this regard, at present this would seem to limit any detailed work to the podiatry, physiotherapy, psychology and occupational therapy workforces, given that these are the only workforces where detailed labour force information is collected through the AIHW labour force survey processes.
- Examination of 'leakage' from the allied health professions, including an assessment of employment issues, workforce dynamics, reasons for cessation of practice, how long professionals remain in the workforce, an evaluation of recruitment and retention processes, re-entry, or 'attract back to practice schemes'. This work could also examine options for extending workforce participation for the allied health workforce, although any work in this area would need to link in with the generic projects already underway through the AHMAC health workforce work program.
- Examination of ways to increase Indigenous participation in the allied health workforce. A starting point could be an overview of measures currently being undertaken within jurisdictions to increase the number of Indigenous persons in the allied health workforce. It should be noted that this issue has already been identified within the Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework and ATSIHWWG are co-ordinating implementation of the Framework.
- Examination of 'allied health' service delivery and scope of practice (stakeholders suggested looking at new roles for allied health professionals, the idea of 'generic allied health workers', and the variation between metropolitan and regional/rural areas). It may also be that the best initial approach to national level allied health workforce planning is to develop a project/scoping study that investigates the requirements for allied health services. Linked to this could be work on the provision of sustainable allied health services and viable models for the provision of these services.
- Investigation of mentoring and other support programs in rural and remote communities to better support allied health providers in these areas.

### **Data collection**

- There are a variety of fragmented data sources used to describe the allied health workforce and these data sources vary in their usefulness, completeness and timeliness.
- The majority of existing data sets available for allied health professions focus on workforce supply. There appears to be a lack of robust data available on the projected demand for allied health services. This needs to be addressed to better inform workforce planning.
- There is currently a lack of clarity around timeframes for collection of data of existing AIHW labour force surveys and the establishment of any new surveys.
- The capacity to collect data on allied health professions varies across professions and jurisdictions. There are also issues around the cost of such exercises and the capacity to resource the collections and undertake them on a regular and timely basis given the large number of health occupations that could be considered to comprise the allied health sector.

### Suggestions for future actions- data collection

- AHWAC re-examine the frequency/timing and coverage of existing national allied health workforce data collections and identify mechanisms for more comprehensive data collections across allied health groups. The registration status of a number of the health professions may enable a broadening of the national health workforce data collections with relatively smooth transition. This recognised, it will also be important to consider long term options for data collection on professions that do not have clear mechanisms in place such as registration authorities. Issues around minimum data items and standard terminology for the allied health workforce would be addressed as part of the AHWOC national minimum data collection project.
- Better data sets be developed that inform workforce requirements and workforce adequacy of the Australian allied health workforce.
- Allied health professional associations and allied health data collections agencies be encouraged to collect data that is compatible with the outcomes of the AHWOC national minimum data set project.

### **Education and training**

- Ensure the connection between the health and education sectors such that future health workforce requirements for the health sector are reflected in and met by the education sectors allocation of funding and placements.
- Workforce supply may be affected for states and territories that do not offer undergraduate university courses. This has two implications; firstly it may deflect potential students away from health courses due to the inaccessibility of the course within the jurisdiction; and secondly, stakeholders held the view that health professionals are more likely to practise where they train, which may result in 'leakage' from that jurisdiction. The states and territories that seem most limited in the range of health courses on offer were the Northern Territory and Tasmania.

- Pressure on clinical training placements - stakeholders noted that there was a lack of undergraduate clinical education places. Factors causing pressure on clinical training placements, included reliance on the goodwill of staff under pressure, lack of physical space to accommodate students, availability of funding, and not having full staffing within a department to enable students to be taken on.

#### Suggestions for future action – education and training

- Improve the coordination between the government and university sectors regarding university intake levels, with the health sector providing direction to universities on the areas of workforce shortage and recommended intake levels. Work between AHMAC and AESOC can be used to continue to progress this issue in the short term.
- Consider innovative models of education, for example distance learning, in order to address the issues associated with the training and distribution of allied health professionals (for example consolidated courses across disciplines, multidisciplinary training venues, distance learning).
- Examine options to reduce the pressure on clinical placements for the allied health professions. This could include, for example, identifying structures to support the delivery of clinical education, particularly in rural, remote and indigenous communities, facilitate the use of private health services as clinical training sites by reducing barriers to clinical education in such settings, and a re-examination of the requirements for clinical education from accrediting bodies and models of clinical education (for example increased flexibility, outcomes required and recognition of existing skills/current competencies). Any work would need to link in with the national work already underway in relation to clinical placements.
- The training and education of allied health professionals should not be conceptualised solely in the tertiary sector. Consideration should be given to the role of the vocational education and training (VET) sector to alleviate pressure on allied health education and training.

#### **National structures**

- There has been a continuing drive for the establishment of national allied health structures to enable more effective allied health participation in national workforce processes.
- Stakeholders expressed concern that representation of allied health professions at higher management levels and on broader workforce matters is inconsistent.

#### Suggestions for future actions – national structures

- That the newly established National Allied Health Advisory Committee be used to improve collaboration and networking across states and territories and assist in providing strategic advice on allied health workforce and clinical practice issues.
- Jurisdictions ensure allied health associations are engaged in health service and health workforce planning processes as appropriate.

## **APPENDIX A - THE AUSTRALIAN ALLIED HEALTH WORKFORCE**

Examples of stakeholder definitions of the allied health workforce, and or groupings of occupations under the term “allied health” are provided below.

### **Australasian Allied Health Classification System Project**

Ten allied health professions were involved in the process of developing a common set of activity descriptors which became the generic allied health activity classification system. These were audiology, dietetics, occupational therapy, orthoptics, physiotherapy, podiatry, pharmacy, prosthetics and orthotics, psychology, social work and speech pathology.

### **National Allied Health Casemix Committee (NAHCC)**

The NAHCC was established in 1993 to provide a collective “casemix voice” for Australia's allied health professionals. It has representation from allied health professional associations and each of the state and territory Allied Health Casemix Committees. Professions covered are audiology, exercise physiology, hospital pharmacy, medical illustration/photography, music therapy, nutrition and dietetics, occupational therapy, orthotics, orthoptics, physiotherapy, podiatry, psychology, social work, and speech pathology.

### **New South Wales (professions included within the mandate of the Principal Advisor, Allied Health) (identified in SARRAH investigation)**

New South Wales Department of Health appointed a Principal Adviser, Allied Health in late 2002. The Principal Advisor has responsibility for the following range of mainstream allied health services: audiology, dietetics, occupational therapy, orthoptics, physiotherapy, podiatry, psychology, radiation therapy, radiography, social work, hospital pharmacy and speech pathology.

While complementary (or “alternative”) therapies such as ingestive delivery methods, manual delivery methods, and mental/emotional/spiritual methods are not part of the Principal Adviser's remit, s/he will be required to develop and maintain a broad understanding of their stage of development and level of utilisation within the community. Further, the range of professions included in the Allied Health grouping may be expected to expand in the future with developments such as new technologies, reclassification or registration for some groups of practitioners.

### **Queensland Health Principal Allied Health Advisor (Directors General Allied Health Recruitment and Retention Taskforce) (identified in SARRAH investigation)**

This taskforce was established to facilitate the development of a strategic Allied Health Workforce Plan for the Queensland Department of Health. The discipline included in the study only included the allied health professional groups employed by Queensland Health. These were: audiology; nutrition and dietetics; occupational therapy; orthoptics; podiatry; physiotherapy; prosthetics and orthotics; psychology; social work; and speech pathology.

### **The United States Association of Schools of Allied Health Professionals**

The Association of Schools of Allied Health Professionals (ASAHP) defines allied health precisely as follows:

“Allied health professionals are involved with the delivery of health or related services pertaining to the identification, evaluation and prevention of diseases and disorders; dietary and nutrition services; rehabilitation and health systems management, among others”.

Positions included within the allied health field include those listed below; however some of the more common ones include dental hygienists, diagnostic medical sonographers, dieticians, medical technologists, occupational therapists, physical therapists, radiographers, respiratory therapists, and speech language pathologists.

