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Suggested citation: Health Workforce Australia 2014: Australia’s Health Workforce Series – Speech Pathologists in Focus
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Introduction

About HWA

Health Workforce Australia (HWA) is a Commonwealth statutory authority established to build a sustainable health workforce that meets Australia’s healthcare needs. HWA leads the implementation of national and large scale reform, working in collaboration with health and higher education sectors to address the critical priorities of planning, training and reforming Australia’s health workforce.

Australia’s health system is facing significant challenges, including an ageing population and an ageing health workforce; changing burden of disease, in particular a growing level of chronic disease; and increased demand for health services with higher numbers of people requiring complex and long-term care. To achieve HWA’s goal of building a sustainable health workforce that meets Australia’s health care needs, health workforce planning is essential – and in health workforce planning, understanding the number and characteristics of the existing health workforce is the essential first step.

Australia’s Health Workforce Series is designed to focus on describing particular professions, settings and issues of interest to aid workforce planning. This issue of Australia’s Health Workforce Series examines speech pathologists, bringing together available information to describe the speech pathologist workforce, including number and characteristics, potential data sources to measure workforce activity, and an analysis based on information presented.

This publication is divided into four main parts:

1. **What is a speech pathologist** – a brief overview of the speech pathologist role and training pathway, and descriptions of the key regulatory bodies and peak associations.

2. **What is known about this workforce** – presentation of data from different sources, describing the size and characteristics of the workforce, student and migration inflows into the workforce, and potential data sources that could be used to measure workforce activity.

3. **What issues are expected to impact supply and/or demand for speech pathologists** – a summary of issues obtained through stakeholder consultation.

4. **HWA’s assessment of the workforce** – including an assessment of existing workforce position (whether workforce supply matches demand for services or not); presentation of a set of workforce dynamics indicators, used to highlight aspects of the current workforce that may be of concern into the future; and a comparison of the speech pathologist workforce’s key characteristics with other health workforces.
What is a speech pathologist?

Speech pathologists diagnose, treat and provide management services to people of all ages with communication disorders, including speech, language, voice, fluency and literacy difficulties, or people who have problems with eating or swallowing. Speech pathologists may perform the following tasks:

- establish the exact nature and severity of each client’s communication or swallowing problems, which may require the use of special diagnostic equipment and assessment tests
- plan and carry out treatment and management in accordance with best available evidence, taking into account age, past and present social environment, and physical and intellectual abilities
- treat children who are unable to communicate effectively due to conditions such as cleft palate, hearing loss, delayed speech or language development, cerebral palsy, Down syndrome, autism, or emotional disturbances
- treat adults whose language, speech or voice has been affected by surgery, disease or disorders of the nervous system, brain damage or hearing loss
- provide intervention and strategies for children and adults who have a stutter
- assess and treat infants, children and adults who have difficulty sucking, chewing and swallowing
- act as a consultant to education, medical, dental and other health professionals
- provide ongoing counselling, advice and information to clients and families as a part of overall treatment
- provide public education for a population approach to early identification and intervention across the lifespan.

Speech pathologists can provide individual therapy, work in small groups, work within a classroom, become involved in home-based programs, provide resources and information, and give advice and direction to clients, their carers and other professionals.

Speech pathologists work in a variety of settings, including early intervention, schools, hospitals, community and rehabilitation centres, aged care facilities, mental health services, specialist centres, disability services and in private practice.

Certified Practising Speech Pathologist status can be earned by speech pathologists who meet the requirements of Speech Pathology Australia’s Professional Self-Regulation program.

---

3 Ibid.
How are speech pathologists trained?

A person must complete either an undergraduate (Bachelor) or postgraduate (Graduate-entry Masters) university degree in speech pathology to become a speech pathologist (Figure 1). Entry level speech pathologists are trained to meet the competencies which enable them to work across the life span with all individuals with communication and swallowing disorders.

There are a number of speech pathology university courses offered throughout Australia. Speech Pathology Australia (refer to ‘Regulatory bodies and associations) can accredit undergraduate and postgraduate training courses against their competency based standards. Graduates who have completed a SPA-accredited course are eligible for SPA membership.

Most employers in Australia require prospective employees to be eligible for Practising membership of Speech Pathology Australia.

Figure 1: Speech Pathology education pathway in Australia
Regulatory bodies and associations

Speech Pathology Australia (SPA).

SPA is the national peak body for the speech pathology profession in Australia. SPA can accredit university training courses against the competency-based occupational standards for speech pathologists. Speech pathologists must have obtained their qualification from an accredited course to become a practising member of SPA. SPA also conducts the assessment of overseas-trained speech pathologist’s skills for equivalency with Australian-trained speech pathologist, for migration purposes.

The profession of speech pathology is not included in the National Registration and Accreditation Scheme (NRAS). However SPA has a self-regulation program in place, through which the clinical, professional and ethical standards of members are regulated.

Practising membership of SPA is a requirement for Medicare provider status, private health fund provider registration, and eligibility to provide services under a range of Commonwealth-funded and third-party funding and insurance bodies.
What is known about this workforce?

In workforce planning, the first key step is to understand the existing workforce. In this section, information is presented from a range of sources to describe the existing number and characteristics of the speech pathologist workforce.

Data sources and limitations

- **Australian Bureau of Statistics (ABS) Census of Population and Housing (the Census).**
The Census is a descriptive count of everyone who is in Australia on one night, and of their dwellings. Its objective is to accurately measure the number and key characteristics of people who are in Australia on census night, and of the dwellings in which they live. Information in the Census is self-reported, meaning information is dependent on individuals’ understanding and interpretation of the questions asked. For example, when reporting occupation, a person may self-report as working in a particular occupation, but not necessarily be appropriately qualified/meet registration standards (where a registrable profession). However, the Census is able to provide a picture of the changing size and characteristics of the reported speech pathologist workforce, which is not currently available through any other source.

- **Department of Education (DE).** DE conduct the Higher Education Statistics Collection, which provides a range of information on the provision of higher education in all Australian universities. Information on tertiary course commencements and completions by field of education is presented in this publication. Cautions to note with the DE data include:
  - Information may include courses allocated to the speech pathology field of study that are not accredited by Speech Pathology Australia.
  - The accuracy of coding courses to field of education is the responsibility of each university, and is subject to the knowledge of those allocating the codes.
  - Information includes combined courses where the course has been allocated to two fields of education. Combined courses are courses designed to lead to a single combined award or to meet the requirements of more than one award.

- **Department of Immigration and Border Protection (DIBP).** DIBP information is administrative by-product data, reporting the number of temporary and permanent visa applications granted to speech pathologists.

- **Speech Pathology Australia.** SPA maintains an ongoing database of its members which records demographic and practice details, including age, gender, location, country of entry-level qualification, employment sector and area of specialty, as well as information on student membership. Although membership information from SPA is more timely than Census information, it is not mandatory for speech pathologists to be members of SPA to practise as a speech pathologist in Australia.
ABS Population of Census and Housing

In the Census, the Australian and New Zealand Standard Classification of Occupations (ANZSCO) is used to publish occupation statistics. In ANZSCO, a speech pathologist is defined as “a person who assesses and treats people with communication disorders or physical problems associated with eating or swallowing”.

Please note, information is presented for people who self-reported as employed speech pathologists in the Census (regardless of level of education). This includes those people working for an employer or conducting their own business, including those with their own incorporated company as well as sole traders, partnerships and contractors. Also, the ABS randomly adjusts cells to avoid the release of confidential data, so there can be slight discrepancies in totals when comparing Census.

**Age and gender**

The number of speech pathologists has grown from 1996 to 2011, with particularly strong growth (of 1,428 speech pathologists or 37 per cent) from 2006 to 2011 (Table 1).

Across all selected census years, almost all employed speech pathologists were female.

Table 1: Number of employed speech pathologists by gender, 1996 to 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>77</td>
<td>86</td>
<td>107</td>
<td>134</td>
<td>74.0</td>
</tr>
<tr>
<td>Females</td>
<td>2,245</td>
<td>2,898</td>
<td>3,760</td>
<td>5,161</td>
<td>129.9</td>
</tr>
<tr>
<td>Persons</td>
<td>2,322</td>
<td>2,984</td>
<td>3,867</td>
<td>5,295</td>
<td>128.0</td>
</tr>
<tr>
<td>% Female</td>
<td>96.7</td>
<td>97.1</td>
<td>97.2</td>
<td>97.5</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: ABS Census of Population and Housing, 1996 to 2011

The speech pathology workforce has a young age profile, with less than 10 per cent of the workforce aged 55 years and over in 1996 and 2011 (Table 2).
Table 2: Employed speech pathologists, age profile, 1996 and 2011

<table>
<thead>
<tr>
<th></th>
<th>Per cent aged 55 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996</td>
</tr>
<tr>
<td>Males</td>
<td>11.7</td>
</tr>
<tr>
<td>Females</td>
<td>2.2</td>
</tr>
<tr>
<td>Persons</td>
<td>2.5</td>
</tr>
</tbody>
</table>

n.a. not applicable
Source: ABS Census of Population and Housing, 1996 and 2011

Figures 2 to 5 below show a detailed age and gender breakdown of employed speech pathologists for the selected census years. The female dominance of the workforce, and the large growth in the number of females entering the workforce 2006 and 2011 can clearly be seen.

Figure 2: Number of employed speech pathologists by age and gender, 1996

Source: ABS Census of Population and Housing, 1996

Figure 3: Number of employed speech pathologists by age and gender, 2001

Source: ABS Census of Population and Housing, 2001
Hours worked

Male speech pathologists average weekly hours worked were substantially higher than female average hours in 1996 and 2011 (Figure 6). However this had little impact on overall average weekly hours worked due to the low number of male speech pathologists.

