

## **Australian Health Ministers' Advisory Committee's Response to Skilling Australia for the future Discussion Paper 2008**

### **Purpose**

The intent of this paper is to provide the Department of Education, Employment & Workplace Relations (DEEWR) with a response from the Australian Health Ministers' Advisory Committee (AHMAC) to the discussion paper "Skilling Australia for the future".

AHMAC has indicated previously that there could be scope to make greater use of the vocational & education training (VET) system in addressing current and future health workforce shortages, noting that

- Delivery could be targeted to those already in the workforce
- VET is incremental in approach, which means that people can build their skills over time to match changing roles
- VET courses could be more readily marketed to older workers, people returning to work, or those wishing to change career while remaining in the workforce.<sup>1</sup>

This paper presents the context for health workforce reform and the case for developing a longer term training strategy given the level of reform being undertaken in this sector. A set of principles to promote effective planning has been drawn from the advice of jurisdictions and through a range of projects currently being undertaken by the National Health Workforce Taskforce (NHWT) for AHMAC in its work program 2007/09. This has been based on information provided by all jurisdictions that is available to them at this time. It is noted that for optimal planning for the proposed allocation of training places jurisdictions will need adequate lead time to work with stakeholders and other agencies to strengthen existing local strategies and investigate potential opportunities.

AHMAC welcomes the establishment of Skills Australia and the opportunity to respond to the discussion paper 'Skilling Australia for the future'. The questions as listed in the discussion paper have been considered in the preparation of this response.

- How should Skills Australia interact with industry groups to ensure that it has access to the most appropriate and up to date data?
- What sources of data on skills shortages should Skills Australia access?
- How will the Industry Skills Councils ensure that their environmental scans take full account of workforce issues in their area of industry coverage?
- What is the best way to ensure that state based industry advisory bodies are engaged in the model without duplication of roles?

### **Use of workforce planning data to support policy responses**

AHMAC acknowledges Skills Australia's intention to develop, collect and disseminate data about the current and emerging skills needs in Australia, together with research and policy advice. A major difficulty for workforce planners is the lack of comprehensive, accurate and timely data on which to base projections.<sup>2</sup>

Data is a critical issue in predicting workforce supply and demand for health professions and the NHWT has developed a workforce projection model to undertake projection planning at a national and jurisdictional level for the health sector. This will assist in policy advice AHMAC can provide about training place allocations in both the VET and higher education sectors. There are a range of limitations in the current training system data that is collected at this time.

AHMAC believes that it is desirable to have a single agreed source of authoritative data on which to base projections of future need and the formulation of appropriate policy responses, including increasing supply and redesigning healthcare roles to meet changing service models and projected shortages.

The NHWT is developing for AHMAC rigorous national workforce data sets that will enable projections of workforce supply and demand for the future, and will be in a position to contribute to foundational data for planning future places. This needs to include reference to specific data from jurisdictions about local requirements. Such projections cover the public, private and not for profit sectors.

Following agreement by the Council of Australian Governments in April 2006, the Australian Health Ministers' Conference and the Ministerial Council on Education, Employment, Training and Youth Affairs now hold an Annual Workforce Meeting where it provides such projections for university places in health as a basis for future planning. This is supported by a Joint Working Group of representatives of AHMAC and the Australian Education Systems Officials Committee. Given the overlap and progressive integration of the tertiary and vocationally trained workforces in health, AHMAC believes there would be value in a similar arrangement being put in place between it and Skills Australia to consider future needs and policy responses.

AHMAC established the Health Workforce Principal Committee (HWPC) and the NHWT in order to prioritise action in health workforce planning and reform at a national level. The HWPC comprises senior Australian Government and state and territory government officials with responsibility for providing advice on health workforce issues to health ministers. As jurisdictions are major employers of health workers and funders of health services in Australia, each jurisdiction is a key stakeholder in the prospective education and training of the health workforce.

### **Role of the Industry Skills Councils**

AHMAC supports the role of the ISCs in brokering training between health service providers and registered training organisations. This, however, needs to be done firstly in the context of ISCs understanding government policies and reform directions. The ISCs therefore need to build robust relationships with the jurisdictions to become fully informed of each jurisdictional context and current workforce reform programs before working directly with health service providers. There is an amount of work being undertaken with the jurisdictions in addition to the national work of the NHWT. The engagement of stakeholders and an ongoing process of consultation needs to be well implemented and cognisant of not establishing parallel or duplicate planning processes.