Anaesthesiology assistants	Medical illustrators
Art therapists	Music therapists
Athletic trainers	Nuclear medicine technologists
Audiologist and speech language pathologists	Occupational therapists
Blindness and visual impairment professionals	Ophthalmic dispensing opticians
Blood bank technology specialists	Ophthalmic laboratory technicians
Cardiovascular technologists	Ophthalmic medical technicians or technologists
Clinical laboratory technologists	Orthoptists
Counselling related professionals	Orthotists and prosthetists
Cytotechnologists	Perfusionists
Dental hygienists	Pharmacy technicians
Diagnostic medical sonographers	Physical therapists
Dieticians	Physician assistants
Electroneurodiagnostic technologists	Radiologic technologists
Emergency medical technicians or paramedics	Rehabilitation counsellors
Genetic counsellors	Respiratory therapists
Health information management professionals	Surgical technologists
Kinesiotherapists	Therapeutic recreation specialists
Medical assistants	

### **The SARRAH process used to define the allied health workforce**

#### State and Territory based allied health professional taskforce / advisory groups

Investigation of which health professions were included in state and territory agencies providing advice or investigating allied health workforce issues were sought. The specific agencies were:

- (a) NSW Principal Allied Health Advisor
- (b) NSW Allied Health Alliance
- (c) Queensland Allied Health Recruitment and Retention Taskforce (Queensland Health)
- (d) Victorian Allied Health Professionals Association
- (e) Allied Health Professional Workforce Planning Group (Tasmanian Department of Health and Human Services)
- (f) Allied Health Workforce Data Collection Project (Northern Territory Health Department)
- (g) WA Rural and Remote Allied Health Workforce (WA Country Services, Department of Health)

(h) Rural Health Training Unit, South Australia (now the Rural Development Unit, Department of Human Services)

**Table A1: State and Territory based allied health professional taskforce/advisory groups**

<b>Profession</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
Audiology	X	X	X	X	X		X	X
Chiropractors						X		
Clinical psychology	X	X	X	X	X	X	X	X
Community pharmacy			X	X			X	
Dental therapists							X	X
Dentists				X				
Diagnostic radiography	X	X		X				
Dietitics and nutrition	X	X	X	X	X	X	X	X
Environmental officer								X
Health information management							X	
Health promotion officer (specific degree)								X
Hospital librarian							X	
Hospital pharmacy	X	X						
Leisure therapist			X					
Medical illustrator / photographer							X	
Medical laboratory science							X	
Music therapist			X					
Nuclear medicine technology							X	
Occupational therapists	X	X	X	X	X	X	X	X
Optometrists	X					X		
Orthoptics	X	X	X		X		X	
Orthotics and prosthetics	X							
Physiotherapy	X	X	X	X	X	X	X	X
Podiatry	X	X	X	X	X	X	X	X
Policy officer								X
Radiation therapy	X						X	
Social work	X	X	X	X	X	X	X	X
Speech pathology	X	X	X	X	X	X	X	X
Welfare officer (social)								X

Source: SARRAH 2004

### Allied Health Associations

Table A2 is a collation of the health professionals who are included in definitions used by national organisations / groups who have a particular interest in representing allied health professions and services. It includes definitions from:

1. Services for Australian Rural and Remote Allied Health
2. Health Professions Council of Australia (the Australian Rural and Remote Allied Health Taskforce)
3. National Allied Health Case mix Committee
4. Australasian Allied Health Classification System Project

**Table A2: Health professional inclusions from bodies representing the allied health professions**

Profession	ARRAHT of			
	SARRAH	HPCA	NAHCC	AAHCS
Audiology	X	X	X	X
Clinical psychology	X	X	X	X
Community pharmacy	X			
Diagnostic radiography	X	X		
Dietitics and nutrition	X	X	X	X
Exercise pharmacy			X	
Hospital pharmacy	X	X	X	X
Medical imaging technology	X	X		
Music therapist			X	
Occupational therapists	X	X	X	X
Optometrists	X			
Orthoptics	X	X	X	X
Orthotics and prosthetics	X	X	X	X
Physiotherapy	X	X	X	X
Podiatry	X	X	X	X
Radiation therapy	X	X		
Social work	X	X	X	X
Speech pathology	X	X	X	X

Source: SARRAH 2004

### Registration/Licensing Requirements

The requirements for the health professions to have registration and/or a license to practise (state/territory based) were investigated.

**Table A3: Registration / licensing requirements for allied health professions**

<b>Profession</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>NT</b>	<b>ACT</b>
Aboriginal health workers							X	
Audiology								
Chinese medicine		X						
Chiropractors	X	X	X	X	X	X	X	X
Clinical psychology	X	X	X	X	X	X	X	X
Community pharmacy	X	X	X	X	X	X	X	X
Dental prosthetics		X	X	X	X	X		X
Dental technicians	X		X					X
Dental therapists/hygienist		X	X			X		
Dentists	X	X	X	X	X	X	X	X
Diagnostic radiography/sonography	X	X	X	X	X	X	X	X
Dietetics								
Hospital pharmacy	X	X	X	X	X	X	X	X
Nuclear medicine technology	X	X	X	X	X	X	X	X
Nursing	X	X	X	X	X	X	X	X
Occupational therapists			X	X	X		X	
Optical dispensers	X							
Optometrists	X	X	X	X	X	X	X	X
Orthoptics								
Orthotics and prosthetics								
Osteopaths	X	X	X	X	X	X	X	X
Physiotherapy	X	X	X	X	X	X	X	X
Podiatry	X	X	X	X	X	X		X
Radiation therapy	X	X	X	X	X	X	X	X
Social work								
Speech pathology			X					

Notes: For Occupational Therapists, Social Workers and Speech Pathologists, professionals are required to obtain specific qualification to be members of their respective Professional Associations in order to practice in some or all states.

Source: SARRAH 2004

Purchasers of health services/professionals (government and private) and those who otherwise have an interest in categorising the health professions

Table A4 is a collation of organisations that purchase the services provided by health professionals other than doctors. It also includes definitions from organisations concerned with classifying health professionals. Lists of health profession inclusions were sort from a range of different purchasers of allied health services,

- (a) Victorian public hospital employment (classified as allied health)
- (b) Tasmanian government allied health careers
- (c) NSW allied health careers
- (d) Queensland health professional careers
- (e) Commonwealth funded programs – More Allied Health Services Program (MAHS)
- (f) Commonwealth funded programs – Medicare
- (g) Commonwealth funded programs – Regional Health Services Program (RHS)
- (h) Commonwealth funded programs – Hearing Australia
- (i) Department of Veterans Affairs
- (j) Example of health insurance fund – Medibank Private
- (k) Industrial awards – WA hospital salaried officers (HSOA)
- (l) Industrial awards – Tasmanian Professional Employees
- (m) Industrial award – New South Wales Health and Research Employees Association
- (n) Australian Taxation Office – “Other health services”
- (o) Australian Standard Classification of Occupations

**Table A4: Purchasers of health services / professionals inclusions**

<b>Profession</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>O</b>
Aboriginal health workers					X	X								X	
Acupuncture										X				X	
Audiology	X				X			X	X	X	X	X	X	X	X
Biomedical engineering	X										X	X			
Chiropractors						X			X	X				X	X
Clinical psychology	X	X	X		X	X	X		X	X	X	X	X	X	
Community pharmacy											X			X	X
Dental prosthetics										X					
Dental technicians												X			
Dental therapist		X										X			
Dentists						X			X	X		X		X	X
Diagnostic radiography	X	X			X						X				
Dietitics and nutrition	X	X	X		X	X	X		X	X	X	X	X	X	X
Environmental officer												X			
Health information management	X														
Health promotion officer (specific degree)							X								
Herbalist														X	
Hospital librarian											X	X	X		
Hospital pharmacy	X	X	X								X	X		X	X
Medical illustration / photographer		X													
Medical imaging technology	X	X									X				X

Medical laboratory science	X							X	X				
Medical physics	X							X					
Medical records										X	X		
Mental health worker			X		X								
Music therapist										X			
Naturopath								X				X	X
Nuclear medicine technology	X	X							X				
Nurse counsellor					X					X	X		
Nursing				X	X	X							X
Occupational therapists	X	X	X		X	X	X	X	X	X	X	X	X
Optical dispensers										X			
Optometrists					X		X					X	X
Oral hygienist								X					
Orthoptics	X				X		X	X		X			X
Orthotics and prosthetics	X	X			X		X	X	X				X
Osteopaths					X		X	X				X	X
Paramedic													X
Physiotherapy	X	X	X		X	X	X	X	X	X	X	X	X
Podiatry	X	X	X		X	X	X	X	X	X		X	X
Radiation therapy	X	X								X			
Research or project officer									X	X	X		
Social work	X	X	X		X	X	X		X	X	X	X	X
Speech pathology	X	X	X		X	X	X	X	X	X	X	X	X
Welfare officer (social)			X							X	X		

Source: SARRAH 2004

Allied health support structures and scholarships available to health professional undergraduates and postgraduates

Table A5 shows the detailed results into the investigations of support structures and scholarships named as 'allied health' professional and available to both undergraduate and postgraduate health professionals. The investigated included:

- WA Country Allied Health Scholarship (undergraduate and postgraduate)
- NSW Rural Allied Health Scholarships (undergraduate)
- WA Country Allied Health Student Placement Scheme
- NSW Rural Allied Health Clinical Placement Grant
- Tasmanian undergraduate allied health student placement support
- Rural Connect Program - Qld rural allied health mentoring Program
- Qld Professional Development Incentive Package
- Qld Health Professional Enhancement Program
- SA Student Supervision Training
- Mentor Link – Victoria
- Qld Rural Scholarships
- Support for Vic Rural Hospitals for new graduate employment
- Rural Health Scholarship Foundation for Victoria
- Australian Government Rural and Remote Health Professional Scholarship Scheme