Overall, there was little change in average weekly hours worked from 1996 to 2011 – falling by less than one hour (Figure 6).

Source: ABS Census of Population and Housing, 1996 and 2011
Figure 7 shows male average weekly hours worked changed substantially in some age cohorts (35-44, 55-64 and 65+). However changes should be considered with caution due to the small number of male speech pathologists.

For females, changes in average weekly hours worked between 1996 and 2011 were minimal across most age cohorts, except for those aged 55-64 and 65 and over (Figure 8). However, the same as males, these changes should be considered with caution due to the small numbers in these groups. Due to the small numbers, these changes also had little effect on overall average weekly hours worked.

Figure 7: Employed male speech pathologists by age and average hours worked, 1996 and 2011

Figure 8: Employed female speech pathologists by age and average hours worked, 1996 and 2011

Source: ABS Census of Population and Housing, 1996 and 2011
Aboriginal and Torres Strait Islander status

Over the four selected census years, there were few employed speech pathologists of Aboriginal and Torres Strait Islander status (Table 3).

Table 3: Employed speech pathologists by Aboriginal and Torres Strait Islander status, 1996 to 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal and Torres Strait</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Islander</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Aboriginal and Torres</td>
<td>2,329</td>
<td>2,986</td>
<td>3,848</td>
<td>5,278</td>
</tr>
<tr>
<td>Strait Islander</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (a)</td>
<td>2,338</td>
<td>2,998</td>
<td>3,869</td>
<td>5,296</td>
</tr>
</tbody>
</table>

(a) Includes Aboriginal and Torres Strait Islander status not stated.

Country of birth

In 1996 and 2011, most employed speech pathologists were born in Australia, followed by the United Kingdom (Table 4). However, the percentage of those born in Australia fell slightly between 1996 and 2011 (down 1.8 percentage points) as did the percentage of those born in the United Kingdom (down 2.1 percentage points). This is a result of an increase in the number of speech pathologists born in other countries such as Southern and East Africa and Maritime South-East Asia.

Table 4: Speech Pathologists – top 5 countries/regions of birth, 1996 and 2011

<table>
<thead>
<tr>
<th>Country/region of birth</th>
<th>1996</th>
<th>%</th>
<th>2011</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1,970</td>
<td>84.7</td>
<td>Australia</td>
<td>4,393</td>
<td>82.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>160</td>
<td>6.9</td>
<td>United Kingdom</td>
<td>255</td>
<td>4.8</td>
</tr>
<tr>
<td>Southern and East Africa</td>
<td>59</td>
<td>2.5</td>
<td>Southern and East Africa</td>
<td>169</td>
<td>3.2</td>
</tr>
<tr>
<td>Northern America</td>
<td>32</td>
<td>1.4</td>
<td>Maritime South-East Asia</td>
<td>82</td>
<td>1.5</td>
</tr>
<tr>
<td>New Zealand</td>
<td>23</td>
<td>1.0</td>
<td>Northern America</td>
<td>81</td>
<td>1.5</td>
</tr>
<tr>
<td>Other countries (a)</td>
<td>83</td>
<td>3.6</td>
<td>Other countries (a)</td>
<td>318</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>2,327</td>
<td>100.0</td>
<td>Total</td>
<td>5,298</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(a) Includes not stated and inadequately described
Education

Table 5 shows the number of people who reported working as a speech pathologist by their reported highest level of qualification. Note, in this table:

- the highest level of educational attainment is not necessarily in the field of speech pathology, and
- those that reported as a speech pathologist with lower than a bachelor degree are not eligible for membership of SPA, and therefore would not be recognised as qualified to provide speech pathology services by employers and government departments, including Medicare and the Department of Veterans Affairs.

The only potential exception would be those that are overseas-trained speech pathologists who have been assessed as having equivalent skills and qualifications as an Australian-trained speech pathologist; or Australian-trained speech pathologists who qualified in past years before bachelor programs were introduced.

Those people who reported only certificate level or secondary school training do not meet current registration requirements and are unlikely to be currently registered as a speech pathologist.

Noting the above cautions, across the four selected Census years, most employed speech pathologists reported a bachelor degree as their highest level of educational attainment. While employed speech pathologists holding a bachelor degree experienced the greatest increase in numbers (up 2,292 from 1996 to 2011), those holding a postgraduate degree experienced the largest percentage increase (up 509 percent) over the same period. This is likely a result of a changing education pathway, now with the dual entry pathway to becoming a speech pathologist.

Table 5: Number of employed speech pathologists by highest level of educational attainment, 1996 to 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Postgraduate degree</td>
<td>134</td>
<td>203</td>
<td>408</td>
<td>816</td>
</tr>
<tr>
<td>Graduate diploma and graduate certificate</td>
<td>85</td>
<td>120</td>
<td>100</td>
<td>163</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>1,893</td>
<td>2,480</td>
<td>3,208</td>
<td>4,185</td>
</tr>
<tr>
<td>Advanced diploma and diploma</td>
<td>108</td>
<td>124</td>
<td>83</td>
<td>64</td>
</tr>
<tr>
<td>Certificate</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Year 12 or below</td>
<td>41</td>
<td>44</td>
<td>21</td>
<td>41</td>
</tr>
<tr>
<td><strong>Total</strong>(a)</td>
<td>2,357</td>
<td>3,038</td>
<td>3,868</td>
<td>5,298</td>
</tr>
</tbody>
</table>

(a) Includes not stated, inadequately described and no educational attainment

Note: In 1996 non school qualifications were classified using the ABS Classification of Qualifications. From 2001 onwards, the Australian Standard Classification of Education has been used.

Source: ABS Census of Population and Housing, 1996 to 2011
Sector of employment

In 1996 and 2001, more speech pathologists were employed by state and territory governments than those working in the private sector. However this changed in 2006 and 2011 – with more working in the private sector than in state and territory governments (Table 6).

Table 6: Number of employed speech pathologists by sector of employment, 1996 to 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Commonwealth government</td>
<td>101</td>
<td>146</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>State/territory government</td>
<td>1,189</td>
<td>1,515</td>
<td>1,464</td>
<td>2,166</td>
</tr>
<tr>
<td>Local government</td>
<td>56</td>
<td>12</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Private sector</td>
<td>984</td>
<td>1,331</td>
<td>2,289</td>
<td>3,025</td>
</tr>
<tr>
<td><strong>Total</strong>(a)</td>
<td><strong>2,351</strong></td>
<td><strong>3,019</strong></td>
<td><strong>3,865</strong></td>
<td><strong>5,295</strong></td>
</tr>
</tbody>
</table>

(a) Includes sector not stated.
Source: ABS Population of Census and Housing, 1996 to 2011

Table 6 shows Australia-wide, more speech pathologists worked in the private sector than in the public sector in 2011. Table 7 shows that employment patterns in New South Wales, Victoria and Western Australia influenced this result (with more speech pathologists working in the private sector), as in all other states and territories, more speech pathologists were employed in the public sector than the private sector.
Table 7: Number of employed speech pathologists by sector of employment and state and territory, 2011

<table>
<thead>
<tr>
<th></th>
<th>Commonwealth Government</th>
<th>State/Territory Government</th>
<th>Local Government</th>
<th>Private sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>51</td>
<td>538</td>
<td>0</td>
<td>1,034</td>
<td>1,629</td>
</tr>
<tr>
<td>Vic</td>
<td>5</td>
<td>577</td>
<td>6</td>
<td>849</td>
<td>1,438</td>
</tr>
<tr>
<td>Qld</td>
<td>23</td>
<td>524</td>
<td>0</td>
<td>495</td>
<td>1,042</td>
</tr>
<tr>
<td>SA</td>
<td>3</td>
<td>207</td>
<td>0</td>
<td>206</td>
<td>416</td>
</tr>
<tr>
<td>WA</td>
<td>9</td>
<td>180</td>
<td>0</td>
<td>351</td>
<td>540</td>
</tr>
<tr>
<td>Tas.</td>
<td>0</td>
<td>78</td>
<td>0</td>
<td>53</td>
<td>131</td>
</tr>
<tr>
<td>NT</td>
<td>3</td>
<td>14</td>
<td>0</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>ACT</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>25</td>
<td>70</td>
</tr>
<tr>
<td>Australia</td>
<td>94</td>
<td>2,163</td>
<td>6</td>
<td>3,025</td>
<td>5,295</td>
</tr>
</tbody>
</table>

Source: ABS Population of Census and Housing, 1996 to 2011

Industry of employment

In both 2006 and 2011, approximately three-quarters of speech pathologists were employed in health care and social assistance industries (Table 8). Within this, similar percentages worked in hospitals (36 per cent), and other allied health services (42 per cent), which includes speech pathology services in 2011. The 1,172 employed speech pathologists working in ‘other industries’ were predominantly employed in public Administration and Safety and education and training.

Table 8: Number of employed speech pathologists by industry, 2006 and 2011

<table>
<thead>
<tr>
<th>Industry</th>
<th>2006</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health care and social assistance industries</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals (except Psychiatric Hospitals)</td>
<td>1,196</td>
<td>1,495</td>
</tr>
<tr>
<td>Other Allied Health Services</td>
<td>1,130</td>
<td>1,762</td>
</tr>
<tr>
<td>Other health care and social assistance</td>
<td>698</td>
<td>870</td>
</tr>
<tr>
<td><strong>Total Health Care and Social Assistance</strong></td>
<td>3,024</td>
<td>4,127</td>
</tr>
<tr>
<td><strong>Other industries</strong></td>
<td>840</td>
<td>1,172</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,864</td>
<td>5,299</td>
</tr>
</tbody>
</table>

Source: ABS Population of Census and Housing, 2006 and 2011
Distribution

Information from the Census on the distribution of the speech pathologist workforce is based on place of usual residence, not place of work.