The development of an effective health workforce training strategy will be dependent on the level to which key players in jurisdictions, industry/enterprises and education and training providers are able to work together for improved outcomes for the health workforce. Whilst AHMAC welcomes the enhanced role of the ISC in the brokering

of training and strengthening of enterprises workforce development strategies, arrangements must be developed that enables jurisdictions to collaborate with the ISC and the state based industry advisory bodies within their particular jurisdiction's context.

### **Current health workforce environment**

It is clearly stated in the Productivity Commission's report that a 'growing demand for health services and a tightening labour supply will add to the pressures on Australia's health system and its workforce in the future'.<sup>3</sup>

The Productivity Commission noted that while governments and other stakeholders have been initiating a range of changes to the health workforce, further reform is needed. The key objective of workforce reform should be to enhance community access to high quality, safe, efficient, effective and financially sustainable health services. There are significant opportunities for greater workforce innovation in achieving these objectives.

The National Health Workforce Strategic Framework (NHWSF) was adopted by Australian Health Ministers in 2004. The Productivity Commission supported the NHWSF principles, including:

- A workforce distribution that optimises equitable access to health care for all Australians, and recognise the specific requirements of people and communities with greatest need
- Cohesive action among the health, education, vocational training and regulatory sectors to promote a health workforce that is knowledgeable, skilled, competent, engaged in life long learning
- Making optimal use of available skills and ensuring best health outcomes through complementary realignment of existing workforce roles or the creation of new roles.

Without action, the supply and demand influences will add to the current problems facing the health workforce and thereby detract from health outcomes. Increasing the number of education and training places for health workers is a necessary response to current workforce shortages and growing demand for health services. In addition, strategies to improve recruitment, retention and re-entry and to use the skills of the existing workforce in the most efficient and effective manner will further lessen the impact of workforce shortages and distribution problems.

The Community Services & Health (CS&H) industry is faced with an increasing demand for its services from an ageing population, and is experiencing unprecedented expectations from consumers. In response, the health services system is reforming its delivery of community services and health care towards a client/consumer-focussed, coordinated multidisciplinary team approach. The strategic direction towards an increased emphasis on health promotion, prevention and early intervention challenges the current health workforce to improve its knowledge of relevant skills and engage in new practices to meet the service demands.

Key facts that impact on the future planning for health workforce education and training include:

- It is estimated that by 2010 nearly half the population will be aged 45 years or over, and by 2047 the proportion of over 65s will have doubled, being 25% of the

population and the over 85s tripled to 5.6% of the population. The over 55s are currently the heaviest consumers of medical services; expenditure on the over 65s is around 4 times more per person than those under 65; and expenditure on the over 85s is around 6 to 9 times more than those under 65.

- The health workforce has been growing at nearly double the rate of the population. Nurses increased by 12.5 percent and medical professionals by 13.9 percent in recent years. The growth in allied health professionals is increasing at a much greater rate than medical practitioners<sup>4</sup>. As noted, the growth in workforce demand has partly offset, and in some cases, outstripped overall growth in workforce supply.
- The ageing workforce will also be a long term problem with declining birth rates and increased life expectancy resulting in fewer people of working age in the population and increased competition for workers, especially skilled workers. It has been estimated that 37% of the 2002 aged care nursing workforce and 26% of the remaining nursing workforce will retire by 2012, resulting in a loss of 65,873 nurses.<sup>5</sup>
- There are currently very low numbers of Aboriginal and Torres Strait Islander people working in all health professions.
- Some rural and remote communities have very limited access to basic primary care services. For those requiring frequent care for chronic conditions, there is greater disruption to employment, education and family life due to regular travel or extended periods away from home. Health workers in rural and remote areas also face more limited access to supporting health professionals, facilities and locum services.
- The health workforce is more reliant on part-time workers than the wider workforce. In 2004, nurses worked an average of 32.8 hours per week. Despite increasing numbers of health workers, the decrease in working hours reduces, and in some cases counteracts, any potential increases in FTE. In 2004 there were 11.64 FTE nurses and 2.8 FTE medical practitioners per 1000 population.<sup>6</sup>

The Australian, state and territory governments have investigated options to improve the health workforce in recent years, including through the Productivity Commission's 'Australian Health Workforce' study, the Commonwealth Government's recent rural and remote health workforce audit, and the establishment of the NHWT work program, endorsed by the Australian Health Ministers' Conference in March 2008.