**Table A5: Allied health support structures and scholarships inclusions**

<b>Profession</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>
Aboriginal health workers		X		X										X
Audiology	X				X	X	X	X	X					X
Chiropractors														X
Clinical psychology	X				X	X	X	X	X		X			X
Community pharmacy	X	X	X	X	X					X	X		X	X
Dentists											X		X	X
Diagnostic radiography		X		X	X	X	X	X	X					X
Dietitics and nutrition	X	X		X	X	X	X	X	X				X	X
Health promotion officer			X											X
Hospital pharmacy	X	X	X	X	X			X	X		X		X	X
Leisure therapist							X							
Medical imaging technology	X		X		X						X			X
Music therapist							X							X
Nursing			X											
Occupational therapists	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Optometrists					X									X
Orthoptics		X		X	X	X	X	X						X
Orthotics and prosthetics					X	X	X	X						X
Paramedics														X
Physiotherapy	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Podiatry	X	X		X	X	X	X	X		X	X		X	X
Rehabilitation counsellor														X
Social work	X	X	X	X	X	X	X	X	X		X			X
Speech pathology	X	X		X	X	X	X	X	X		X	X	X	X

Source: SARRAH 2004

## APPENDIX B – ABS/AIHW HEALTH AND COMMUNITY LABOUR FORCE, 2001

Table B1 shows the allied health professions that are grouped under the category ‘allied health’ workers within the joint ABS/AIHW publication ‘Health and community labour force, 2001’.

**Table B1: Allied health workers: ABS/ AIHW: Health and community labour force, 2001**

ASCO code	Occupational title	Description
2383–11	Occupational therapist	Assesses the function of people whose abilities and daily activities are impaired
2384–11	Optometrist	Performs eye examinations and vision tests to determine the presence of visual, ocular and other abnormalities, and prescribes lenses, other optical aids or therapy
2385–11	Physiotherapist	Assesses, treats and prevents disorders in human movement caused by injury or disease
2386–11	Speech pathologist	Assesses and treats people with communication disorders including speech, language, voice, fluency and literacy difficulties or people who have physical problems with eating or swallowing
2388–11	Podiatrist	Prevents, diagnoses and treats medical and surgical conditions of the feet, including those resulting from bone and joint disorders, muscular pathologies as well as neurological and circulatory diseases
2393–11	Dietitian	Assists individuals, groups and communities to attain, maintain and promote health through good diet and nutrition
2399–11	Audiologist	Provides diagnostic assessment and rehabilitation services related to human hearing defects
2399–13	Orthoptist	Diagnoses and manages eye movement disorders and associated sensory deficiencies
2399–15	Orthotist	Designs, builds, fits and repairs splints, braces, callipers and related appliances to restore functions or compensate for muscular or skeletal disabilities
2399–79	Health professional nec	This occupation group cover health professionals not elsewhere classified
2514–11	Clinical psychologist	Consults with individuals and groups, assesses psychological disorders and administers programs of treatment
6313–19	Therapy aide	Provides assistance to occupational, diversional or physiotherapists in therapy programs and care of their patients

Source: ABS/AIHW ‘Health and community services labour force, 2001’.

## **APPENDIX C – AUSTRALIAN DEPARTMENT OF EMPLOYMENT AND WORKPLACE RELATIONS**

The Australian Department of Employment and Workplace Relations (DEWR) is the Australian Government agency with prime portfolio responsibility for monitoring skill shortages. DEWR assesses skill shortages by a number of means including contact with employers, industry, employer and employee organisations and education and training providers. The prime focus of DEWR's agency approach is surveying employers who have recently advertised vacancies for selected skilled occupations.

In assessing skill shortages, this industry and employer intelligence is considered in conjunction with statistical information on demand and supply trends for the selected occupations. Skill shortage assessments cover Trades, Professionals and Information and Communication Technology (ICT) skills and occupations. The specific occupations and skills to be included in the annual skill shortage assessment program are determined through consultations with peak industry bodies, other key stakeholders and DEWR state offices. The program is conducted through the DEWR state offices.

There is considerable ambiguity about the term 'skill shortages' in industry and media discussions, and in developing guidelines for training, migration, labour market programs and regional skills analysis. The term 'skill shortages' is often a surrogate for more general recruitment difficulties, or skill gaps (deficiencies in the skills of existing workers). DEWR skill shortage monitoring and assessment focuses mainly on skill shortages defined as below:

*Skill shortages* exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.

Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment overall or in the occupation. An occupation may be assessed as in shortage even though not all specializations are in shortage. Occupations may be in shortage in particular geographical areas and not in others.

For each state and the Northern Territory, skill shortages are rated as evident in the capital city only (M – metropolitan), in regional areas (R – other than the capital city) or statewide (S). If there are shortages in the three largest states, or in a majority of states, then the occupation is rated as being in national shortage (N). Skill shortages involve skills that require a significant period of training and/or experience to acquire.

In the national and state skill shortage lists, especially ICT skills, the term 'recruitment difficulties' is used as a way of signaling a degree of skill shortage - shown as "D" in the skill shortage lists. This provides an option for recognising skills where employers are experiencing some difficulty in finding suitable workers even though a broader skill shortage is not evident.

Recruitment difficulties occur when employers have some difficulty in filling vacancies for an occupation. There may be an adequate supply of skilled workers, but employers are still unable to attract and recruit sufficient suitable employees.

The recruitment difficulties may be due to characteristics of the industry, occupation or employer, such as: relatively low remuneration, poor working conditions, poor image of the industry, unsatisfactory working hours, location hard to commute to, ineffective recruitment advertising and processes or firm specific and highly-specialized skills needs.

Skill shortages may exist outside those included in the skill shortage lists. For example, an occupation or skill, particularly where the number employed is very small, may not be identified in consultations with industry bodies and other key stakeholders and pockets of shortage may exist in isolated communities. In addition, variations in national or regional industry activity may cause shortages not apparent at the time when the skill shortage lists are being prepared. The lists do not include skill shortages involving skills that require only a very limited period of training and/or experience to acquire.

#### Jobs Prospects Matrix

The DEWR also produce the Jobs Prospect Matrix that covers a number of the allied health professions (including for example audiologists, orthoptists, orthotists, dietitians, occupational therapists, optometrists, pharmacists, physiotherapists, podiatrists, and speech pathologists). The Job Prospects Matrix provides an overall job prospect rating for each occupation for the period to 2009-10. There are five ratings: very good, good, average, below average or limited. These ratings are necessarily indicative, and may vary from region to region and according to the skills and attributes of individual workers. Labour market conditions may change over time for particular occupations, industries or the economy generally, and could affect job prospects.

Several factors are considered in assessing job prospects: future and recent employment growth; whether an occupation is in growth industries; unemployment rate; job openings; vacancy level; vacancy trends for skilled occupations; and skill shortages.

The Jobs Prospects Matrix can be accessed on the internet at:

<http://www.workplace.gov.au/WP/Content/Files/WP/EmploymentPublications/JobOutlook2003UL2.pdf>

## **APPENDIX D – AUSTRALIAN DEPARTMENT OF EDUCATION, SCIENCE AND TRAINING**

Appendix D provides the data used in preparing the figures in chapter 3 on allied health university commencements and completions. This data is broken down to state/territory level.

The Australian Department of Education Science and Training (DEST) gathers university commencements and completions from Australian universities according to the category of study. Prior to 2001, the Field of Study classification was used, which includes the following areas of study under the broad category of health:

- health (general);
- dentistry;
- dental therapy;
- health support activities (general);
- health administration;
- health counselling;
- health surveying and environmental health;
- health support activities (other);
- health sciences and technologies (general);
- nursing (basic); nursing (post-basic);
- medical radiography; medical technology;
- nutrition and dietetics;
- optometry; pharmacy;
- podiatry;
- health sciences and technologies (other);
- medical science;
- medicine;
- rehabilitation services (general);
- occupational therapy;
- physiotherapy;
- speech pathology / audiology; and
- rehabilitation services (other).

From 2001 the Field of Education classification was implemented, which includes the following areas of study under the broad category of health:

- General Medicine;
- Surgery;
- Psychiatry;
- Obstetrics and Gynaecology;
- Paediatrics;
- Anaesthesiology;
- Pathology;
- Radiology;
- Internal Medicine;
- General Practice;
- Medical Studies, nec;
- General Nursing;

- Midwifery;
- Mental Health Nursing;
- Community Nursing;
- Critical Care Nursing;
- Aged Care Nursing;
- Palliative Care Nursing;
- Mothercraft Nursing and Family and Child Health Nursing;
- Nursing, n.e.c.;
- Pharmacy;
- Dentistry;
- Dental Assisting;
- Dental Technology;
- Dental Studies, n.e.c.;
- Optometry;
- Optical Technology;
- Optical Science, n.e.c.;
- Veterinary Science;
- Veterinary Assisting;
- Veterinary Studies, n.e.c.;
- Occupational Health and Safety;
- Environmental Health;
- Indigenous Health;
- Health Promotion;
- Community Health;
- Epidemiology; Public Health, n.e.c.;
- Radiography;
- Physiotherapy;
- Occupational Therapy;
- Chiropractic and Osteopathy;
- Speech Pathology;
- Audiology;
- Massage Therapy;
- Podiatry;
- Rehabilitation Therapies, n.e.c.;
- Naturopathy;
- Acupuncture;
- Traditional Chinese Medicine;
- Complementary Therapies, n.e.c.;
- Nutrition and Dietetics;
- Human Movement;
- Paramedical Studies;
- First Aid; and
- Health, n.e.c.