State and territory

In 2011, the more populated states of New South Wales, Victoria and Queensland accounted for more than three-quarters (78 per cent) of employed speech pathologists. On a number per 100,000 population basis, the number of employed speech pathologists ranged from a high of 26.1 in Victoria to a low of 13 in the Northern Territory.

The characteristics of speech pathologists were the same across all states and territories – almost all were female and worked part-time hours (Table 9).

Table 9: Selected characteristics of employed speech pathologists by state and territory, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th>NSW</th>
<th>Vic.</th>
<th>Qld</th>
<th>SA</th>
<th>WA</th>
<th>Tas.</th>
<th>NT</th>
<th>ACT</th>
<th>Aust.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2011</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>1,630</td>
<td>1,445</td>
<td>1,043</td>
<td>411</td>
<td>538</td>
<td>130</td>
<td>30</td>
<td>68</td>
<td>5,295</td>
</tr>
<tr>
<td>No. per 100,000 population</td>
<td>22.6</td>
<td>26.1</td>
<td>23.3</td>
<td>25.1</td>
<td>22.9</td>
<td>25.4</td>
<td>13.0</td>
<td>18.5</td>
<td>23.7</td>
</tr>
<tr>
<td>Average hours worked</td>
<td>29.5</td>
<td>30.8</td>
<td>31.2</td>
<td>29.1</td>
<td>30.4</td>
<td>29.7</td>
<td>30.4</td>
<td>33.2</td>
<td>30.3</td>
</tr>
<tr>
<td>% female</td>
<td>97.9</td>
<td>97.1</td>
<td>97.3</td>
<td>96.1</td>
<td>98.1</td>
<td>96.2</td>
<td>100.0</td>
<td>100.0</td>
<td>97.5</td>
</tr>
<tr>
<td><strong>2006</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>1,104</td>
<td>1,070</td>
<td>758</td>
<td>326</td>
<td>426</td>
<td>93</td>
<td>31</td>
<td>58</td>
<td>3,869</td>
</tr>
<tr>
<td>No. per 100,000 population</td>
<td>16.4</td>
<td>21.1</td>
<td>18.9</td>
<td>21.0</td>
<td>20.8</td>
<td>19.0</td>
<td>14.8</td>
<td>17.3</td>
<td>18.9</td>
</tr>
<tr>
<td>% change in number 2006 to 2011</td>
<td>47.6</td>
<td>35.0</td>
<td>37.6</td>
<td>26.1</td>
<td>26.3</td>
<td>39.8</td>
<td>-3.2</td>
<td>17.2</td>
<td>36.9</td>
</tr>
</tbody>
</table>

Remoteness area

The remoteness area (RA) structure is a geographic classification system produced by the ABS and is used to present regional data. The RA categories are defined in terms of the physical distance of a location from the nearest urban centre (access to goods and services) based on population size.

Table 10 shows the distribution of employed speech pathologists across remoteness areas.

The percent of speech pathologists across remoteness areas was similar in 2006 and 2011, with approximately:

- Three-quarters located in major cities
- One-sixth located in inner regional areas
- Six percent located in outer regional areas
- Less than one percent in remote and very remote areas

Table 10: Selected characteristics of employed speech pathologists by state and territory, 2006 and 2011

<table>
<thead>
<tr>
<th></th>
<th>Major cities</th>
<th>Inner regional</th>
<th>Outer regional</th>
<th>Remote(a)</th>
<th>Very remote(a)</th>
<th>Australia (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>4,055</td>
<td>842</td>
<td>343</td>
<td>40</td>
<td>12</td>
<td>5,295</td>
</tr>
<tr>
<td>No. per 100,000 population</td>
<td>25.9</td>
<td>20.5</td>
<td>16.9</td>
<td>12.7</td>
<td>5.9</td>
<td>23.7</td>
</tr>
<tr>
<td>Average hours worked</td>
<td>30.3</td>
<td>29.4</td>
<td>32.8</td>
<td>29.3</td>
<td>31.0</td>
<td>30.3</td>
</tr>
<tr>
<td>% female</td>
<td>97.4</td>
<td>97.5</td>
<td>98.3</td>
<td>92.5</td>
<td>100.0</td>
<td>97.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>2,885</td>
<td>4,055</td>
<td>2,635</td>
<td>3,435</td>
<td>3,15</td>
<td>4,055</td>
</tr>
<tr>
<td>No. per 100,000 population</td>
<td>20.3</td>
<td>25.9</td>
<td>17.6</td>
<td>20.5</td>
<td>13.6</td>
<td>16.9</td>
</tr>
<tr>
<td>% change in number 2006 to 2011</td>
<td>40.6</td>
<td>24.7</td>
<td>30.4</td>
<td>29.0</td>
<td>-20.0</td>
<td>36.9</td>
</tr>
</tbody>
</table>

(a) Care should be taken when interpreting the figures for Remote and Very remote areas due to the relatively small number of employed speech pathologists who reported their usual residence was in these regions.

(b) Includes migratory and no usual residence.

Speech Pathology Australia – membership data

SPA collects data on its members, and membership is open to all people who have successfully completed a SPA accredited course, or successfully passed the assessment for overseas-trained speech pathologists. Membership is also open to students undergoing their entry-level speech pathology qualifications in Australia. Members’ demographic and practice details are maintained by SPA, including age, gender, location, country of entry-level qualification, employment sector and area of specialty, as well as information on student membership.

SPA data shows that as at 9 July 2014, there were 6,099 SPA members. Of these, nine in every ten members (5,511 speech pathologists) held practising membership. A further 451 people held student membership (Table 11).

Table 11: Number of SPA members by membership type, July 2014.

<table>
<thead>
<tr>
<th>Membership type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practising(^{a})</td>
<td>5,511</td>
</tr>
<tr>
<td>Student</td>
<td>451</td>
</tr>
<tr>
<td>Non-practising(^{b})</td>
<td>102</td>
</tr>
<tr>
<td>Other(^{c})</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,099</strong></td>
</tr>
</tbody>
</table>

\(^{a}\) Includes Practising, Fellow - practising, Post-graduate student, Fellow - post-graduate student and Life membership types.

\(^{b}\) Includes Non-practising and Fellow-non-practising membership types.

\(^{c}\) Includes Alumnus, Associate, Fellow - alumnus and Re-entry membership types.

Source: Speech Pathology Australia member database

As at 9 July 2014, the average age of practising SPA members was 37 years.

Table 12: Practising members, average age, July 2014

<table>
<thead>
<tr>
<th>Average age</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>

Source: Speech Pathology Australia member database
SPA membership data on the distribution of speech pathologists is consistent with Census data, with more than three-quarters (77 per cent) of practising members located in New South Wales, Victoria and Queensland.

Almost all practising SPA members are female (Table 13), again consistent with Census data.

Table 13: Number of SPA practising members by state and territory, July 2014

<table>
<thead>
<tr>
<th></th>
<th>NSW</th>
<th>Vic.</th>
<th>Qld</th>
<th>SA</th>
<th>WA</th>
<th>Tas.</th>
<th>NT</th>
<th>ACT</th>
<th>Overseas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>34</td>
<td>38</td>
<td>31</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1,552</td>
<td>1,399</td>
<td>1,168</td>
<td>391</td>
<td>567</td>
<td>96</td>
<td>38</td>
<td>50</td>
<td>123</td>
<td>5,384</td>
</tr>
<tr>
<td>Persons</td>
<td>1,586</td>
<td>1,437</td>
<td>1,199</td>
<td>399</td>
<td>574</td>
<td>100</td>
<td>38</td>
<td>52</td>
<td>126</td>
<td>5,511</td>
</tr>
<tr>
<td>% female</td>
<td>97.8</td>
<td>97.3</td>
<td>97.4</td>
<td>98.0</td>
<td>98.7</td>
<td>96.0</td>
<td>100.0</td>
<td>96.0</td>
<td>97.6</td>
<td>97.7</td>
</tr>
</tbody>
</table>

Source: Speech Pathology Australia member database

SPA collects information on their members’ practice type. Of those members that reported their practice type, those in New South Wales, Victoria and Western Australia reported working in private practice more than public practice. In all other states and territories, more practising members reported working in public practice only than in private practice only (Table 14).

Table 14: Number of SPA practising members by practice type, July 2014

<table>
<thead>
<tr>
<th></th>
<th>NSW</th>
<th>Vic.</th>
<th>Qld</th>
<th>SA</th>
<th>WA</th>
<th>Tas.</th>
<th>NT</th>
<th>ACT</th>
<th>Overseas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private practice only</td>
<td>885</td>
<td>578</td>
<td>438</td>
<td>140</td>
<td>259</td>
<td>24</td>
<td>12</td>
<td>12</td>
<td>n.a.</td>
<td>2,364</td>
</tr>
<tr>
<td>Public practice only</td>
<td>310</td>
<td>456</td>
<td>470</td>
<td>141</td>
<td>159</td>
<td>66</td>
<td>21</td>
<td>21</td>
<td>n.a.</td>
<td>1,648</td>
</tr>
<tr>
<td>Private and public practice</td>
<td>127</td>
<td>164</td>
<td>101</td>
<td>49</td>
<td>33</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>n.a.</td>
<td>486</td>
</tr>
</tbody>
</table>

Note: for those who reported practice type only, only one practice has been counted per member except for the dual private and public.