Due to the timeframes associated with training many health professionals and the imminent impacts of supply and demand issues, it is essential that a sustained focus is placed on developing a health workforce of sufficient skill mix and number to underpin future service delivery and population health outcomes.

The demand for CS&H university graduates will continue to increase into the future, especially with current skills shortages experienced in some professions including nursing, physiotherapy, podiatry and social work. Governments are now realising the high costs associated with the reliance on university trained health workers (in terms of both education and salary). It is becoming increasingly evident that a team of health workers with various training and skill levels can more efficiently and effectively meet the health care needs of the community. Vocationally trained health

workers can assist in meeting all of these strategies to improve and strengthen Australia's health workforce.

This team structure would see the largest group of health workers who manage day-to-day clinical service provision being vocationally trained health workers, overlapping with health workers who provide clinical and advanced or comprehensive clinical services, who again overlap with much smaller bodies of health workers who provide highly technical health care and services.

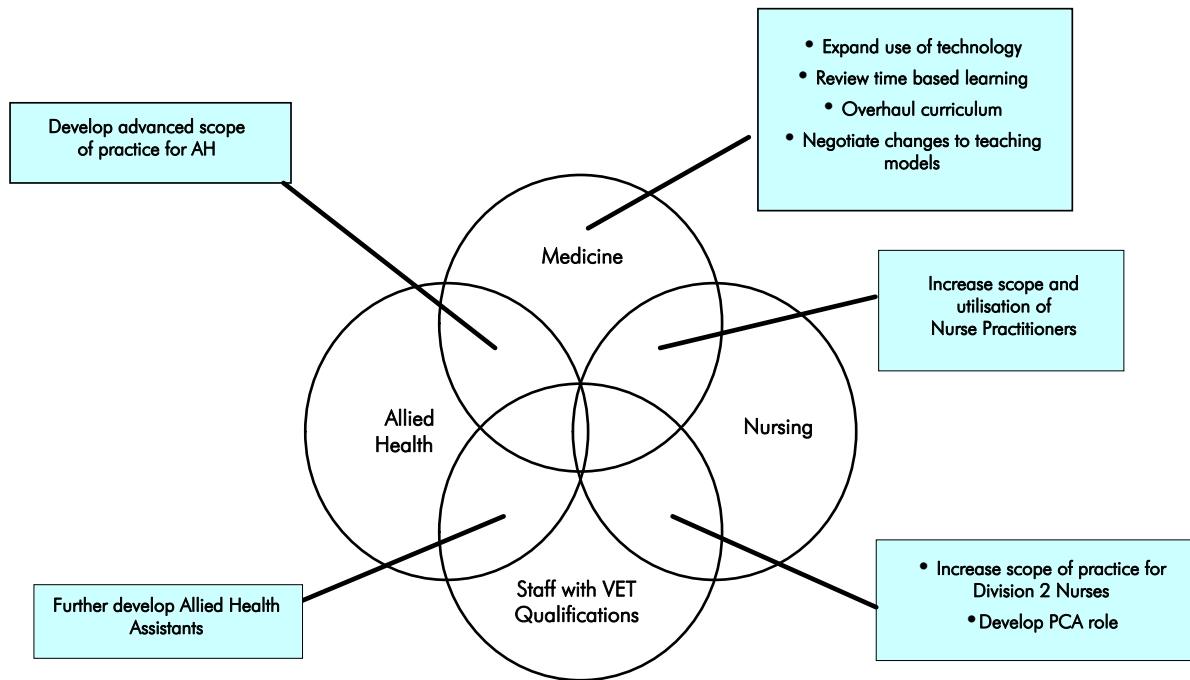


Figure 1: Integration of Health Workforce Source: Department of Human Services, Victoria proposal to the Skills Australia Discussion Paper April 2008

Workforce planning therefore should not simply be concerned with planning the numbers required in each profession, but more strategically focus on planning the provision of professionals with the mix of skills necessary to ensure adequate provision of services.