The tables provided show allied health course commencements and completions by state and territory between 1993 and 2003. The tables provided relate to specific allied health courses,

and may not reflect the totality of students commencing or completing allied health courses. A number of courses conducted by universities are classified under rehabilitation therapies, and may relate to physiotherapy or occupational therapy for example. Similarly, some courses, for example nutrition, speech pathology and radiography, may be coded by the university under a more specific medical or scientific field.

In reading the figures on university course commencements, the following notes must be taken into account:

(a) Courses selected as follows:

-----for 1993-2000, where Field Of Study = 070603 (Physiotherapy), 070409 (Podiatry), 070408 (Pharmacy), 070602 (Occupational Therapy) or 070406 (Nutrition & Dietetics), or

-----for 2001-2002, where Field Of Education = 061701 (Physiotherapy), 061713 (Podiatry), 061707 (Speech Pathology), 061705 (Chiropractic & Osteopathy), 061500-061501 (Radiography) or 060500-060501 (Pharmacy).

(b) Figures for 2001-2003 reflect full-year data, while other years show enrolments as at 31 March.

In relation to university course completions, the following notes must be taken into account:

(a) Courses selected as follows:

-----for 1993-2000, where Field Of Study = 070603 (Physiotherapy), 070409 (Podiatry), 070408(Pharmacy), 070602 (Occupational Therapy) or 070406 (Nutrition & Dietetics), or

-----for 2001-2002, where Field Of Education = 061701 (Physiotherapy), 061713 (Podiatry), 061707 (Speech Pathology), 061705 (Chiropractic & Osteopathy), 061500-061501 (Radiography) or 060500-060501 (Pharmacy).

Tables D1 and D2 show chiropractic and osteopathy university course commencements and completions between 2001 and 2003.

**Table D1: Chiropractic and osteopathy commencements by state and territory 2001 to 2003**

<b>State/Territory</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
New South Wales	280	299	303
Victoria	262	276	231
Western Australia	0	65	54
<b>National Total</b>	<b>542</b>	<b>640</b>	<b>588</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D2: Chiropractic and osteopathy completions by state and territory 2001 and 2002**

<b>State and Institution</b>	<b>2001</b>	<b>2002</b>
New South Wales	170	258
Victoria	175	181
<b>National Total</b>	<b>345</b>	<b>439</b>

Source: OZUP (1994-2003)

Tables D3 and D4 show nutrition and dietetics university course commencements and completions between 1993 and 2003.

**Table D3: Nutrition and dietetics commencements by state and territory 1993 to 2003**

<b>State/Territory</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
New South Wales	82	75	88	61	78	109	125	134	192	232	244
Victoria	106	84	95	140	99	80	90	125	145	100	134
Queensland	51	44	58	55	124	90	98	82	112	162	194
Western Australia	51	70	65	60	67	69	56	60	57	63	50
South Australia	22	1	23	0	20	0	33	44	34	43	55
Northern Territory	0	0	0	0	0	0	0	0	0	49	23
Australian Capital Territory	0	0	0	0	0	44	26	26	31	33	40
<b>National Total</b>	<b>312</b>	<b>274</b>	<b>329</b>	<b>316</b>	<b>388</b>	<b>392</b>	<b>428</b>	<b>471</b>	<b>571</b>	<b>682</b>	<b>740</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D4: Nutrition and dietetics completions by state and territory 1993 to 2002**

<b>State and Institution</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
New South Wales	19	73	56	58	66	68	86	98	64	95
Victoria	49	60	67	88	81	74	75	87	71	55
Queensland	51	42	49	57	63	44	56	66	80	79
Western Australia	41	39	41	40	45	45	33	43	34	56
South Australia	3	20	2	22	1	19	0	21	25	27
Northern Territory	0	0	0	0	0	0	0	0	0	16
Australian Capital Territory	0	0	0	0	20	37	20	10	14	13
<b>National Total</b>	<b>163</b>	<b>234</b>	<b>215</b>	<b>265</b>	<b>276</b>	<b>287</b>	<b>270</b>	<b>325</b>	<b>288</b>	<b>341</b>

Source: OZUP (1994-2003)

Tables D5 and D6 show occupational therapy university course commencements and completions between 1993 and 2003.

**Table D5: Occupational therapy commencements by state and territory 1993 to 2003**

<b>State/Territory</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
New South Wales	195	297	275	350	304	392	393	432	384	473	463
Victoria	186	189	152	165	167	137	175	139	153	201	223
Queensland	101	91	102	110	110	169	191	201	213	204	201
Western Australia	88	103	113	112	127	107	124	115	146	150	142
South Australia	68	93	85	100	86	85	86	87	66	97	87
Northern Territory	0	0	0	0	0	0	0	0	5	8	11
<b>National Total</b>	<b>638</b>	<b>773</b>	<b>727</b>	<b>837</b>	<b>794</b>	<b>890</b>	<b>969</b>	<b>974</b>	<b>967</b>	<b>1,133</b>	<b>1,127</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D6: Occupational therapy completions by state and territory 1993 to 2002**

<b>State and Institution</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
New South Wales	173	204	213	128	191	237	300	308	330	295
Victoria	154	147	144	121	121	116	145	122	88	118
Queensland	60	73	75	82	81	78	90	94	151	154
Western Australia	64	69	89	59	72	95	103	107	63	89
South Australia	45	42	41	53	71	82	82	83	72	71
<b>National Total</b>	<b>496</b>	<b>535</b>	<b>562</b>	<b>443</b>	<b>536</b>	<b>608</b>	<b>720</b>	<b>714</b>	<b>704</b>	<b>727</b>

Source: OZUP (1994-2003)

Tables D7 and D8 show pharmacy university course commencements and completions between 1993 and 2003.

**Table D7: Pharmacy commencements by state and territory 1993 to 2003**

<b>State/Territory</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
New South Wales	159	191	184	226	266	299	307	333	328	297	387
Victoria	167	167	176	147	211	148	227	243	243	284	241
Queensland	115	105	153	156	141	157	153	153	290	273	283
Western Australia	122	123	128	123	124	138	138	145	160	156	207
South Australia	47	55	88	112	81	109	96	136	128	182	184
Tasmania	34	36	35	46	50	41	44	52	48	56	55
Northern Territory	0	0	0	0	0	0	0	12	0	0	0
<b>National Total</b>	<b>644</b>	<b>677</b>	<b>764</b>	<b>810</b>	<b>873</b>	<b>892</b>	<b>965</b>	<b>1,074</b>	<b>1,197</b>	<b>1,248</b>	<b>1,357</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D8: Pharmacy completions by state and territory 1993 to 2002**

<b>State and Institution</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
New South Wales	165	131	177	182	191	177	81	189	249	239
Victoria	139	123	118	195	120	249	24	187	149	176
Queensland	71	94	64	92	116	143	30	117	147	174
Western Australia	46	60	76	80	56	74	97	97	98	130
South Australia	35	30	43	43	81	83	19	66	81	95
Tasmania	23	23	27	29	27	41	50	6	29	32
<b>National Total</b>	<b>479</b>	<b>461</b>	<b>505</b>	<b>621</b>	<b>591</b>	<b>767</b>	<b>301</b>	<b>662</b>	<b>753</b>	<b>846</b>

Source: OZUP (1994-2003)

Tables D9 and D10 show physiotherapy university course commencements and completions between 1993 and 2003.

**Table D9: Physiotherapy commencements by state and territory 1993 to 2003**

<b>State/Territory</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
New South Wales	286	272	242	333	269	320	328	304	372	383	412
Victoria	252	344	277	257	267	391	365	339	336	279	311
Queensland	127	132	149	146	174	175	199	223	203	247	243
Western Australia	110	132	130	121	148	128	152	150	186	168	177
South Australia	102	129	150	143	133	125	134	137	145	147	135
Australian Capital Territory	0	0	0	0	5	4	0	0	0	0	0
<b>National Total</b>	<b>877</b>	<b>1,009</b>	<b>948</b>	<b>1,000</b>	<b>996</b>	<b>1,143</b>	<b>1,178</b>	<b>1,153</b>	<b>1,242</b>	<b>1,224</b>	<b>1,278</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D10: Physiotherapy completions by state and territory 1993 to 2002**

<b>State and Institution</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
New South Wales	238	265	222	215	192	166	215	183	262	232
Victoria	173	165	220	194	273	308	311	340	272	240
Queensland	108	111	105	113	114	145	161	166	160	156
Western Australia	110	101	121	119	113	131	93	119	135	121
South Australia	115	114	99	83	105	152	112	132	132	120
Australian Capital Territory	0	0	0	0	3	4	1	0	0	0
<b>National Total</b>	<b>744</b>	<b>756</b>	<b>767</b>	<b>724</b>	<b>800</b>	<b>906</b>	<b>893</b>	<b>940</b>	<b>961</b>	<b>869</b>

Source: OZUP (1994-2003)

Tables D11 and D12 show podiatry university course commencements and completions between 1993 and 2003.