Source: Speech Pathology Australia member database
Differences between ABS Census data and SPA membership data

The SPA and Census data show different numbers of speech pathologists working in Australia. Reasons for this relate to the methodology and purpose of the collections. Census information is a descriptive count of everyone who is in Australia on one night and information is self-reported by individuals completing the Census form, while the SPA data is an administrative collection, with the primary purpose of maintaining an up-to-date membership database of speech pathologists who have completed accredited courses and have applied for membership of SPA. Census data captures everyone reporting their occupation as a speech pathologist – regardless of level and type of qualification, while SPA information reflects the number of speech pathologists who are members of the association, and do not reflect the total number of professionals with speech pathology qualifications who may be living and working in Australia (noting that SPA estimate that approximately 80 per cent of speech pathologists in Australia are members).

Due to the different methodologies and purpose of collections, differences between the two sources are therefore likely to occur. For example, people may choose to maintain their practising SPA membership, but are either not working or do not consider ‘speech pathologist’ to be their primary role at the time of the Census.
Workforce inflows

Students

There are currently two sources of information on speech pathology students in Australia – SPA and the Department of Education. Information from both sources is presented in this section.

Speech Pathology Australia

The Competency-based Occupational Standards for Speech Pathologists (CBOS 2011) defines the knowledge base, skills, professional attributes and standards required of someone entering the speech pathology profession in Australia. SPA accredits speech pathology programs that adequately assess all graduating students against the CBOS 2011.

There are currently 15 universities offering 24 speech pathology programs across 19 locations in Australia. Ten of these programs commenced in the last five years. Table 15 shows the number of students commencing and expected to graduate from these programs in 2013 and 2014.

In 2014, approximately 1,300 students commenced speech pathology programs. This was an increase of approximately 130 students from 2013, and according to SPA, more than a two-fold increase from an intake of around 600 in the early 2000s.

Approximately 720 students were expected to graduate in 2014, the same as 2013.

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* Speech Pathology Australia, Speech Pathology Training and Workforce in Australia – an overview, June 2014
Table 15: Student commencements and graduates for speech pathology programs by state and territory, 2013 and 2014

<table>
<thead>
<tr>
<th></th>
<th>Student commencements</th>
<th>No. expected to complete/graduate at year end</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>NSW</td>
<td>425</td>
<td>524</td>
</tr>
<tr>
<td>Vic.</td>
<td>236</td>
<td>218</td>
</tr>
<tr>
<td>Qld</td>
<td>225</td>
<td>275</td>
</tr>
<tr>
<td>SA</td>
<td>108</td>
<td>98</td>
</tr>
<tr>
<td>WA</td>
<td>187</td>
<td>197</td>
</tr>
<tr>
<td>Tas.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>NT</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ACT</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Aust.</td>
<td>1,181</td>
<td>1,312</td>
</tr>
</tbody>
</table>

Source: Speech Pathology Australia, Speech Pathology Training and Workforce in Australia – an overview, June 2014

The Department of Education student numbers

The Department of Education (DE) conducts the Higher Education Statistics Collection, which provides a range of information on the provision of higher education in all Australian universities. From this collection, information is available on the number of student commencements and completions in higher education courses allocated to the speech pathology field of education, as well as the characteristics of those students. While this does not specifically include only those students in accredited speech pathology courses, it does provide an indication of student trends over time, which can assist with workforce planning.

In this section, information on student commencements and completions in higher education courses allocated to the speech pathology field of education is presented.

Cautions to note with the DE data:

- Information may include courses allocated to the speech pathology field of education that are not accredited by Speech Pathology Australia.
- The accuracy of coding courses to field of education is the responsibility of each university, and is subject to the knowledge of those allocating the codes.
- Information includes combined courses where the course has been allocated to two fields of education. Combined courses are courses designed to lead to a single combined award or to meet the requirements of more than one award.
Student commencements

Table 16 shows the number of speech pathology student commencements increased year on year from 2008 to 2012.

Most students commenced Bachelor courses across the selected years. However those commencing a postgraduate qualification increased at a greater rate (up 157 percent) than those commencing a bachelor qualification (up 56 percent) from 2008 to 2012.

Female student commencements comprised approximately 95 percent of all student commencements across the selected years, consistent with the existing workforce demographic.

Table 16: Number of student commencements within the speech pathology field of education by gender, 2008 to 2012

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>548</td>
<td>638</td>
<td>684</td>
<td>769</td>
<td>853</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>120</td>
<td>161</td>
<td>170</td>
<td>218</td>
<td>308</td>
</tr>
<tr>
<td>Total</td>
<td>668</td>
<td>799</td>
<td>854</td>
<td>987</td>
<td>1,161</td>
</tr>
<tr>
<td>% female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>95.4</td>
<td>95.0</td>
<td>95.6</td>
<td>94.8</td>
<td>94.1</td>
</tr>
<tr>
<td>% overseas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.8</td>
<td>11.0</td>
<td>9.1</td>
<td>9.6</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Source: Department of Education

Student completions

Similar trends are shown for speech pathology student completions as with commencements, with:

- An overall increase in completions over the period 2008 to 2012 (up 27 percent or 123 completions)
- Postgraduate completions increasing at a greater rate than bachelor completions
- Female completions comprising approximately 95 percent of all completions
- International completions comprising approximately 10 percent of all completions (Table 17).
Table 17: Number of student completions within the speech pathology field of education by gender, 2008 to 2012

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
<td>347</td>
<td>408</td>
<td>380</td>
<td>392</td>
<td>402</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>114</td>
<td>127</td>
<td>114</td>
<td>159</td>
<td>182</td>
</tr>
<tr>
<td>Total</td>
<td>461</td>
<td>535</td>
<td>494</td>
<td>551</td>
<td>584</td>
</tr>
<tr>
<td>% female</td>
<td>94.1</td>
<td>96.8</td>
<td>94.1</td>
<td>95.1</td>
<td>97.1</td>
</tr>
<tr>
<td>% overseas</td>
<td>8.9</td>
<td>9.2</td>
<td>9.9</td>
<td>10.0</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Source: Department of Education

**Immigration**

Speech pathologists appear on the Skilled Occupation List and the Consolidated Skilled Occupation List. This means that overseas-trained speech pathologists are eligible for permanent migration through the skilled independent pathway or through sponsored pathways, including state and territory, regional and employer sponsored pathways. They are also eligible for temporary migration through the Temporary Business 457 visa.

Speech Pathology Australia (SPA) assesses the qualifications of overseas-trained speech pathologists for migration purposes. Overseas-trained speech pathologists need to show they hold, or are eligible for, current practising membership of SPA, including competence in the use of English within the Australian clinical context. Two application processes exist:

1. A mutual recognition agreement application – relevant for overseas-trained speech pathologists who are a current member in the specified membership category of the American Speech Language Hearing Association (USA), the Irish Association of Speech and Language Therapists (Ireland), the New Zealand Speech Language Therapists Association (New Zealand) or Royal College of Speech and Language Therapists (UK) or Speech-Language and Audiology Canada (Canada).

2. A complete application – for those not eligible for the mutual recognition application.
**Temporary visa grants**

All temporary visas granted to speech pathologists between 2005-06 and 2012-13 were in the 457 Temporary Work (Skilled) category (Table 18). Although increasing across the period, the number of temporary visas granted for speech pathologists is very low relative to the number in the workforce.

**Table 18: Number of temporary visa grants by subclass, 2005-06 to 2012-13**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>17</td>
<td>18</td>
<td>29</td>
<td>24</td>
</tr>
</tbody>
</table>

Source: Department of Immigration and Border Protection administrative data.

**Permanent visa grants**

Table 19 shows the number of permanent visas granted to speech pathologists from 2005-06 to 2012-13. The same as the temporary visa grants, the number of permanent visas granted for speech pathologists is very low relative to the number in the workforce.

**Table 19: Number of permanent visa grants by visa type, 2005-06 to 2012-13**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>19</td>
<td>15</td>
<td>10</td>
<td>21</td>
<td>27</td>
<td>29</td>
<td>31</td>
<td>44</td>
</tr>
</tbody>
</table>

(a) Includes Skilled Regional, Skilled Independent and State/Territory Sponsored visas.

Source: Department of Immigration and Border Protection administrative data.

Skills Australia flagged the speech pathology occupation as being borderline in terms of its inclusion on the 2013 Skilled Occupation List. This means this occupation may be removed in future years subject to monitoring of the labour market, education and migration data and evidence from stakeholders in relation to future oversupply issues, migration outcomes and areas of specific need. This would mean overseas-trained speech pathologists would not be eligible to migrate to Australia under the skilled independent pathway or through sponsored pathways, including the Temporary Business 457 visa.

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How can workforce activity be measured?

As well as understanding the existing workforce stock and having an indication of how many people are entering the workforce, understanding workforce demand also forms an integral component of workforce planning. HWA employs the utilisation method for workforce demand projections. This method measures expressed demand, and is based on service utilisation patterns as they currently exist. Potential data sources that could be used to measure service utilisation patterns for speech pathologists are outlined here.

- Speech pathology services can be rebated under many private health funds. Therefore Private Health Insurance Administrative Council data is one source of information that can be used to measure workforce activity. A limitation with this source is that services that can be claimed are likely to be capped annually, so any services provided beyond that cap are not captured.

- A substantial number of speech pathologists are employed by state/territory hospitals. Therefore national hospital morbidity database (NHMD) information on procedures that may be conducted by speech pathologists is another potential source of information on workforce activity. The primary limitation of NHMD information is that the type of practitioner providing the service is not recorded, therefore assumptions must be made on the number of services provided by speech pathologists.

- Medicare is another data source. However Medicare rebates are only available for speech pathology services provided to chronically ill people who are being managed by their general practitioner under a chronic disease management plan, and to children through the ‘Helping children in Autism’ or ‘Better Start for Children with Disability’ programs. Sessions under these programs are capped, so again, any services beyond those claimed are not captured.

- The Australian Bureau of Statistics collected information on the number of people consulting a speech therapist/pathologist in the 2011-12 Australian Health Survey. However this is conducted approximately every three years, and information can quickly out-of-date for workforce planning purposes.

