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# A Statistical appendix

This appendix contains contextual information to assist the interpretation of the performance indicators presented in the Report. It also contains a discussion of the statistical concept of age standardisation and its application to Indigenous and all people's use of aged care services.

Most of the service areas covered by the *Report on Government Services 2008* (2008 Report) use population data from tables AA.1 and AA.2 for descriptive information (such as expenditure per person in the population) or performance indicators (such as participation rates for vocational education and training (VET)).

## **Indigenous data in the statistical appendix**

The statistical appendix in the 2008 Report contains the following data items on Indigenous people:

- persons by country of birth, August 2006 ('000)
- population profile, 30 June 2006
- proportion with weekly income of \$249 or less, August 2006
- proportion who had completed year 12 or equivalent, August 2006
- proportion who had attended higher education, August 2006
- standardised incidence ratio for use of Community Aged Care Packages (CACP) and permanent residential aged care (combined), 30 June 2001
- age-specific usage rates of CACPs and permanent residential aged care (per 1000 people), 30 June 2005
- ratio of CACP residents and permanent residents (combined) to 1000 persons in target population, 30 June 2001.

### *Attachment tables*

Attachment tables for data within the statistical appendix of this compendium are contained in attachment A of the compendium. These tables are identified in references throughout this chapter by an 'AA' suffix (for example, table AA.3 is

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table 3 in the statistical appendix attachment). As the data are directly sourced from the 2008 Report, the compendium also notes where the original table, figure or text in the 2008 Report can be found. For example, where the compendium refers to '2008 Report, p. A.15' this is page 15 of the statistical appendix of the 2008 Report, and '2008 Report, table AA.2' is attachment table 2 of the statistical appendix attachment of the 2008 Report.