**Table D11: Podiatry commencements by state and territory 1993 to 2003**

State/Territory	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New South Wales	0	0	0	32	49	67	27	32	63	59	90
Victoria	52	40	40	45	43	43	58	61	56	69	72
Queensland	28	30	24	40	37	40	32	33	40	43	53
Western Australia	20	31	25	24	27	20	30	35	45	41	41
South Australia	21	20	18	31	22	30	29	29	28	26	24
<b>National Total</b>	<b>121</b>	<b>121</b>	<b>107</b>	<b>172</b>	<b>178</b>	<b>200</b>	<b>176</b>	<b>190</b>	<b>232</b>	<b>238</b>	<b>280</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D12: Podiatry completions by state and territory 1993 to 2002**

State and Institution	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New South Wales	0	0	0	0	0	0	43	24	24	25
Victoria	34	55	54	52	43	42	47	43	48	14
Queensland	21	19	22	29	15	31	0	31	32	18
Western Australia	37	27	23	15	23	18	25	13	24	26
South Australia	10	16	16	18	17	15	14	25	18	31
<b>National Total</b>	<b>102</b>	<b>117</b>	<b>115</b>	<b>114</b>	<b>98</b>	<b>106</b>	<b>129</b>	<b>136</b>	<b>146</b>	<b>114</b>

Source: OZUP (1994-2003)

Tables D13 and D14 show radiography university course commencements and completions between 1993 and 2003.

**Table D13: Radiography commencements by state and territory 1993 to 2003**

State/Territory	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New South Wales	256	506	497	446	433	375	473	495	516	530	606
Victoria	0	2	0	72	83	117	121	122	98	134	112
Queensland	70	85	76	66	97	64	83	83	136	173	171
Western Australia	61	64	71	52	59	58	45	67	0	0	0
South Australia	55	98	92	123	114	116	137	157	157	125	124
<b>National Total</b>	<b>442</b>	<b>755</b>	<b>736</b>	<b>759</b>	<b>786</b>	<b>730</b>	<b>859</b>	<b>924</b>	<b>907</b>	<b>962</b>	<b>1,013</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D14: Radiography completions by state and territory 1993 to 2002**

State and Institution	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New South Wales	172	393	391	334	337	231	303	307	322	374
Victoria	0	0	1	63	73	56	65	62	67	57
Queensland	53	64	60	69	75	65	76	64	115	129
Western Australia	24	43	26	34	46	34	41	40	0	0
South Australia	45	54	45	60	84	87	94	91	124	107
Tasmania	6	0	0	0	0	0	0	0	0	0
<b>National Total</b>	<b>300</b>	<b>554</b>	<b>523</b>	<b>560</b>	<b>615</b>	<b>473</b>	<b>579</b>	<b>564</b>	<b>628</b>	<b>667</b>

Source: OZUP (1994-2003)

Tables D15 and D16 show rehabilitation therapies university course commencements and completions between 1993 and 2003.

**Table D15: Rehabilitation therapies commencements by state and territory 1993 to 2003**

State/Territory	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New South Wales	168	185	231	298	392	459	466	512	108	110	126
Victoria	133	234	112	269	284	213	188	220	211	248	268
Queensland	22	16	43	47	50	34	22	37	16	21	14
Western Australia	6	21	11	17	10	4	9	0	24	52	66
South Australia	69	75	87	86	111	83	27	17	83	78	160
Tasmania	0	0	0	0	0	0	0	12	0	0	0
<b>National Total</b>	<b>398</b>	<b>531</b>	<b>484</b>	<b>717</b>	<b>847</b>	<b>793</b>	<b>712</b>	<b>798</b>	<b>442</b>	<b>509</b>	<b>634</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D16: Rehabilitation therapies completions by state and territory 1993 to 2002**

State and Institution	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New South Wales	92	160	118	138	185	194	137	265	58	64
Victoria	95	132	112	93	101	129	146	153	143	168
Queensland	2	20	7	22	39	28	27	14	10	8
Western Australia	0	2	5	8	5	9	4	1	15	53
South Australia	55	48	53	47	56	56	20	21	110	74
Tasmania	0	0	0	0	0	0	0	10	0	0
<b>National Total</b>	<b>244</b>	<b>362</b>	<b>295</b>	<b>308</b>	<b>386</b>	<b>416</b>	<b>334</b>	<b>464</b>	<b>336</b>	<b>367</b>

Source: OZUP (1994-2003)

Tables D17 and D18 show speech pathology university course commencements and completions between 1993 and 2003.

**Table D17: Speech pathology commencements by state and territory, 1993 to 2003**

State/Territory	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New South Wales	105	132	165	201	192	255	261	265	238	262	257
Victoria	103	97	92	94	89	88	86	96	89	107	116
Queensland	79	86	96	101	108	95	115	117	108	105	110
Western Australia	31	38	38	47	45	51	41	64	54	47	42
South Australia	39	36	35	35	36	46	32	44	34	44	31
<b>National Total</b>	<b>357</b>	<b>389</b>	<b>426</b>	<b>478</b>	<b>470</b>	<b>535</b>	<b>535</b>	<b>586</b>	<b>523</b>	<b>565</b>	<b>556</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D18: Speech pathology completions by state and territory 1993 to 2002**

State and Institution	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New South Wales	89	106	85	65	101	115	133	128	121	151
Victoria	71	75	64	67	86	75	69	83	70	81
Queensland	67	57	64	64	72	67	80	88	69	88
Western Australia	21	29	23	31	27	26	29	31	56	59
South Australia	24	32	32	29	25	37	35	37	35	29
<b>National Total</b>	<b>272</b>	<b>299</b>	<b>268</b>	<b>256</b>	<b>311</b>	<b>320</b>	<b>346</b>	<b>367</b>	<b>351</b>	<b>408</b>

Source: OZUP (1994-2003)

Tables D19 and D20 show total university course commencements and completions between 1993 and 2003.

**Table D19: Total course commencements by state and territory 1993 to 2003 (all course commencements listed)**

State/Territory	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New South Wales	1,251	1,658	1,682	1,947	1,983	2,276	2,380	2,507	2,481	2,645	2,888
Victoria	999	1,157	944	1,189	1,243	1,217	1,310	1,345	1,593	1,698	1,708
Queensland	593	589	701	721	841	824	893	929	1,118	1,228	1,269
Western Australia	489	582	581	556	607	575	595	636	672	742	779
South Australia	423	507	578	630	603	594	574	651	675	742	800
Tasmania	34	36	35	46	50	41	44	64	48	56	55
Northern Territory	0	0	0	0	0	0	0	12	5	57	34
Australian Capital Territory	0	0	0	0	5	48	26	26	31	33	40
<b>National Total</b>	<b>3,789</b>	<b>4,529</b>	<b>4,521</b>	<b>5,089</b>	<b>5,332</b>	<b>5,575</b>	<b>5,822</b>	<b>6,170</b>	<b>6,623</b>	<b>7,201</b>	<b>7,573</b>

Source: OZUE (1993-2000) ENROL (2001-03)

**Table D20: Total course completions by state and territory 1993 to 2002 (all course completions listed)**

<b>State and Institution</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
New South Wales	948	1,332	1,262	1,120	1,263	1,188	1,298	1,502	1,600	1,733
Victoria	715	757	780	873	898	1,049	882	1,077	1,083	1,090
Queensland	433	480	446	528	575	601	520	640	764	806
Western Australia	343	370	404	386	387	432	425	451	425	534
South Australia	332	356	331	355	440	531	376	476	597	554
Tasmania	29	23	27	29	27	41	50	16	29	32
Northern Territory	0	0	0	0	0	0	0	0	0	16
Australian Capital Territory	0	0	0	0	23	41	21	10	14	13
<b>National Total</b>	<b>2,800</b>	<b>3,318</b>	<b>3,250</b>	<b>3,291</b>	<b>3,613</b>	<b>3,883</b>	<b>3,572</b>	<b>4,172</b>	<b>4,512</b>	<b>4,778</b>

Source: OZUP (1994-2003)

## APPENDIX E: PERSONS EMPLOYED IN HEALTH OCCUPATIONS BY STATISTICAL REGION OF WORKPLACE 2001

The tables that follow are based on the ABS Census of Population and Housing 2001 data, and are taken from the joint ABS/AIHW publication 'Health and community services labour force, 2001'. Information has been provided alphabetically for each state and territory, and includes:

- Persons employed in health occupations per 100,000 by statistical region of workplace 2001 (based on broad categories such as allied health workers and complementary therapies)
- Persons employed in health occupations, statistical region of workplace 2001 (for occupations grouped under the category allied health, such as occupational therapy and podiatry).