- Other sources of information that could be used to measure workforce activity for speech pathologists include the Transport Accident Commission, Department of Veterans’ Affairs and WorkCover.

Despite the number of potential data sources that exist, each have substantial limitations in providing a complete picture in measuring the current activity of, and demand for, speech pathologists in Australia.
What issues have stakeholders identified for the speech pathologist workforce?

Considerations that may impact future workforce supply or demand are important in providing a real world context for interpreting the historical trends presented in this report, and developing an understanding of future workforce requirements. Consultation was conducted with employers and the profession to obtain their views on such considerations, which are summarised in this section.

What were the jurisdiction views?

A common comment across some jurisdictions was that while there are sufficient numbers of speech pathologists to fill junior positions, there are insufficient numbers of more experienced speech pathologists with specialised clinical skill sets, who are also able to manage services. One jurisdiction noted high attrition at the senior level contributes to this, with reasons for attrition including demographics (it is a female-dominated workforce, with people leaving or reducing hours for family reasons), limited opportunities at a management level and limited pay progression.

Reducing average hours of work, a result of an increasing part-time workforce, was highlighted as an issue affecting future workforce supply. The ability to provide clinical placements and sufficient practical time for the increasing number of speech pathology students was also noted as impacting on quality of education.

Maldistribution was noted by many jurisdictions, with difficulty in attracting and retaining people to regional locations.

The ageing population, particularly predicted increases in those with dementia and multiple co-morbidities; increasing incidence of chronic disease; and increasing incidence of paediatric disability (for example autism spectrum disorders) is expected to increase demand for speech pathology services.

The lack of good information on this workforce was also highlighted as an issue.

What were the Association views?6

A key issue highlighted by SPA are the rapid reforms currently occurring in speech pathology service delivery, that is resulting in a shift from public to private practice. For example, the National Disability Insurance Scheme is seeing a withdrawal of state funding and a move to individual funding, with a consequent shift from public sector to NGO and private provider service provision. SPA highlight that such a shift will potentially have flow on effects for the speech pathology profession, including:

- Loss of career structure
- Loss of clinical supervision
- Loss of training and professional development opportunities

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6 Speech Pathology Australia, Speech Pathology Training and Workforce in Australia – an overview, June 2014
• Erosion of established clinical governance structures
• Loss of communication access and community capacity building programs and services.

SPA highlighted that the current attrition rate of speech pathologists is relatively high (at 13 per cent). Research highlights reasons for this include large caseloads, reduced effectiveness due to rationing of services, lack of autonomy, lack of career pathways, and remuneration ceilings. Additionally, SPA indicated that the full-time speech pathology workforce peaks at approximately ten years post-graduation, then moves to part-time.

High attrition and high levels of part-time work impact on workforce supply and capacity, including the number of experienced practitioners able to provide more complex speech pathology services, as well as training capacity – both in terms of clinical supervision and academic/research activity.

SPA commented that new graduates are reporting difficulties in finding full-time positions within the public sector. Consequently many are entering private practice, with SPA concerned this could potentially lead to even higher attrition rates, through limited job security and fewer professional supports than would traditionally be offered to new graduates and early career speech pathologists.

Consistent with jurisdiction views, SPA indicated there is a maldistribution of speech pathologists, with more working in metropolitan versus regional areas and even fewer speech pathologists working in rural and remote communities. It was noted that rural and remote courses have commenced in some areas of Australia with the intention of recruiting locals into the course with the aim they remain local and work within their communities.

The same as jurisdictions, SPA also highlighted data gaps as a key area of concern. While information does exist on workforce supply and workforce activity, there are substantial limitations on both sides to be able to conduct workforce planning, or measure the need for speech pathology services.

In relation to demand for speech pathology services, SPA expect demand to increase due in part to the effects of an ageing population, improved survival rates of premature, chronically ill and disabled infants, an increased in the detection of early speech and language disorders and the increase in opportunities to provide support to participants of the National Disability Insurance Scheme.
HWA’s assessment of this workforce

HWA’s assessment of the speech pathologist workforce comprises three components:

1. **An assessment of existing workforce position** – used to assess whether workforce supply matches demand for services (whether the workforce is in balance or not) at this point in time

2. **A set of indicators** – collectively called the workforce dynamics indicator – used to highlight aspects of the current workforce that may be of concern into the future

3. **Comparison with other occupations** – ABS Census data is used to compare key characteristics of the speech pathologist workforce with other selected health occupations.

Existing workforce position assessment

Ideally, quantitative evidence should be used to determine whether a workforce is in balance or not at a point in time. In the absence of suitable data, HWA consulted with jurisdictions, peak bodies and associations, and employers to obtain their assessment of the existing workforce position of the speech pathologist workforce. These views are incorporated within the existing workforce position assessment.

Existing workforce position assessment scale

Stakeholders used the following scale to assess the existing workforce position of speech pathologist workforces.

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td><strong>Current perceived excess supply</strong> – current aggregate workforce exceeds existing expressed service demand, including across geographic areas</td>
</tr>
<tr>
<td>Green</td>
<td><strong>No current perceived shortage</strong> – sufficient workforce for existing expressed service demand, minimal number of vacancies, no difficulty filling positions, and short waiting times</td>
</tr>
<tr>
<td>Yellow</td>
<td><strong>Perceived maldistribution: localised excess supply and localised shortages</strong> – existing workforce supply exceeds existing expressed service demand in some locations, while in other locations expressed service demand exceeds existing workforce.</td>
</tr>
<tr>
<td>Orange</td>
<td><strong>Perceived maldistribution: localised adequate supply and localised shortages</strong> – existing sufficient workforce for existing expressed service demand is some locations, however expressed service demand exceeds existing workforce in other locations</td>
</tr>
<tr>
<td>Red</td>
<td><strong>Perceived current shortage</strong> – that is, expressed service demand in excess of existing workforce, ongoing vacancies exist, difficult/unable to fill positions, and extended waiting times across geographic areas</td>
</tr>
</tbody>
</table>
Other measures available to examine existing workforce position

Other partial measures that can be used to provide an indication of the existing workforce position of a particular workforce are waiting times and vacancy rates.

Waiting times

Waiting times are a measure of access to a health professional – not specifically a measure of workforce imbalance. It is for this reason that waiting times can only be used as a partial measure to demonstrate existing workforce position. Factors other than workforce availability exist that influence waiting times and affect its use as an indicator, including the length of time someone has to wait, as this influences their likelihood to wait, and demand for a particular health profession.

Budget can also strongly influence waiting times for health professions primarily based in the public sector. Budget constraints influence supply by limiting the availability of staff and directing the priorities in services, which impacts waiting times.

Vacancy rates

Vacancy rates and duration of vacancies are often used to assess potential workforce imbalances. Vacancies can imply there is an insufficient sized workforce as there are not enough people to fill positions available. However, there are a range of cautions to note with using vacancy rates as a measure of workforce shortage:

- Vacancies occur as a part of normal operations due to turnover and lags in filling positions.
- There is no single level of vacancy rate considered to reflect a workforce shortage.
- Vacancies can occur for reasons other than shortage, for example: the vacancy could be in an unattractive location; an employer may choose not to fill a vacancy for reasons such as budget constraints; or, applicants for a position may not have sufficient experience or skills the employer is looking for.
- Vacancy rates may also understate workforce shortage, for example positions may not be advertised if they are not expected to be filled.

The sector in which this measure is being applied to also determines its usefulness. In the public health sector, positions are salaried so vacancy rates can be an appropriate indicator. However in the private sector, private practitioners often deliver services so there may be minimal identified vacancies. Other indicators such as waiting times for a first appointment may be more appropriate for the private sector. For the reasons above, vacancy rates can also only be used as a partial indicator – they should not solely be considered as a measure of workforce shortage.

A number of other partial indicators can also be used to provide a picture of the existing workforce position, including overtime rates, salaries and predicted employment growth. However for this publication, the assessment by key stakeholders was focussed on.
Existing workforce position assessment

Reflecting the fact allied health professionals are employed and deployed differently across jurisdictions, the range of stakeholder views received and the difficulty in assigning weightings to stakeholders to generate a national assessment; a single existing workforce position assessment has not been assigned for speech pathologists. Information obtained from jurisdictions resulted in existing workforce position assessments across the scale – from green (no current perceived shortage) through to red (perceived current shortage). Reasons behind the perceived shortage related ratings are reflected in the workforce issues section of this report, and particularly relate to:

- difficulties in recruiting to rural and regional areas, and
- difficulties in recruiting experienced speech pathologists.

Given the difficulties in adequately measuring workforce demand for speech pathologists, SPA has not made a statement on the sufficiency of the existing workforce to meet demand. Their views on issues affecting the speech pathology workforce are reflected in the workforce issues section of this report.

The Department of Employment also conduct research to identify skill shortages in the Australian labour market, and publish the results of their research in individual occupation reports. The skill shortage research methodology is based on a sample survey of employers who had recently advertised vacancies, examining whether they were able to find suitable workers for the advertised position. Employers are identified through sources including national and regional newspapers, online job boards, association websites, professional journals and specialist publications.

The Department of Employment national labour market rating for speech pathologists (as at April 2013) was ‘no shortage’, the same as the previous labour market rating (at March 2012). They noted employers filled surveyed vacancies across a range of sectors with little difficulty, and that on average, there were more than three suitable applicants per vacancy, and most employers had good fields of applicants from whom to choose.7

Workforce dynamics indicator

The workforce dynamics indicator (WDI) is used to highlight aspects of the current workforce that may be of concern into the future. The WDI was adapted from Health Workforce New Zealand’s (HWNZ) medical discipline vulnerability ranking method8, where a traffic light approach is used to score workforces against the selected indicators.