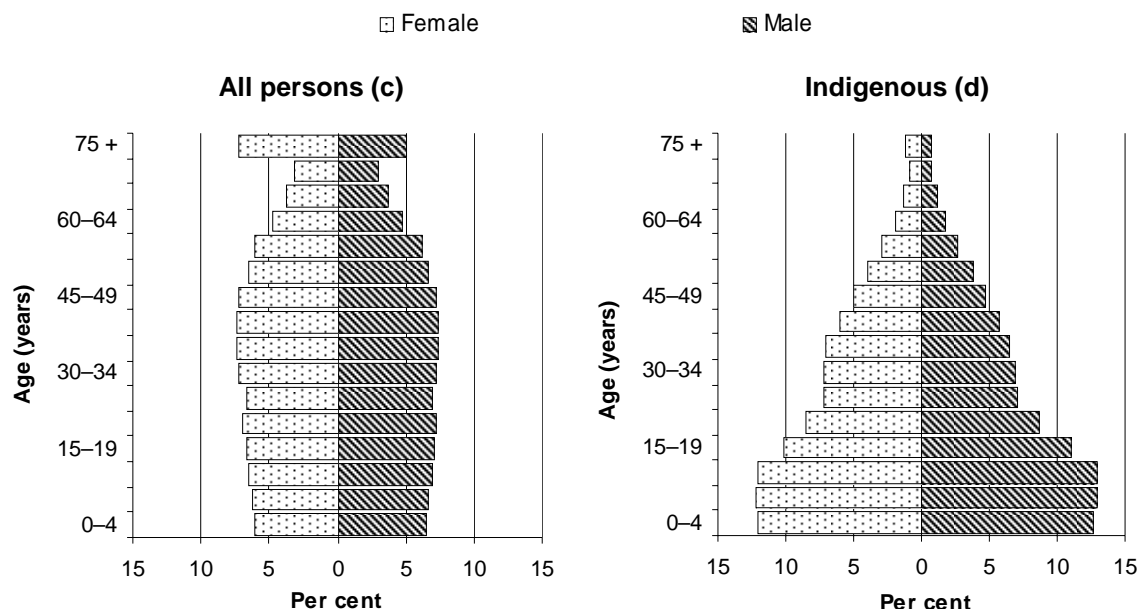
## Population

More than three quarters of Australia's 20.7 million people lived in the eastern mainland states as at 30 June 2006, with NSW, Victoria and Queensland accounting for 32.9 per cent, 24.8 per cent and 19.8 per cent, respectively, of the nation's population. Western Australia and SA accounted for a further 9.9 per cent and 7.6 per cent, respectively, of the population, while Tasmania, the ACT and the NT accounted for the remaining 2.4 per cent, 1.6 per cent and 1.0 per cent, respectively (2008 Report, table AA.1).

As in most other developed economies, greater life expectancy and declining fertility have contributed to an 'ageing' of Australia's population. However, the age distribution of Indigenous Australians is markedly different (figure A.1). At 30 June 2006, 9.2 per cent of Australia's population was aged 70 years or over, in contrast to 1.8 per cent of Australia's Indigenous population (tables AA.3 and 2008 Report, tables AA.1). Across jurisdictions, the proportion of people aged 70 years or over ranged from 11.0 per cent in SA to 2.6 per cent in the NT (2008 Report, tables AA.1).

Half of the population at June 2006 was female (50.3 per cent). This distribution was similar across all jurisdictions except the NT, which had a lower representation of women in its population (48.1 per cent) (2008 Report, table AA.1). The proportion of women in the population varies noticeably by age. Nationally, approximately 56.7 per cent of people aged 70 or over were female, compared with 48.7 per cent of people aged 14 years or younger (2008 Report, table AA.1).

Figure A.1 **Population distribution, Australia, by age and sex, 30 June 2006<sup>a, b</sup>**



<sup>a</sup> Totals may not add as a result of rounding. <sup>b</sup> Includes other territories. <sup>c</sup> Estimated resident population (ERP) figures as at 30 June 2006 are preliminary and rebased on the *2006 Census of Population and Housing*. <sup>d</sup> Experimental estimates at 30 June 2006 are preliminary rebased estimates and are based on the *2006 Census of Population and Housing*.

Source: ABS (unpublished) Australian Demographic Statistics, December Quarter 2006; ABS (2007a) Australian Demographic Statistics, March Quarter 2007; table AA3 and 2008 Report, table AA.1; 2008 Report, figure A.1, p. A.3.

## Population, by ethnicity and proficiency in English

The most and least common languages other than English spoken in people's homes varied across jurisdictions in August 2006. The most extreme variation was in the NT, where 15.1 per cent of people spoke an Australian Indigenous language (65.3 per cent of the total persons in the NT who spoke a language other than English in their homes) (table AA.2).