### New South Wales

**Table E3: Persons employed in health occupations per 100,000 population: statistical region of workplace, New South Wales, 2001**

<b>Statistical Region</b>	<b>Allied health workers</b>	<b>Complementary therapies</b>	<b>Dental workers</b>	<b>Medical imaging workers</b>	<b>Pharmacist workers</b>
Inner Sydney	426	101	345	90	140
Eastern Suburbs	344	73	193	64	103
St-George Sutherland	186	48	140	49	88
Canterbury-Bankstown	124	17	82	27	82
Fairfield-Liverpool	134	23	91	44	55
Outer South Western Sydney	113	20	70	26	45
Inner Western Sydney	241	55	154	40	87
Central Western Sydney	302	24	173	73	116
North Western Sydney	134	25	81	35	50
Lower Northern Sydney	401	87	232	82	134
Central Northern Sydney	229	46	147	36	90
Northern Beaches	234	72	124	32	94
Gosford-Wyong	161	29	100	42	57
Hunter	176	32	104	46	55
Newcastle	183	31	101	50	49
Hunter SD Bal	142	34	118	23	83
Illawarra	181	33	103	43	53
Wollongong	186	26	97	49	52
Nowra-Bomaderry	388	93	199	89	79
Illawarra SD Bal	106	35	88	14	48
South Eastern	138	34	88	19	62
Richmond-Tweed	187	85	129	37	57
Mid-north Coast	155	47	103	33	51
Northern	147	24	91	29	65
Far West-North Western	138	11	80	32	55

Central West	162	22	89	33	50
Murray-Murrumbidgee	131	23	93	33	54
<b>Total NSW</b>	<b>203</b>	<b>43</b>	<b>128</b>	<b>45</b>	<b>74</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E4: Persons employed in health occupations, statistical region of workplace, New South Wales, 2001**

Region	Occ.									Hth			Total
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot	pro nec	Clin. psych	Ther. aide	
Inner Sydney	136	115	267	40	25	95	37	23	19	37	392	32	1,218
Eastern Suburbs	88	72	201	55	30	27	13	24	3	36	218	20	787
St-George Sutherland	95	70	241	48	47	30	13	16	10	70	99	29	768
Canterbury-Bankstown	44	46	95	32	21	17	4	6	—	25	53	22	365
Fairfield-Liverpool	66	39	122	38	10	24	10	9	4	16	90	23	451
Outer South Western													
Sydney	36	20	57	35	10	13	3	—	—	23	47	14	258
Inner Western Sydney	57	30	85	16	15	23	6	12	—	32	84	16	376
Central Western Sydney	155	43	220	57	18	64	28	16	21	34	168	34	858
North Western Sydney	106	55	196	59	25	34	13	9	6	62	160	33	758
Lower Northern Sydney	120	75	281	62	40	73	44	28	7	68	274	37	1,109
Central Northern Sydney	114	58	295	79	40	46	10	16	5	78	109	37	887
Northern Beaches	53	42	157	44	21	24	6	6	—	46	91	24	514
Gosford-Wyong	64	31	133	28	24	34	7	6	—	32	60	42	461
Hunter	167	56	242	90	28	75	20	6	6	28	209	73	1,000
Newcastle	148	44	200	75	25	69	20	6	6	21	195	59	868
Hunter SD Bal	19	12	42	15	3	6	—	—	—	7	14	14	132
Illawarra	95	44	189	42	30	46	9	6	8	38	150	39	696
Wollongong	63	28	130	29	16	33	6	3	5	25	112	31	481
Nowra-Bomaderry	19	7	32	8	7	8	3	—	3	3	19	4	113
Illawarra SD Bal	13	9	27	5	7	5	—	3	—	10	19	4	102
South Eastern	36	12	81	20	9	13	—	—	—	17	53	17	258
Richmond-Tweed	60	23	112	24	15	23	4	—	—	35	73	18	387
Mid-north Coast	55	39	112	24	16	20	7	4	3	38	71	28	417
Northern	26	12	77	24	11	19	5	—	—	26	40	15	255
Far West-North Western	31	13	44	14	9	11	3	—	—	26	23	18	192
Central West	50	21	61	18	9	16	4	3	—	30	43	22	277
Murray-Murrumbidgee	59	19	82	34	7	22	6	3	6	30	46	20	334
NSW Undefined/No fixed address	16	19	48	12	15	12	—	—	—	20	46	—	188
<b>Total NSW</b>	<b>1,729</b>	<b>954</b>	<b>3,398</b>	<b>895</b>	<b>475</b>	<b>761</b>	<b>252</b>	<b>193</b>	<b>98</b>	<b>847</b>	<b>2,599</b>	<b>613</b>	<b>12,814</b>

Notes: 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## Victoria

**Table E13: Persons employed in health occupations per 100,000 population: statistical region of workplace, Victoria, 2001**

Statistical Region	Allied health Complementary			Medical	Pharmacist workers
	workers	therapies	Dental workers	imaging workers	
Outer Western Melbourne	137	31	89	24	60
North Western Melbourne	121	29	77	22	62
Inner Melbourne	792	118	430	205	249
North Eastern Melbourne	186	40	100	47	75
Inner Eastern Melbourne	286	64	153	38	87
Southern Melbourne Melbourne	282	64	161	35	88
Outer Eastern Melbourne	146	43	101	28	75
South Eastern Melbourne	121	33	89	25	56
Mornington Peninsular	184	52	108	37	57
Barwon-Western District	177	40	101	36	53
Central Highlands-Wimmera	179	47	97	32	56
Loddon-Mallee	167	38	90	29	56
Goulburn-Ovens-Murray	147	42	81	31	55
All Gippsland	168	43	90	23	55
<b>Total Victoria</b>	<b>218</b>	<b>50</b>	<b>124</b>	<b>41</b>	<b>77</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E14: Persons employed in health occupations, statistical region of workplace, Victoria, 2001**

Region	Hth pro Clin. Ther.												Total
	Occ. Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot	nec	psych	aide	
Outer Western Melbourne	103	56	187	73	38	28	22	14	—	38	146	46	751
North Western Melbourne	48	23	72	35	16	11	8	3	3	17	66	16	318
Inner Melbourne	232	118	429	91	57	108	61	48	52	43	590	64	1,893
North Eastern Melbourne	106	41	199	64	42	32	15	10	3	38	163	54	767
Inner Eastern Melbourne	221	95	402	116	77	53	45	28	19	82	362	97	1,597
Southern Melbourne Melbourne	141	66	276	67	68	58	16	17	16	71	209	61	1,066
Outer Eastern Melbourne	67	43	128	54	30	18	7	8	6	44	119	30	554
South Eastern Melbourne	55	39	101	35	15	19	11	6	3	20	92	26	422
Mornington Peninsular	68	19	105	36	24	24	12	10	6	36	69	32	441
Barwon-Western District	83	39	158	54	36	35	14	6	3	35	90	52	605
Central Highlands-Wimmera	43	19	73	38	29	17	7	3	9	19	50	26	333
Loddon-Mallee	66	25	107	34	32	26	6	3	—	16	63	37	415
Goulburn-Ovens-Murray	53	32	110	34	26	19	7	3	—	40	43	40	407
All Gippsland	52	25	83	38	18	17	7	6	—	33	70	42	391
VIC Undefined/No Fixed Address	8	20	48	25	27	16	9	5	—	22	41	—	221
<b>Total Victoria</b>	<b>1,346</b>	<b>660</b>	<b>2,478</b>	<b>794</b>	<b>535</b>	<b>481</b>	<b>247</b>	<b>170</b>	<b>120</b>	<b>554</b>	<b>2,173</b>	<b>623</b>	<b>10,181</b>

Notes: 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## Queensland

**Table E7: Persons employed in health occupations per 100,000 population: statistical region of workplace, Queensland, 2001**