HWA selected the following indicators for scoring.

- **Average age** – workforces with a higher average age are more susceptible to higher exit rates (through retirement) with lower entry rates.

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• **Percentage aged 55 and over** – this can be a useful indicator of those potentially retiring or reducing working hours within the next 10 years.

• **Change in average hours worked** – workforces with falling average weekly hours worked can be an indicator of sufficient workforce supply, or supply exceeding demand; while workforces with increasing hours of work can indicate supply pressures.

• **Replacement rate** – this item is designed to calculate the ratio of newly registered professional to workforce exits in a given year. This indicates whether the number currently completing training is sufficient to replace those presently leaving the workforce.

• **Dependence on internationally trained professionals** – workforces with high percentages of internationally trained professionals are of greater concern due to their dependence on a less reliable supply stream (for example, changes in immigration policy may impact on supply).

• **Duration of training program** – the greater the duration of training, the longer it takes to train a replacement workforce.

The WDI provides a visual summary of the key dynamics of workforce recruitment, retention and retirement. They provide an easily understood presentation of health workforce planning information.

**Workforce dynamic indicator assessment**

ABS censes data was used to calculate the workforce dynamics indicators, except for the replacement rate, dependence on internationally trained professionals and duration of training.

**Average age**

As speech pathologists are classified at the 6 digit ANZSCO level, the average age cannot be calculated from readily ABS census data. Census data shows that the median age for speech pathologists fell in the 30 - 34 age cohort. Therefore it can be estimated that the average age of speech pathologists falls within this range, which is the lowest bracket of the workforce dynamics indicator.

**Percentage aged 55+**

The percentage of speech pathologists aged 55 years and over was 6.8 percent at 2011. This falls in the first range in the workforce dynamics indicator score.

**Change in average hours worked**

For employed speech pathologists, average weekly hours worked were 30.3 in both 2006 and 2011. Therefore, there was no annual change in average hours worked, so this falls in the lowest range on the workforce dynamics indicator score.

**Replacement rate**

A replacement rate is not able to be calculated for speech pathologists.
Dependence on internationally trained professionals

Data on those in the speech pathologist workforce that obtained their qualification overseas is not currently available. In lieu of this information, DIBP and Census data has been used to calculate a proxy indicator. The proxy indicator examines the number of permanent visas granted to people nominating an occupation of speech pathology, as a percentage of new workforce entrants.

The proxy indicator was developed using the following items:

- the number of permanent visas granted to speech pathologists over the period July 2006 to June 2011. This was 102 permanent visa grants.
- New workforce entrants, with net growth in employed speech pathologists between the 2006 and 2011 Census used as a proxy for new workforce entrants. This was 1,428.

Using the above information, the proxy indicator for dependence on ITPs is calculated to be 7.1 percent, which falls into the first bracket on the workforce dynamics indicator rating scale.

Duration of training

This is assessed as the shortest accredited training pathway to work as a speech pathologist. For speech pathologists, the shortest accredited training pathway is four years, which is comprised of a four year Bachelor degree. This falls into the second bracket on the workforce dynamics indicator.

The WDI provides a visual summary of the key dynamics of workforce recruitment, retention and retirement. They provide an easily understood presentation of health workforce planning information.

Table 20: Speech pathologists – workforce dynamics indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age</td>
<td></td>
</tr>
<tr>
<td>Percentage aged 55+</td>
<td></td>
</tr>
<tr>
<td>Change in average hours</td>
<td></td>
</tr>
<tr>
<td>Replacement rate</td>
<td>n.a.</td>
</tr>
<tr>
<td>Dependence on ITPs</td>
<td></td>
</tr>
<tr>
<td>Duration of training</td>
<td></td>
</tr>
</tbody>
</table>

n.a. not assessed.
Indicator range boundaries

The range boundaries for most indicators were selected as an extension of the HWNZ ranking method. In this development of the WDI, the ranges for each indicator were set to be relatively equal, rather than being established using a statistical base.

To be able to score against the WDI, an extensive range of data is required. Where a score cannot be allocated due to insufficient data, the indicator is not assessed.

The indicators used are basic measures only – ideally as data availability improves, more sophisticated measures can be developed. Table 21 summarises the indicators and their score ranges.

Table 21: Workforce dynamics indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Minimal concern</th>
<th>Significant concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age</td>
<td>&lt;40</td>
<td>40–44</td>
</tr>
<tr>
<td>Percentage aged 55+</td>
<td>&lt;20%</td>
<td>20% – &lt;30%</td>
</tr>
<tr>
<td>Annual change in average hours</td>
<td>&lt; +/- 0.3hrs</td>
<td>+/- 0.3hrs –</td>
</tr>
<tr>
<td>Replacement rate</td>
<td>130+</td>
<td>110% – &lt;130%</td>
</tr>
<tr>
<td>Dependence on internationally trained professionals</td>
<td>&lt;12%</td>
<td>12% – 24%</td>
</tr>
<tr>
<td>Duration of training</td>
<td>&lt;4</td>
<td>4</td>
</tr>
</tbody>
</table>
How do speech pathologists compare with other health professions?

While recognising there are limitations with ABS Census of Population and Housing Census data, particularly around how individual’s may self-report their occupation, it is the only data source able to provide information collected on the same basis for all health occupations.

Table 22 shows key characteristics of those employed in selected health occupations using Census data. Please note, for this comparison table, information is based on all people who reported as being employed in the relevant occupation in the Census, regardless of their level of qualification and field of study. Compared with the other health occupations, self-reported speech pathologists:

• were in the lowest median age group (30 – 34 years)
• had one of the lowest percentages of people aged 55 years and over (6.8 percent)
• had the highest percentage of employed females (97.5 percent).
Table 22: Selected health occupations, selected characteristics