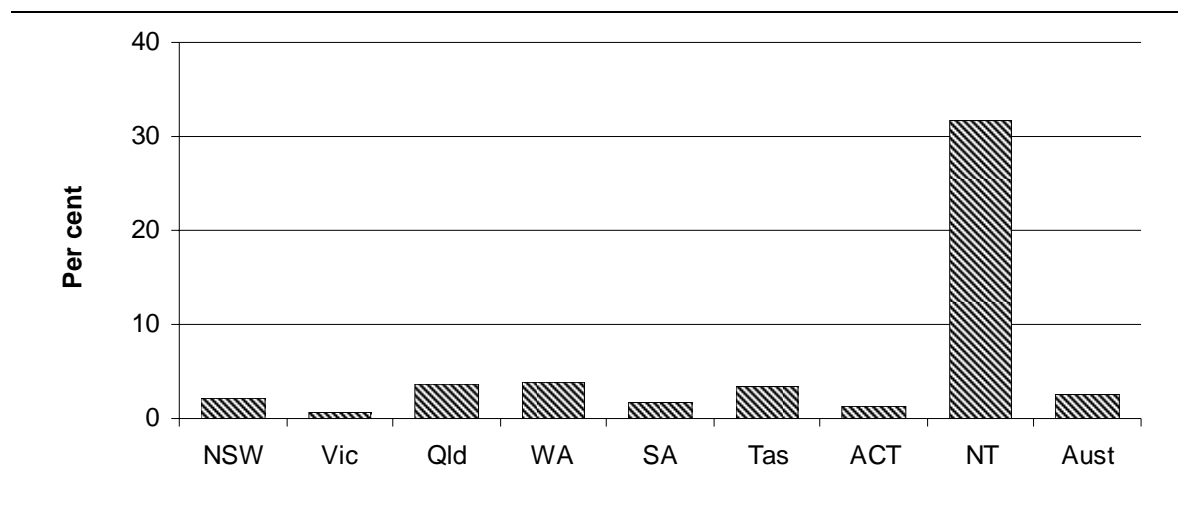
## Indigenous population profile

There were an estimated 517 174 Indigenous people (259 693 female and 257 481 male) in Australia at 30 June 2006, accounting for approximately 2.5 per cent of the total population (table AA.3 and 2008 Report, table AA.2). The proportion of people who were Indigenous was significantly higher in the NT (31.6 per cent) than in any other jurisdiction. Across the other jurisdictions, the proportion ranged from 3.8 per cent in WA to 0.6 per cent in Victoria (figure A.2).

Nationally, the Indigenous population is projected to grow to 528 645 people in 2009 (table AA.4).

The majority of Indigenous people (81.8 per cent) at August 2006 spoke only English at home, while a further 9.0 per cent spoke an Indigenous language and English very well or well. However, 2.2 per cent spoke English not well or not at all (up to 12.2 per cent in the NT). Nationally, 5.2 per cent did not state proficiency in any specific language (table AA.5).

Figure A.2 **Indigenous people as a proportion of the population, 30 June 2006<sup>a, b, c</sup>**



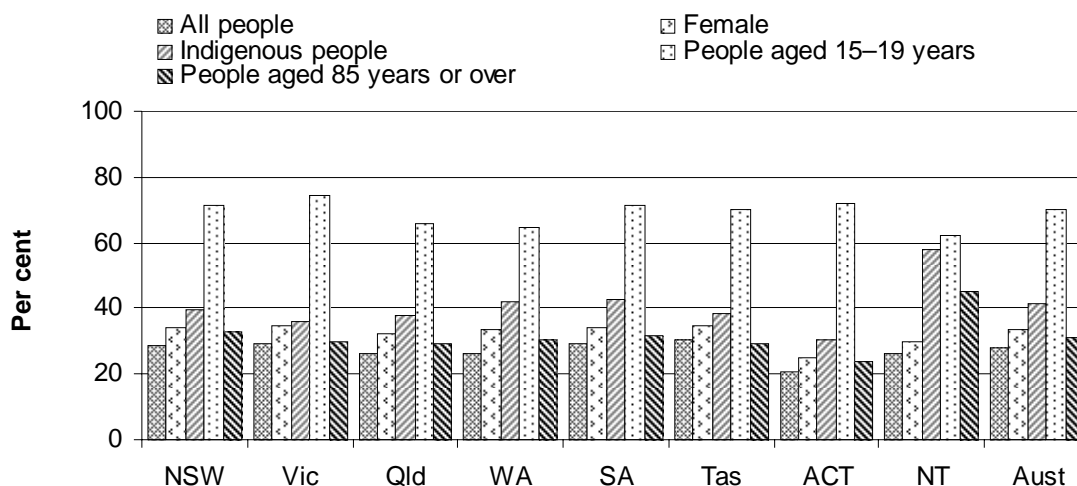
<sup>a</sup> 'Australia' includes other territories. <sup>b</sup> Experimental estimates of the Australian Indigenous population at 30 June 2006 are preliminary rebased estimates and are based on the *2006 Census of Population and Housing*. <sup>c</sup> The ERP at 30 June 2006 is preliminary and rebased on the *2006 Census of Population and Housing*.