Optimal use of the health workforce against this model has the potential to increase the overall future capacity of the health workforce. In order to realise this potential, there needs to be sufficient supply of the first tier of health workers.

In summary, the role of vocationally trained health workers in the Australian health workforce is steadily increasing in importance. Making better use of existing vocationally trained workers and increasing the supply of new vocationally trained workers will play a significant role in developing an effective health workforce.

Expanding the use and service roles of VET trained staff has the potential to address some of the identified workforce issues and policy drivers within the industry. These include:

- Addressing barriers to service provision and ensuring all Australians have access to high quality, effective, efficient and financially viable health services.

- Reducing the reliance on university-trained professionals through better use of assistant and support roles.
- Assisting in equitable distribution of health workers and therefore services (for example using the skills of health workers in rural and remote areas to full advantage).
- Aligning skill development with the identified service and client/consumer needs of the CS&H sector through innovative education and training models.
- Responding more quickly to skills shortage pressures through a competency-based framework, shorter course length, and work-based approaches to training and recognition of prior learning and skills gap training.
- Increasing and expanding the supply pool from which CS&H industry staff can be drawn by targeting sections of the workforce typically under-represented in CS&H such as older workers, school leavers or those who are unwilling/unable to undertake university study.
- Supporting competency-based models that provide capacity for lifelong learning, through a structure of articulated, multiple career pathways which have the potential to ultimately impact positively upon productivity, work practices and staff retention.
- Engaging with the local community to respond to the immediate workforce needs through flexible and tailored career pathways.

In addition to workforce reform work being undertaken by individual jurisdictions, work to maximise the system's ability to utilise the VET workforce as part of a coordinated response to meeting growing service demand is underway at a national level. The NHWT has two key projects, firstly to investigate perceived barriers and disincentives to the better utilisation of VET trained workers in the health sector. The uptake of VET trained staff is perceived to be less than the available capacity but the disincentives have not been identified or enumerated. The NHWT will initially analyse the benefits for the health care sector, and recommend actions that will increase the knowledge about the availability of VET trained workers as part of health workforce capacity and facilitate the development of a collaborative strategy between VET providers and health services to upskill the existing workers who would benefit from VET qualifications.

The second project will investigate the availability of clear, accessible, complementary and easy to navigate education and training pathways for health sector workers that meet the future needs of the health sector. This includes a focus on articulation of VET training and higher education, recognition of prior learning and improvements in quality training delivery and assessment. It strongly supports a paradigm shift from a 'time served' to a 'competency' based or an outcomes approach to education and training that is open to new collaborations and solutions. This project will inform provide policy advice and make recommendations for improved system development between education and health sectors.

The NHWT focus on innovation and reform of the workforce also provides a number projects that are examining the possibilities and implementation strategies for VET trained workers to take on roles that have been traditionally taken up by tertiary qualified professionals. There is potential to use task substitution and role redesign

for improved service delivery as well as developing career progress and new pathways for VET trained staff.

The potential for utilising the health workplace as a training platform in collaboration with VET training providers will also be investigated. The NHWT's project activities will develop recommendations and service models that will attract and encourage the up skilling of the local workforce through local on the job training initiatives.

The current health workforce is not a discrete one – it interacts significantly with the community and disability services sector. There are important opportunities to provide career pathways across these sectors as most health occupations are found in both sectors. Increasingly, there are common competencies and skill sets being identified, and given the emphasis on client centeredness and holistic models of care, this needs to be supported for the future vibrancy of the health workforce, and its evolving service delivery. Workforce planning will need to focus across these sectors at all levels to ensure quality, consistency and transportability of skills.

There may be a strategic opportunity to consider joint planning between the senior officials that support the relevant ministerial councils governing both higher education (MCEETYA) and vocational training (MCVTE) and health (AHMC) and community and disability services (ACDSMC) within their existing planning structures.