Statistical Region	Allied health workers	Complementary therapies	Dental workers	Medical imaging workers	Pharmacist workers
Brisbane City Inner Ring	479	83	317	135	154
City Core	1,537	192	933	540	369
Northern Inner	209	60	188	9	79
Eastern Inner	156	56	112	11	72
Southern Inner	250	68	205	63	140
Western Inner	468	57	259	163	183
Brisbane City Outer Ring	194	38	119	30	68
Northern Outer	189	51	109	39	68
Eastern Outer	173	40	140	13	63
Southern Outer	181	35	153	44	81
Western Outer	226	25	81	9	57
South & East BSD Balance	104	27	96	18	48
Logan City	100	22	92	23	49
Gold Coast City Part A	131	33	118	11	51
Beaudesert Shire Part A	33	11	59	—	26
Redland Shire	115	35	103	18	52
North & West BSD Balance	140	27	125	28	69
Caboolture Shire Part A	93	27	106	22	54
Pine Rivers Shire	114	28	105	15	44
Redcliffe City	209	39	158	43	82
Ipswich City (Part in BSD)	182	21	149	40	105
South and East Moreton	154	55	133	40	62
Gold Coast City Part B	157	57	134	42	62
South and East Moreton Balance	103	32	111	12	56
North and West Moreton	142	62	117	34	54
Wide Bay-Burnett	125	33	114	28	44
Darling Downs–South West	161	32	138	25	67
Darling Downs	159	30	132	27	69
South West	177	46	185	12	54
Mackay–Fitzroy–Central West	125	33	119	21	43
Mackay	116	38	104	20	51
Fitzroy	126	27	129	22	36
Central West	197	49	123	25	49
Northern–North West	150	28	132	39	46
Northern	153	27	134	44	44
North West	136	29	124	17	58
Far North	126	41	123	22	54
<b>Total Queensland</b>	<b>183</b>	<b>45</b>	<b>145</b>	<b>41</b>	<b>68</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E8: Persons employed in health occupations, statistical region of workplace, Queensland, 2001**

Region	Occ.									Hth pro nec	Clin. psych	Ther. aide	Total
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot				
Brisbane City Inner Ring	263	104	532	122	57	113	50	11	31	92	308	97	1,780
City Core	169	56	306	51	20	83	47	8	22	37	177	49	1,025
Northern Inner	23	18	70	22	12	8	—	—	3	19	44	11	230
Eastern Inner	22	10	32	15	9	3	—	—	3	10	19	8	131
Southern Inner	26	8	40	13	8	5	—	—	3	8	22	6	139
Western Inner	23	12	84	21	8	14	3	3	—	18	46	23	255
Brisbane City Outer Ring	125	72	268	100	42	27	12	—	9	118	139	56	968
Northern Outer	41	29	114	26	14	12	—	—	—	46	28	13	323
Eastern Outer	10	6	31	8	8	3	3	—	—	20	6	9	104
Southern Outer	38	18	69	35	11	6	9	—	9	21	38	11	265
Western Outer	36	19	54	31	9	6	—	—	—	31	67	23	276
South & East BSD													
Balance	48	43	94	34	11	14	6	—	—	32	59	23	364
Logan City	21	21	43	15	3	6	6	—	—	12	27	10	164
Gold Coast City Part	10	7	13	6	3	—	—	—	—	5	12	3	59
A Beaudesert Shire Part													
A	—	—	—	3	—	3	—	—	—	—	3	—	9
Redland Shire	17	15	38	10	5	5	—	—	—	15	17	10	132
North & West BSD													
Balance	70	43	122	63	22	16	11	3	3	58	94	38	543
Caboolture Shire Part													
A	7	11	21	8	7	3	—	—	—	16	15	11	99
Pine Rivers Shire	18	14	34	19	4	3	—	—	3	14	21	7	137
Redcliffe City	13	7	20	10	4	3	5	3	—	12	16	9	102
Ipswich City (Part in BSD)	32	11	47	26	7	7	6	—	—	16	42	11	205
South and East Moreton	65	52	149	38	32	22	11	3	—	88	103	32	595
Gold Coast City Part	62	48	140	38	29	22	11	3	—	84	100	32	569
B South and East													
Moreton Balance	3	4	9	—	3	—	—	—	—	4	3	—	26
North and West Moreton	41	36	115	30	16	11	10	4	3	69	64	37	436
Wide Bay-Burnett	30	19	62	28	10	9	4	—	—	37	44	41	284
Darling Downs-South													
West	51	31	92	37	11	22	3	—	—	36	61	24	368
Darling Downs	42	27	80	31	11	18	3	—	—	36	53	21	322
South West	9	4	12	6	—	4	—	—	—	—	8	3	46
Mackay-Fitzroy-Central													
West	51	36	84	45	11	17	7	3	—	38	66	41	399
Mackay	18	16	33	13	4	8	3	—	—	17	23	19	154
Fitzroy	30	17	45	29	7	9	4	3	—	18	37	22	221
Central West	3	3	6	3	—	—	—	—	—	3	6	—	24
Northern-North West	40	32	70	27	14	15	3	—	3	24	79	20	327
Northern	36	28	55	21	11	12	3	—	3	21	73	17	280
North West	4	4	15	6	3	3	—	—	—	3	6	3	47
Far North	39	25	68	20	6	19	7	6	—	20	42	17	269
Qld undefined	9	20	29	7	14	9	—	—	—	7	16	—	111
<b>Total Queensland</b>	<b>832</b>	<b>513</b>	<b>1,685</b>	<b>551</b>	<b>246</b>	<b>294</b>	<b>124</b>	<b>30</b>	<b>49</b>	<b>619</b>	<b>1,075</b>	<b>426</b>	<b>6,444</b>

Note: 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## Western Australia

**Table E15: Persons employed in health occupations per 100,000 population: statistical region of workplace, Western Australia, 2001**

Statistical Region	Allied health workers	Complementary therapies	Dental workers	Medical imaging workers	Pharmacist workers
Central Metropolitan	1,194	104	665	290	235
East Metropolitan	126	34	130	22	57
North Metropolitan	170	35	130	22	58
South West Metropolitan	181	42	133	32	82
South East Metropolitan	188	39	128	16	77
Lower Western WA	173	39	114	24	52
Remainder - Balance WA	120	30	79	21	41
<b>Total WA</b>	<b>234</b>	<b>42</b>	<b>157</b>	<b>41</b>	<b>73</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E16: Persons employed in health occupations, statistical region of workplace, Western Australia, 2001**

Region	Occ.										Hth pro nec	Clin. psych	Ther. aide	Total
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot					
Central Metropolitan	250	61	361	73	43	66	35	7	12	24	334	122	1,388	
East Metropolitan	45	20	77	16	15	7	4	—	—	5	42	61	292	
North Metropolitan	126	39	171	78	25	19	7	—	3	7	91	113	679	
South West Metropolitan	71	36	141	44	26	13	11	—	5	7	83	73	510	
South East Metropolitan	111	36	116	43	29	10	3	3	7	5	107	108	578	
Lower Western WA	72	29	117	30	23	23	6	—	3	5	59	72	439	
Remainder - Balance WA	51	13	89	24	9	11	4	—	—	3	42	33	279	
WA Undefined/No Fixed Address	13	9	25	8	11	5	3	—	3	3	22	7	109	
<b>Total WA</b>	<b>739</b>	<b>243</b>	<b>1,097</b>	<b>316</b>	<b>181</b>	<b>154</b>	<b>73</b>	<b>10</b>	<b>33</b>	<b>59</b>	<b>780</b>	<b>589</b>	<b>4,274</b>	

Notes: 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## South Australia

**Table E9: Persons employed in health occupations per 100,000 population: statistical region of workplace, South Australia, 2001**

Statistical Region	Allied health	Complementary	Dental workers	Medical imaging	
	workers	therapies		workers	Pharmacist workers
Northern Adelaide	149	15	104	20	52
Western Adelaide	204	39	110	40	92
Eastern Adelaide	497	90	427	158	119
Southern Adelaide	222	41	131	34	64
North & Western SA	118	20	87	14	41
Southern & Eastern SA	118	42	91	12	44
<b>Total SA</b>	<b>218</b>	<b>42</b>	<b>157</b>	<b>46</b>	<b>69</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E10: Persons employed in health occupations, statistical region of workplace, South Australia, 2001**

Region	Occ.									Hth pro	Clin.	Ther.	Total
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot	nec	psych	aide	
Northern Adelaide	91	21	137	56	30	20	8	—	—	31	64	46	504
Western Adelaide	55	18	139	43	27	15	—	—	10	32	42	34	415
Eastern Adelaide	95	56	293	70	67	56	29	6	13	75	235	72	1,067
Southern Adelaide	80	32	207	59	45	33	13	—	7	58	82	85	701
North & Western SA	22	9	53	22	9	13	3	—	5	21	6	19	182
Southern & Eastern SA	32	18	96	24	24	11	3	—	—	26	15	31	280
SA Undefined/No Fixed Address	4	10	17	4	9	—	—	—	—	3	10	4	61
<b>Total SA</b>	<b>379</b>	<b>164</b>	<b>942</b>	<b>278</b>	<b>211</b>	<b>148</b>	<b>56</b>	<b>6</b>	<b>35</b>	<b>246</b>	<b>454</b>	<b>291</b>	<b>3,210</b>

Notes: 'Undefined' classification, e.g. 'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## Tasmania

**Table E11: Persons employed in health occupations per 100,000 population: statistical region of workplace, Tasmania, 2001**

Statistical Region	Allied health	Complementary	Dental workers	Medical imaging	Pharmacist
	workers	therapies		workers	workers
Greater Hobart-Southern	233	25	114	46	90
Northern	165	35	98	49	74
Mersey-Lyell	146	32	95	22	51
<b>Total Tasmania</b>	<b>198</b>	<b>30</b>	<b>106</b>	<b>42</b>	<b>76</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E12: Persons employed in health occupations, statistical region of workplace, Tasmania, 2001**