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Median age group 2011</th>
<th>% aged 55 years and over 2011</th>
<th>% female 2011</th>
<th>Average hours worked 2006</th>
<th>Average hours worked 2011</th>
<th>Change in average hours worked 2006 to 2011</th>
<th>Total employed 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Health Occupations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chiropractor</td>
<td>35-39</td>
<td>13.3</td>
<td>34.9</td>
<td>34.1</td>
<td>32.8</td>
<td>-1.3</td>
<td>3,186</td>
</tr>
<tr>
<td>Dental Practitioners</td>
<td>40-44</td>
<td>22.0</td>
<td>36.7</td>
<td>36.8</td>
<td>35.3</td>
<td>-1.5</td>
<td>10,990</td>
</tr>
<tr>
<td>Medical Practitioners</td>
<td>40-44</td>
<td>23.9</td>
<td>39.6</td>
<td>42.8</td>
<td>41.2</td>
<td>-1.5</td>
<td>70,242</td>
</tr>
<tr>
<td>Medical Diagnostic Radiographer</td>
<td>35-39</td>
<td>15.5</td>
<td>66.3</td>
<td>33.7</td>
<td>33.5</td>
<td>-0.2</td>
<td>7,289</td>
</tr>
<tr>
<td>Medical Radiation Therapist</td>
<td>30-34</td>
<td>6.7</td>
<td>73.0</td>
<td>32.2</td>
<td>33.4</td>
<td>1.2</td>
<td>1,634</td>
</tr>
<tr>
<td>Nuclear Medicine Technologist</td>
<td>30-34</td>
<td>5.3</td>
<td>68.9</td>
<td>34.2</td>
<td>34.5</td>
<td>0.3</td>
<td>604</td>
</tr>
<tr>
<td>Midwifery and Nursing Professionals</td>
<td>45-49</td>
<td>21.2</td>
<td>90.5</td>
<td>30.8</td>
<td>30.9</td>
<td>0.0</td>
<td>239,262</td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>30-34</td>
<td>6.6</td>
<td>92.2</td>
<td>31.3</td>
<td>31.2</td>
<td>-0.2</td>
<td>9,250</td>
</tr>
<tr>
<td>Optometrist</td>
<td>40-44</td>
<td>13.5</td>
<td>47.9</td>
<td>36.6</td>
<td>34.8</td>
<td>-1.8</td>
<td>3,628</td>
</tr>
<tr>
<td>Osteopath</td>
<td>30-34</td>
<td>9.8</td>
<td>52.0</td>
<td>35.2</td>
<td>34.5</td>
<td>-0.8</td>
<td>1,132</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>30-34</td>
<td>14.5</td>
<td>59.6</td>
<td>36.3</td>
<td>34.5</td>
<td>-1.8</td>
<td>19,929</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>35-39</td>
<td>10.9</td>
<td>69.3</td>
<td>32.9</td>
<td>32.7</td>
<td>-0.1</td>
<td>15,924</td>
</tr>
<tr>
<td>Podiatrist</td>
<td>35-39</td>
<td>7.8</td>
<td>61.1</td>
<td>34.6</td>
<td>35.0</td>
<td>0.4</td>
<td>2,803</td>
</tr>
<tr>
<td>Psychologists</td>
<td>40-44</td>
<td>24.3</td>
<td>77.9</td>
<td>32.5</td>
<td>31.1</td>
<td>-1.4</td>
<td>18,602</td>
</tr>
<tr>
<td>Occupation</td>
<td>Median age group</td>
<td>% aged 55 years and over 2011</td>
<td>% female 2011</td>
<td>Average hours worked 2006</td>
<td>Average hours worked 2011</td>
<td>Change in average hours worked 2006 to 2011</td>
<td>Total employed 2011</td>
</tr>
<tr>
<td>----------------------------------------</td>
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<td>---------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Traditional Chinese Medicine Practitioner</td>
<td>45-49</td>
<td>30.0</td>
<td>48.5</td>
<td>34.8</td>
<td>32.2</td>
<td>-2.5</td>
<td>680</td>
</tr>
<tr>
<td><strong>NON-REGISTERED HEALTH OCCUPATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Diagnostic and Promotion Professionals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietitian</td>
<td>30-34</td>
<td>8.5</td>
<td>93.2</td>
<td>31.2</td>
<td>29.8</td>
<td>-1.4</td>
<td>3,705</td>
</tr>
<tr>
<td>Sonographer</td>
<td>35-39</td>
<td>9.1</td>
<td>76.5</td>
<td>31.9</td>
<td>31.4</td>
<td>-0.5</td>
<td>3,447</td>
</tr>
<tr>
<td>Orthoptist</td>
<td>30-34</td>
<td>8.6</td>
<td>88.6</td>
<td>31.1</td>
<td>29.1</td>
<td>-2.0</td>
<td>678</td>
</tr>
<tr>
<td>Orthotist or Prosthetist</td>
<td>35-39</td>
<td>16.1</td>
<td>39.5</td>
<td>39.6</td>
<td>38.1</td>
<td>-1.5</td>
<td>403</td>
</tr>
<tr>
<td>Environmental Health Officer</td>
<td>40-44</td>
<td>18.6</td>
<td>48.5</td>
<td>37.5</td>
<td>35.2</td>
<td>-2.2</td>
<td>3,516</td>
</tr>
<tr>
<td>Occupational Health &amp; Safety Adviser</td>
<td>40-44</td>
<td>18.2</td>
<td>36.8</td>
<td>39.5</td>
<td>42.0</td>
<td>2.6</td>
<td>15,272</td>
</tr>
<tr>
<td>Health Promotion Officer</td>
<td>40-44</td>
<td>18.5</td>
<td>81.8</td>
<td>32.7</td>
<td>31.9</td>
<td>-0.8</td>
<td>4,861</td>
</tr>
<tr>
<td>Health Diagnostic and Promotion Professionals</td>
<td>40-44</td>
<td>15.5</td>
<td>76.2</td>
<td>33.3</td>
<td>32.2</td>
<td>-1.1</td>
<td>290</td>
</tr>
<tr>
<td><strong>Health Therapy Professionals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Speech Pathologist</strong></td>
<td>30-34</td>
<td><strong>6.8</strong></td>
<td><strong>97.5</strong></td>
<td><strong>30.3</strong></td>
<td><strong>30.3</strong></td>
<td><strong>0.0</strong></td>
<td><strong>5,295</strong></td>
</tr>
<tr>
<td><strong>Audiologist</strong></td>
<td>35-39</td>
<td>12.0</td>
<td>77.6</td>
<td>32.9</td>
<td>31.5</td>
<td>-1.4</td>
<td>1,489</td>
</tr>
<tr>
<td><strong>Complementary health therapists</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acupuncturist</td>
<td>45-49</td>
<td>24.2</td>
<td>52.5</td>
<td>31.8</td>
<td>29.8</td>
<td>-2.0</td>
<td>1,259</td>
</tr>
<tr>
<td>Occupation</td>
<td>Median age group 2011</td>
<td>% aged 55 years and over 2011</td>
<td>% female 2011</td>
<td>Average hours worked 2006</td>
<td>Average hours worked 2011</td>
<td>Change in average hours worked 2006 to 2011</td>
<td>Total employed 2011</td>
</tr>
<tr>
<td>------------------------------------------------</td>
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<td>---------------------------</td>
<td>---------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Homoeopath</td>
<td>50-54</td>
<td>42.7</td>
<td>78.4</td>
<td>23.7</td>
<td>21.9</td>
<td>-1.8</td>
<td>227</td>
</tr>
<tr>
<td>Naturopath</td>
<td>45-49</td>
<td>24.3</td>
<td>81.3</td>
<td>27.7</td>
<td>25.6</td>
<td>-2.1</td>
<td>2,900</td>
</tr>
<tr>
<td>Complementary Health Therapists nec</td>
<td>45-49</td>
<td>27.6</td>
<td>79.8</td>
<td>21.8</td>
<td>22.3</td>
<td>0.5</td>
<td>746</td>
</tr>
</tbody>
</table>

**Health and welfare support workers**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Median age group 2011</th>
<th>% aged 55 years and over 2011</th>
<th>% female 2011</th>
<th>Average hours worked 2006</th>
<th>Average hours worked 2011</th>
<th>Change in average hours worked 2006 to 2011</th>
<th>Total employed 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal and Torres Strait Islander Health Worker*(a)</td>
<td>40-44</td>
<td>13.0</td>
<td>72.3</td>
<td>34.2</td>
<td>36.4</td>
<td>2.2</td>
<td>1,256</td>
</tr>
<tr>
<td>Ambulance Officers and Paramedics</td>
<td>40-44</td>
<td>10.7</td>
<td>32.0</td>
<td>40.7</td>
<td>40.3</td>
<td>-0.5</td>
<td>11,947</td>
</tr>
<tr>
<td>Diversional Therapist</td>
<td>50-54</td>
<td>36.9</td>
<td>91.2</td>
<td>28.2</td>
<td>28.4</td>
<td>0.2</td>
<td>4,257</td>
</tr>
</tbody>
</table>

**Personal carers and assistants**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Median age group 2011</th>
<th>% aged 55 years and over 2011</th>
<th>% female 2011</th>
<th>Average hours worked 2006</th>
<th>Average hours worked 2011</th>
<th>Change in average hours worked 2006 to 2011</th>
<th>Total employed 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged or Disabled Carer</td>
<td>45-49</td>
<td>26.7</td>
<td>82.3</td>
<td>26.7</td>
<td>27.2</td>
<td>0.5</td>
<td>108,210</td>
</tr>
<tr>
<td>Nursing Support and Personal Care Workers</td>
<td>45-49</td>
<td>22.2</td>
<td>79.5</td>
<td>28.9</td>
<td>28.7</td>
<td>-0.1</td>
<td>70,491</td>
</tr>
</tbody>
</table>

**Social and welfare professionals**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Median age group 2011</th>
<th>% aged 55 years and over 2011</th>
<th>% female 2011</th>
<th>Average hours worked 2006</th>
<th>Average hours worked 2011</th>
<th>Change in average hours worked 2006 to 2011</th>
<th>Total employed 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Worker</td>
<td>40-44</td>
<td>19.6</td>
<td>83.2</td>
<td>33.0</td>
<td>32.7</td>
<td>-0.3</td>
<td>16,916</td>
</tr>
</tbody>
</table>

**Other health occupations**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Median age group 2011</th>
<th>% aged 55 years and over 2011</th>
<th>% female 2011</th>
<th>Average hours worked 2006</th>
<th>Average hours worked 2011</th>
<th>Change in average hours worked 2006 to 2011</th>
<th>Total employed 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomist or Physiologist</td>
<td>30-34</td>
<td>8.3</td>
<td>57.7</td>
<td>35.3</td>
<td>34.1</td>
<td>-1.1</td>
<td>168</td>
</tr>
<tr>
<td>Biomedical Engineer</td>
<td>35-39</td>
<td>15.8</td>
<td>10.2</td>
<td>40.1</td>
<td>39.8</td>
<td>-0.2</td>
<td>726</td>
</tr>
<tr>
<td>Health and Welfare Services Managers nec</td>
<td>45-49</td>
<td>27.1</td>
<td>72.6</td>
<td>40.9</td>
<td>40.3</td>
<td>-0.6</td>
<td>9,707</td>
</tr>
<tr>
<td>Occupation</td>
<td>Median age group 2011</td>
<td>% aged 55 years and over 2011</td>
<td>% female 2011</td>
<td>Average hours worked 2006</td>
<td>Average hours worked 2011</td>
<td>Change in average hours worked 2006 to 2011</td>
<td>Total employed 2011</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------</td>
<td>----------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Medical Laboratory Scientist</td>
<td>35-39</td>
<td>13.0</td>
<td>69.5</td>
<td>35.9</td>
<td>35.2</td>
<td>-0.6</td>
<td>15,846</td>
</tr>
<tr>
<td>Massage Therapist</td>
<td>40-44</td>
<td>15.5</td>
<td>74.6</td>
<td>22.4</td>
<td>22.2</td>
<td>-0.2</td>
<td>10,603</td>
</tr>
<tr>
<td>Medical Technicians</td>
<td>35-39</td>
<td>14.8</td>
<td>78.4</td>
<td>31.7</td>
<td>31.0</td>
<td>-0.7</td>
<td>22,120</td>
</tr>
<tr>
<td>Optical Dispenser</td>
<td>35-39</td>
<td>11.1</td>
<td>74.0</td>
<td>32.4</td>
<td>30.5</td>
<td>-1.9</td>
<td>4,488</td>
</tr>
<tr>
<td>Optical Mechanic</td>
<td>40-44</td>
<td>15.8</td>
<td>32.7</td>
<td>37.2</td>
<td>36.8</td>
<td>-0.4</td>
<td>651</td>
</tr>
<tr>
<td>Primary Health Organisation Manager</td>
<td>45-49</td>
<td>22.6</td>
<td>72.6</td>
<td>.</td>
<td>38.8</td>
<td>.</td>
<td>376</td>
</tr>
<tr>
<td>All health occupations(a)</td>
<td>40-44</td>
<td>20.4</td>
<td>76.3</td>
<td>32.1</td>
<td>31.9</td>
<td>-0.2</td>
<td>789,975</td>
</tr>
</tbody>
</table>

. . nil or rounded to nil
nec not elsewhere classified

(a) Aboriginal and Torres Strait Islander Health Workers includes the registered health occupation of Aboriginal and Torres Strait Islander Health Practitioner. Only includes those who reported being of Aboriginal and Torres Strait Islander status, and self-reported as an Aboriginal and Torres Strait Islander Health Worker.