Those in rural, regional and remote areas consistently report difficulties with recruitment and retention of adequate numbers of qualified workers. Broad strategies have included active migration to rural areas for a range of critical workforces such as general practitioners. Recent research suggests that recruiting unemployed or underemployed local residents into training and employment through collaborations between enterprises, local government, training providers and the community are the most effective means of increasing a sustainable workforce in these areas. This preferred strategy is strongly supported by some jurisdictions' experience with critical skills shortage and chronic recruitment problems. It is noted however that in some rural and remote communities, that are predominantly indigenous, the low levels of literacy and numeracy preclude local residents accessing VET training. It is important that opportunities to work with training organisations and complementary pre-vocational training such as bridging courses and mentoring programs are available.

It is also important to note that 60 per cent of the places are targeting existing workers which are considered to be the financial responsibility of the states and territories. The funding arrangement for this training over the four years is not yet confirmed. The subsequent analysis on the ongoing cost burden through new employment arrangements is also not known but can be surmised to be significant over time.

### **Vocational education and training environment**

The VET system plays an important role in assisting the matching of the skills required by employers to the skills offered by workers.<sup>7</sup> It is predicted that there is an increased need for higher level qualifications to match the more complex interactive and cognitive<sup>8</sup> skills needed by industry and this means an increase in training programs from Certificate III level and higher. This has, however, a flow on effect to the training sector, requiring the up-skilling of trainers to ensure that there is an available trainer workforce to deliver the level and industry relevant training in these higher level qualifications. This is a shared concern of jurisdictions as is the need to have training provided at all levels of qualifications.

## **Access and equity**

The demographic profile of a region is significant, particularly for participation at higher qualification levels. The proportion of non-English speakers living in a region has a significant positive effect on participation at a diploma level. As socioeconomic status of a region increases, rates of participation in VET decrease.<sup>9</sup>

There are also inequalities in the access of existing workers to workforce skills development opportunities<sup>10</sup>. Currently much of the training at the associate professional level (diploma and advanced diploma) appears to be undertaken at an individual's initiative and expense. In 2007 the Australian Government extended the employer incentives for apprentices to higher level VET qualifications<sup>11</sup>.

## **Principles for the allocation of training places**

The principles proposed below are to be considered in conjunction with the guiding principles of the National Health Workforce Strategic Framework. The set of principles for the allocation process of training places outlined were developed by drawing on responses provided by jurisdictions. The emphasis was to be able to demonstrate equity, transparency, and objectivity in any methodology or set criteria for allocation processes. There are a range of additional comments provided by individual jurisdictions based on their particular context in which health workforce training currently occurs, and these are captured under the relevant supporting principles.

The set of proposed principles are:

1. Plan for reform not just 'business as usual'
2. Ensure clear and transparent allocation processes that support access and equity
3. Sustained investment is essential for the ongoing development of health workforce training
4. Build and value partnerships that create and sustain a strong health workforce

### **1. Plan for reform not just 'business as usual'**

A policy framework is required for health workforce education & training that promotes collaborative and consultative planning, allocation and monitoring of VET training places. It must take into account the:

- Need for alignment of vocational training outcomes with projected service demands and evolving models of care.
- Appropriate data collection, analysis and reporting arrangements that need to be fully developed.
- Development of an integrated and seamless health workforce.
- Development potential for role redesign, expanded scopes of practice, and skill sets for multidisciplinary approaches and client centred practice as the critical change drivers.
- Pathways to employment and sustainable jobs, particularly in rural and remote communities where infrastructure for training and employment is under-developed.

The priority health occupation of nursing is acknowledged. The following occupations have been identified as being in high need of training places across all

levels of qualifications, being allied health workers, aboriginal health workers, and mental health workers. The need and subsequent drivers are described as:

- Mental health, aged care and community services, including upskilling existing workers to deal with the greater complexity of client need and changing models of care as well as opportunities for career progression.
- Additional places across acute and primary health care, in particular through an increased role for enrolled nurses and allied health assistants to manage the projected growth in service demand.
- Effective health services for Aboriginal and Torres Strait Islander communities supported through pathways to employment and preparation for engaging workers in training.
- Increased emphasis on health promotion, prevention and early intervention strategies delivered through community settings across a range of occupations.
- Dental assistants to address looming shortages.
- Trained workers in anaesthetic technology; non emergency client transport; and ambulance services are emerging needs.
- Need for population health qualifications to work in rural and remote communities.