Region	Occ.								Hth pro	Clin.	Ther.	Total	
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot	nec	psych		aide
Greater Hobart-Southern	61	36	130	35	24	19	11	4	8	51	88	59	526
Northern	33	15	53	18	11	4	4	—	3	30	19	24	214
Mersey-Lyell	24	9	39	17	13	7	—	—	3	11	15	14	152
TAS Undefined/No Fixed Address	3	—	4	—	—	—	—	—	—	4	4	3	18
<b>Total Tasmania</b>	<b>121</b>	<b>60</b>	<b>226</b>	<b>70</b>	<b>48</b>	<b>30</b>	<b>15</b>	<b>4</b>	<b>14</b>	<b>96</b>	<b>126</b>	<b>100</b>	<b>910</b>

Notes: 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## Australian Capital Territory

**Table E1: Persons employed in health occupations per 100,000 population: statistical region of workplace, Australian Capital Territory, 2001**

Statistical Region	Allied health	Complementary	Dental workers	Medical imaging	Pharmacist
	workers	therapies		workers	workers
ACT	236	44	172	46	73
<b>Total ACT</b>	<b>238</b>	<b>44</b>	<b>174</b>	<b>48</b>	<b>75</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E2: Persons employed in health occupations, statistical region of workplace, Australian Capital Territory, 2001**

Region	Occ.									Hth			Total
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot	pro nec	Clin. psych	Ther. aide	
ACT	88	42	199	37	30	73	14	9	7	34	176	20	729
ACT Undefined/No Fixed Address	—	—	3	—	3	—	—	—	—	—	3	—	9
<b>Total ACT <sup>(a)</sup></b>	<b>88</b>	<b>42</b>	<b>202</b>	<b>37</b>	<b>33</b>	<b>73</b>	<b>14</b>	<b>9</b>	<b>7</b>	<b>34</b>	<b>179</b>	<b>20</b>	<b>738</b>

Notes: (a) Include those with no fixed address, or whose address was undefined. 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## Northern Territory

**Table E5: Persons employed in health occupations per 100,000 population: statistical region of workplace, Northern Territory, 2001**

Statistical Region	Allied health workers	Complementary therapies	Dental workers	Medical imaging workers	Pharmacist workers
in	195	31	113	32	51
ance NT	113	7	58	21	20
<b>Total Northern Territory (a)</b>	<b>157</b>	<b>21</b>	<b>90</b>	<b>27</b>	<b>38</b>

Notes: 'Undefined' classification, e.g. Other NSW (undefined) included in total figures. 2. Excludes those whose place of work varied in the reference week, or was not stated

Source: AIHW, Health and community services labour force, 2001

**Table E6: Persons employed in health occupations, statistical region of workplace, Northern Territory, 2001**

Region	Occ.									Hth pro	Clin.	Ther.	Total
	Ther.	Optom	Physio	Speech	Pod	Diet.	Audio.	Orthop	Orthot	nec	psych	aide	
Darwin	38	14	48	17	—	13	7	—	3	5	43	7	195
Balance NT	13	5	27	7	3	13	3	—	—	3	13	10	97
NT Undefined/No Fixed Address	—	—	3	—	—	—	—	—	—	—	—	—	3
<b>Total Northern Territory (a)</b>	<b>51</b>	<b>19</b>	<b>78</b>	<b>24</b>	<b>3</b>	<b>26</b>	<b>10</b>	<b>—</b>	<b>3</b>	<b>8</b>	<b>56</b>	<b>17</b>	<b>295</b>

Notes: (a) Include those with no fixed address, or whose address was undefined. 'Undefined' classification, e.g.'Other NSW (undefined)', included in Total figures. Excludes those whose place of work varied in the reference week, or was not stated.

Source: AIHW, Health and community services labour force, 2001

## APPENDIX F: AUSTRALIAN STANDARD GEOGRAPHIC CLASSIFICATION OF REMOTENESS

This appendix provides a summary description of the geographic classifications used throughout this report. The information contained below is taken directly from the 2004 AIHW report: *Rural, regional and remote health: a guide to remoteness classifications*, AIHW cat. no. PHE 53. For original sources of the information and further details about these classifications, including the methodology used in their development; strengths and weaknesses of each; and maps showing their geographic distribution, please see the AIHW report.

The information contained in this appendix relates to the geographic classification used in this report, ASGC Remoteness Areas, and also includes information about ARIA which underlies the development of the ASGC Remoteness Areas.

### Accessibility/Remoteness Index of Australia (ARIA)

The ARIA classification was developed in 1997 by the then Commonwealth Department of Health and Aged Care, based on a continuous measure of remoteness (also called ARIA) developed by National Key Centre for Social Applications of Geographic Information Systems. In this classification, an ARIA category is allocated on the basis of the average ARIA index score (between 0 and 12) within an area (such as an SLA). The ARIA index score is based on the road distance from the closest service centres in each of four classes (as defined using 1996 census population data). ARIA index scores, and therefore ARIA categories, are capable of being updated over time as populations change. ARIA categorises areas as 'highly accessible', 'accessible', 'moderately accessible', 'remote' and 'very remote'.

As shown in Table F1, ARIA index values have been ranged into ARIA classes.

**Table F1: Structure of ARIA classification**

Class	Abbreviation	Index Value Range
Highly accessible	HA	0–1.84(a)
Accessible	A	>1.84–3.51(a)(b)
Moderately accessible	MA	>3.51–5.80(c)
Remote	R	>5.80–9.08(d)
Very remote	VR	>9.08–12(e)

Notes: (a) The cut-offs used are in practice slightly different from the values published by DoHA (DHAC & GISCA 2001) and presented here.

(b) Greater than 1.84 but less than or equal to 3.51.

(c) Greater than 3.51 but less than or equal to 5.80.

(d) Greater than 5.80 but less than or equal to 9.08.

(e) Greater than 9.08 but less than or equal to 12.

Source: AIHW

The classes have been characterised broadly as follows:

- *Highly Accessible*—relatively unrestricted accessibility to a wide range of goods and services and opportunities for social interaction;
- *Accessible*—some restrictions to accessibility of some goods and services and opportunities for social interaction;
- *Moderately Accessible*—significantly restricted accessibility of goods and services and opportunities for social interaction;
- *Remote*—very restricted accessibility of goods, services and opportunities for social interaction;
- *Very Remote*—very little accessibility of goods, services and opportunities for social interaction.

### **Australian Standard Geographical Classification (ASGC) Remoteness Areas**

ASGC Remoteness Areas, released in 2001 by the ABS, is based on an enhanced measure of remoteness (ARIA+) developed by GISCA. The ARIA+ index values (used in ASGC Remoteness Areas) and ARIA index values (used in the ARIA classification) of localities are calculated in a similar manner although there are some differences. For example:

- ARIA+ index values (between 0 and 15) are based on road distance from a locality to the closest service centre in each of five classes of population size (instead of four—as in ARIA).
- ASGC Remoteness categories are given to Census Collection Districts (CDs) on the basis of the average ARIA+ score within the CD. An assessment of remoteness in individual SLAs (or other areas) can then be made on the basis of the ASGC Remoteness Area categories allocated to the SLA's constituent CDs.

ASGC Remoteness categorises areas as 'major cities', 'inner regional', 'outer regional', 'remote' and 'very remote'.

Table F2 shows the ASGC Remoteness Areas and their ARIA+ index value ranges.

**Table F2: Structure of ASGC Remoteness Areas**

<b>Class</b>	<b>Abbreviation</b>	<b>Index value range</b>
Major cities of Australia	MC	0–0.2(a)
Inner regional Australia	IR	>0.2–2.4(b)
Outer regional Australia	OR	>2.4–5.92(c)
Remote Australia	R	>5.92–10.53(d)
Very remote Australia	VR	>10.53–15(e)
Migratory (f)	..	..

Notes: (a) Equal to or greater than 0 but less than or equal to 0.2.

(b) Greater than 0.2 but less than or equal to 2.4.

(c) Greater than 2.4 but less than or equal to 5.92.

(d) Greater than 5.92 but less than or equal to 10.53.

(e) Greater than 10.53 but less than or equal to 15.

(f) Areas composed of off-shore, shipping and migratory CDs. In allocating an ASGC Remoteness

Areas class to an area of land, only the first five classes are applicable.

Source: AIHW

**APPENDIX G: MEMBERSHIP OF THE NATIONAL ALLIED HEALTH ADVISORY COMMITTEE**

Karen Murphy	ACT Health
Brenda McLeod	NSW Department of Health
Christobel Flavell	NT Health and Community Services
Jenny Finch	Queensland Health
Heather Baron	SA Department of Human Services
Lorraine Millar	Tasmanian Department of Health and Human Services
Lise Pittman	Victorian Department of Human Services
Nicole O'Keefe	WA Department of Health

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