(b) See Appendix two for the full list of health occupations and their corresponding ANZSCO code.
What does the analysis show?

In terms of workforce characteristics, ABS Census information shows the speech pathologist workforce:

- has experienced substantial growth, particularly over the last five years
- is predominately female
- has a young age-profile, with less than 10 per cent aged 55 or over
- works part-time hours on average.

SPA membership data reflects the key characteristics demonstrated in the census data, with almost all practising SPA members being female, and practising members having an average age of 37 years.

The WDI assessment suggests no real areas of concern for this workforce – all indicators (except replacement rate, which could not be assessed) were at the ‘minimal concern’ end of the WDI scale. However, a number of key issues raised as impacting the speech pathologist workforce are not reflected in the WDI assessment.

Census data shows that there has been a shift in the sector in which speech pathologists are working. In 1996 more speech pathologists worked in the government sector than the private sector, while in 2011, more speech pathologists were working in the private sector. SPA raised this as a key issue, which in their view, is having a number of workforce implications (highlighted in the stakeholder issues section of this report).

In terms of the education supply stream, this is the major source of speech pathologists in Australia (with visa grant numbers indicating immigration is not a significant supply source for the Australian speech pathologist workforce). There have been substantial increases in speech pathology programs and students over the last five years, with corresponding demands on clinical supervision and placements. The increasing number of speech pathologists working in the private sector, public sector workload and prioritisation demands, as well as high attrition rates, limits the ability to provide clinical placements and clinical supervision – noted by both jurisdictions and SPA as an area of concern.

Retention strategies, particularly around career pathways in a changing employment environment, and strategies to meet increasing training and clinical supervision needs from increasing numbers of students, are therefore potential areas of investigation for this workforce.

In terms of being able to conduct workforce planning projections for the speech pathology workforce, both jurisdictions and SPA expressed concerns about adequacy of workforce data. While information from the ABS Census and SPA membership data is presented in this report, both have limitations for workforce planning purposes. In particular, Census information is based on self-reported occupation, and the fact the Census is conducted five-yearly means information can be quickly out of date (particularly in rapidly expanding workforces) for workforce planning purposes; while SPA membership data reflects the number of speech pathologists who are members of the association, not the total number of professionals with speech pathology qualifications who may be living and working in Australia. Additionally, there are limitations in being able to adequately measure speech pathologists’ activity and the current and future level of demand for the workforce, from available data sources.
## Appendix One – ANZSCO Occupations

<table>
<thead>
<tr>
<th>ANZSCO Code</th>
<th>Occupation title</th>
</tr>
</thead>
</table>

Health and welfare service managers
- 134200 Health and Welfare Services Managers, nfd
- 134211 Medical Administrator
- 134212 Nursing Clinical Director
- 134213 Primary Health Organisation Manager
- 134299 Health & Welfare Services Managers nec

Archivists, curators and records managers
- 224213 Health Information Manager

Other engineering professionals
- 233913 Biomedical Engineer

Life scientists
- 234512 Anatomist or Physiologist

Medical laboratory scientists
- 234611 Medical Laboratory Scientist

Medical Imaging Professionals
- 251200 Medical Imaging Professionals, nfd
- 251211 Medical Diagnostic Radiographer
- 251212 Medical Radiation Therapist
- 251213 Nuclear Medicine Technologist
- 251214 Sonographer

Occupational & Environmental Health Professionals
- 251300 Occupational & Environmental Health Professionals, nfd
- 251311 Environmental Health Officer
- 251312 Occupational Health & Safety Adviser

Optometrists & Orthoptists
- 251400 Optometrists & Orthoptists, nfd
- 251411 Optometrist
- 251412 Orthoptist
Pharmacists
- 251500 Pharmacists, nfd
- 251511 Hospital Pharmacist
- 251512 Industrial Pharmacist
- 251513 Retail Pharmacist

Other Health Diagnostic & Promotion Professionals
- 251900 Other Health Diagnostic & Promotion Professionals, nfd
- 251911 Health Promotion Officer
- 251912 Orthotist or Prosthetist
- 251999 Health Diagnostic & Promotion Professionals, nec

Chiropractors & Osteopaths
- 252100 Chiropractors & Osteopaths, nfd
- 252111 Chiropractor
- 252112 Osteopath

Complementary Health Therapists
- 252200 Complementary Health Therapists, nfd
- 252211 Acupuncturist
- 252212 Homoeopath
- 252213 Naturopath
- 252214 Traditional Chinese Medicine Practitioner
- 252299 Complementary Health Therapists, nec

Dental Practitioners
- 252300 Dental Practitioners, nfd
- 252311 Dental Specialist
- 252312 Dentist

Speech Professionals & Audiologists
- 252700 Speech Professionals & Audiologists, nfd
- 252711 Audiologist
- 252712 Speech Pathologist
Generalist Medical Practitioners
- 253100 Generalist Medical Practitioners, nfd
- 253111 General Medical Practitioner
- 253112 Resident Medical Officer

Specialist Physicians
- 253300 Internal Medicine Specialists, nfd
- 253311 Specialist Physician (General Medicine)
- 253312 Cardiologist
- 253313 Clinical Haematologist
- 253314 Clinical Oncologist
- 253315 Endocrinologist
- 253316 Gastroenterologist
- 253317 Intensive Care Specialist
- 253318 Neurologist
- 253321 Paediatrician
- 253322 Renal Medicine Specialist
- 253323 Rheumatologist
- 253324 Thoracic Medicine Specialist
- 253399 Internal Medicine Specialists, nec

Surgeons
- 253500 Surgeons, nfd
- 253511 Surgeon (General)
- 253512 Cardiothoracic Surgeon
- 253513 Neurosurgeon
- 253514 Orthopaedic Surgeon
- 253515 Otorhinolaryngologist
- 253516 Paediatric Surgeon
- 253517 Plastic & Reconstructive Surgeon
- 253518 Urologist
- 253521 Vascular Surgeon

Other Medical Practitioners
• 253900  Other Medical Practitioners, nfd
• 253911  Dermatologist
• 253912  Emergency Medicine Specialist
• 253913  Obstetrician & Gynaecologist
• 253914  Ophthalmologist
• 253915  Pathologist
• 253916  Radiologist [2006]
• 253917  Diagnostic & Interventional Radiologist [2011]
• 253918  Radiation Oncologist [2011]
• 253999  Medical Practitioners, nec

Nurse Educators & Researchers
• 254200  Nurse Educators & Researchers, nfd
• 254211  Nurse Educator
• 254212  Nurse Researcher

Registered Nurses
• 254400  Registered Nurses, nfd
• 254411  Nurse Practitioner
• 254412  Registered Nurse (Aged Care)
• 254413  Registered Nurse (Child & Family Health)
• 254414  Registered Nurse (Community Health)
• 254415  Registered Nurse (Critical Care & Emergency)
• 254416  Registered Nurse (Developmental Disability)
• 254417  Registered Nurse (Disability & Rehabilitation)
• 254418  Registered Nurse (Medical)
• 254421  Registered Nurse (Medical Practice)
• 254422  Registered Nurse (Mental Health)
• 254423  Registered Nurse (Perioperative)
• 254424  Registered Nurse (Surgical)
• 254499  Registered Nurses, nec

Psychologists
• 272300  Psychologists, nfd
• 272311 Clinical Psychologist
• 272312 Educational Psychologist
• 272313 Organisational Psychologist
• 272314 Psychotherapist
• 272399 Psychologists, nec

Medical Technicians
• 311200 Medical Technicians, nfd
• 311211 Anaesthetic Technician
• 311212 Cardiac Technician
• 311213 Medical Laboratory Technician
• 311214 Operating Theatre Technician
• 311215 Pharmacy Technician
• 311216 Pathology Collector
• 311299 Medical Technicians, nec

Ambulance Officers & Paramedics
• 411100 Ambulance Officers & Paramedics, nfd
• 411111 Ambulance Officer
• 411112 Intensive Care Ambulance Paramedic

Dental Hygienists, Technicians & Therapists
• 411200 Dental Hygienists, Technicians & Therapists, nfd
• 411211 Dental Hygienist
• 411212 Dental Prosthetist
• 411213 Dental Technician
• 411214 Dental Therapist

Enrolled & Mothercraft Nurses
• 411400 Enrolled & Mothercraft Nurses, nfd
• 411411 Enrolled Nurse
• 411412 Mothercraft Nurse

Nursing Support & Personal Care Workers
• 423300 Nursing Support & Personal Care Workers, nfd
• 423311 Hospital Orderly
• 423312 Nursing Support Worker
### Australia’s Health Workforce Series – Speech Pathologists in Focus

#### 423313 Personal Care Assistant

#### 423314 Therapy Aide

**Other**

- 250000 Health Professionals, nfd
- 251000 Health Diagnostic & Promotion Professionals, nfd
- 251111 Dietitian
- 252000 Health Therapy Professionals, nfd
- 252411 Occupational Therapist
- 252511 Physiotherapist
- 252611 Podiatrist
- 253000 Medical Practitioners, nfd
- 253211 Anaesthetist
- 253411 Psychiatrist
- 254000 Midwifery & Nursing Professionals, nfd
- 254111 Midwife
- 254311 Nurse Manager
- 272112 Drug & Alcohol Counsellor
- 272199 Counsellors nec
- 272511 Social Worker
- 399913 Optical Dispenser
- 399914 Optical Mechanic
- 411311 Diversional Therapist
- 411511 Aboriginal and Torres Strait Islander Health Worker
- 411611 Massage Therapist
- 411715 Residential Care Officer
- 423111 Aged or Disabled Carer
- 423211 Dental Assistant
- 451511 Natural Remedy Consultant
- 599915 Clinical Coder