Some jurisdictions suggest that the planning for reform response needs to occur more quickly than in previous initiatives in order to ameliorate skills shortage pressures through competency based training, revised course lengths and work based approaches to training. This is also aimed at reducing the reliance on university trained professionals by advancing the utilisation of assistant and support roles more broadly.

## **2. Ensure clear and transparent allocation processes that support equity and access**

The effective planning for allocation of training places is premised on reliable data that provides workforce projections, clinical training needs and capacity, and an assessment of the requisite skills and qualifications to build the appropriate workforce across Australia. Jurisdictions have the primary responsibility for the planning of their health workforce and as such are central to informing any allocation planning. It is critical that a national workforce perspective is developed to provide health ministers with appropriate advice. Jurisdictions contribute considerable understanding of local context including opportunities and constraints when seeking to distribute training places according to highest need weighted against access and capacity to provide quality training.

## **3. Sustained investment is essential for the ongoing development of health workforce training**

The skills shortage and reform strategy demands that an ongoing investment is needed for the future development of the health workforce. The most significant concern raised is the need to have training outcomes translate into employment outcomes which will require a coordinated approach from all tiers of government. The focus of Productivity Places Program on the upgrading of existing workers' skills is strongly supported and an emphasis on training being available at all levels of qualification is important. For some jurisdictions maintaining a growth strategy for training will be

dependent on other community initiatives and include employer and employee incentives for enterprises to retain newly skilled or up-skilled staff. For others there is emphasis on foundational literacy and numeracy skills to ensure the broadest possible representation can be achieved within the health workforce.

#### **4. Build and value partnerships that create and sustain a quality health workforce**

There are a number of policy and implementation challenges appearing for jurisdictions to consider in their planning for the allocated training places. The interdependencies between the enterprise, the training providers, industry representatives and tiers of government will require that a coordinated effort is maintained over time. In some instances, jurisdictions foresee the need to build capacity and readiness at a community, health service, and training provider level. The shift to 'planning the provision of professionals with the mix of skills necessary to ensure adequate provision of services'<sup>12</sup> will require a commitment to building the support structures and systems across communities, provider organisations and governments.

Not all regions in Australia are equally placed when it comes to responding to changes in labour market demands. Regions with unusually high participation in training and employment are characterised by responsive community-based models in which partnerships figure strongly.<sup>13</sup>

During the future planning phases for training places need to be informed by AHMAC and the jurisdictions and the progress of work reform being undertaken. It will also require a range of inputs including work undertaken by industry through the Community Services & Health Industry Skills Council and the state based industry advisory bodies, in consultation with VET training providers, and informed by DEEWR.

It is understood health services are not as yet well placed to take up the potential of VET trained staff or maximise reform opportunities with their own workforces. It is expected that much of this initial information will be drawn from the existing workforce reform programs at the national level with the NHWT and jurisdictions at the local level as a pre-requisite for establishing effective processes that endure through such a significant period of reform over the next three years.

#### **Response to the allocation of additional VET places**

The announcement of the allocation of 50,000 VET places over three years, for areas of national skills shortage in health occupations, has been well received and represents a significant opportunity to not only consolidate recruitment into the health workforce but improve the retention of skilled workers, and support the imminent challenge of reformed models of care and role redesign in health services over time.

In the time available, jurisdictions have sought to indicate their needs and capacity to take up the additional VET places. Given the limited time available to evidence this response, the majority of figures are presented as total numbers, with specific detail on numbers for each occupational group to be provided by jurisdictions in their individual submissions. In planning access to the allocation of the additional 50,000 places, AHMAC would seek that Skills Australia consider:

- In order to enable the development of new and expanded health workforce roles, including the establishment of associated training capacity, it would be

appropriate to allocate most of the VET places towards the end of the three year period. Given the large numbers involved, however, AHMAC considers there are risks associated with achieving the recruitment targets for the new training places in the timeframe specified and would welcome further dialogue on this as part of the planning process.

- In order to increase overall supply of the health workforce, it would be sensible to prioritise the new training places for those people who are currently not employed in the health workforce.

It has been estimated by jurisdictions that the allocation of 50,000 additional VET places can be utilised by the health sector over the next three years. It should be noted that these are initial estimates and will be refined further during the planning process,.

|                    | <b>2009</b>  | <b>2010</b>   | <b>2011</b>   | <b>Total</b>  |
|--------------------|--------------|---------------|---------------|---------------|
| Queensland         | 1,464        | 3,416         | 4,880         | 9,760         |
| Northern Territory | 68           | 158           | 225           | 450           |
| Victoria           | 2,771        | 6,465         | 9,235         | 18,470        |
| NSW                | 2,910        | 6,792         | 9,703         | 19,405        |
| Tasmania           | 135          | 315           | 450           | 900           |
| South Australia    | 570          | 1,330         | 1,900         | 3,800         |
| West Australia     | 912          | 2,129         | 3,042         | 6,083         |
| ACT                | 165          | 385           | 550           | 1,100         |
| <b>Total</b>       | <b>8,994</b> | <b>20,989</b> | <b>29,985</b> | <b>59,968</b> |

The following lists the range of priority occupations identified at this time is as follows. It is expected that this list will also be refined as further planning is undertaken.

- Aboriginal Community Worker-general practice
- Aboriginal Community Worker-remote settings
- Aboriginal Health Worker (non clinical)
- Aboriginal Public Health/Environmental Health Workers
- Aboriginal Mental Health Worker
- Aged Care/Home & Community Care Worker
- Allied Health Assistants
- Allied Health Assistants/Community Rehabilitation Assistant
- Dental Assistant
- Community Service Workers (non clinical)
- Community Service Workers: Alcohol & Other Drugs/Mental Health
- Enrolled nurse (Cert IV & V, Dip)
- Enrolled nurses, Adv diploma (Cert VI)
- Patient Care Assistant
- Pharmacy Technician/Assistant
- Ambulance Services/ Paramedical Science
- Laboratory Skills
- Health Services Assistants
- Training And Assessment
- Population Health
- Indigenous Population Health
- Nursing – not specified
- Dental Technician

There is an increasing intersect between the workforce engaged by the disability and health sectors. Whilst it is acknowledged that disability services workforce resources

are critical to overall health services delivery, this workforce is largely located in the community services and disability sectors. AHMAC therefore proposes that training needs for the disability sector need to be taken up as part of the broader VET sector in the remaining *Skilling Australia* allocation of 400,000 training places.

---

<sup>1</sup> Productivity Commission, 2005, *Australia's Health Workforce*, Research Report, Canberra

<sup>2</sup> Iliffe, J., July 2007 "A new approach to Australia's health workforce", Centre for Policy Development, <http://cpd.org.au>

<sup>3</sup> Productivity Commission, 2005, *Australia's Health Workforce*, Research Report, Canberra

<sup>4</sup> Australian Institute of Health and Welfare, 2004, *Australia's Health 2004*, Canberra

<sup>5</sup> Access Economics, 2004, *Employment in Nursing Occupations*, report for the Department of Health and Ageing.

<sup>6</sup> Australian Institute of Health and Welfare, 2006, National health labour force series, Number 38, *Medical labour force 2004*, December 2006, Canberra, AIHW cat. No. Hwl 39

<sup>7</sup> Richardson, S. *Research overview 2.3. What is a skill shortage?* NCVET 2006

<sup>8</sup> Lowry, D. Molloy, S. & McGlennon, S. *Research Overview Future skill needs: projections and employers' views*, NCVET 2006

<sup>9</sup> Lamb, S. *Research Overview 4.2. Participation in vocational education and training across Australia: a regional analysis*. NCVET 2006

<sup>10</sup> Australian Industry Group, *Skilling the Existing Workforce Consultation Paper An Australian Industry Group Project*, April 2007 Australian Industry Group

<sup>11</sup> TAFE Directors Australia *investing in Productivity! Engaging TAFE to accelerate Workforce Development and Job participation: Response to the Council for Australian Governments human capital reform agenda*, March 2007

<sup>12</sup> Duckett, S.J. *Health Workforce Design for the 21<sup>st</sup> Century*. LaTrobe University, June 2004

<sup>13</sup> Lamb, S. *Research Overview 4.2. Participation in vocational education and training across Australia: a regional analysis*. NCVET 2006