Source: ABS (December Quarter 2006, March Quarter 2007) *Australian Demographic Statistics*; table AA.3 and 2008 Report, table AA.2; 2008 Report, figure A.5, p. A.7.

## Income

Nationally, 28.0 per cent of people aged 15 years or over in August 2006 had a relatively low weekly individual income of \$249 or less (2008 Report, table AA.16). The proportion was considerably higher for younger people (70.3 per cent for people aged 15–19 years), Indigenous people (41.4 per cent), females (33.5 per cent) but similar for older people (30.9 per cent for people aged 85 years or over) (figure A.3).

**Figure A.3 Weekly individual income of \$249 or less, by sex, Indigenous status and age, August 2006<sup>a</sup>**



<sup>a</sup> 'Australia' includes other territories.

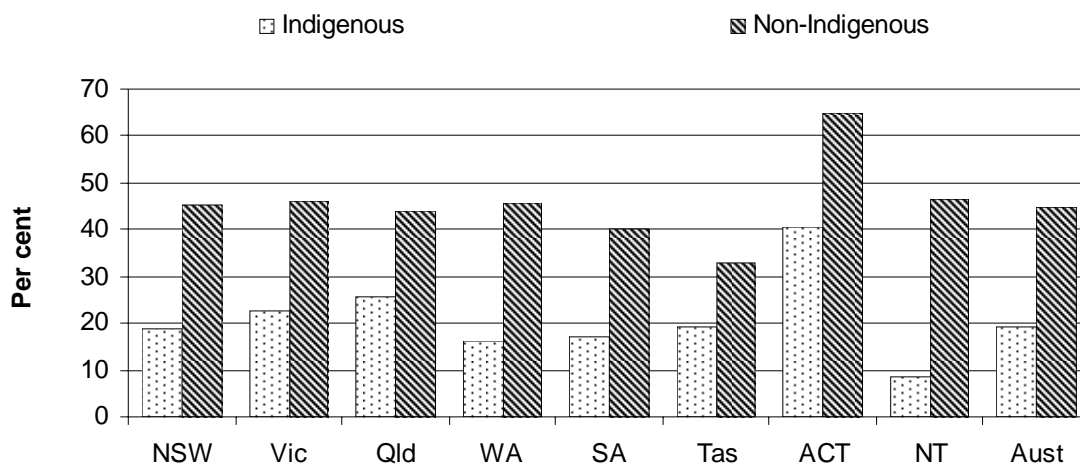
Source: ABS (unpublished) 2006 Census of Population and Housing; ABS (unpublished) 2006 Census of Population and Housing, Cat. no. 2068.0; table AA.7 and 2008 Report, tables AA.16 and AA.18; 2008 Report, figure A.8, p. A.10.

## Educational attainment

Employment outcomes and income are closely linked to the education and skill levels of individuals. At August 2006, 42.2 per cent of people aged 15 years and over (approximately 6.7 million people) had completed year 12 or equivalent as the highest level of schooling. A further 22.9 per cent (3.6 million people) had completed year 10 or equivalent schooling. Across jurisdictions, the proportion of people aged 15 years and over who had completed year 12 or equivalent schooling ranged from 62.1 per cent in the ACT to 31.3 per cent in Tasmania (2008 Report, figure A.10).

The proportion of non-Indigenous people aged 15 years or over who had completed year 12 or equivalent schooling as the highest level of schooling (44.9 per cent) was considerably higher than the proportion of Indigenous people (19.4 per cent) in August 2006. Across jurisdictions, the proportion of Indigenous people aged 15 years or over who had completed year 12 or equivalent schooling ranged from 40.7 per cent in the ACT to 8.5 per cent in the NT. The proportion of non-Indigenous people who had completed year 12 or equivalent was highest in the ACT (65.0 per cent) and lowest in Tasmania (33.0 per cent) (figure A.4).

Figure A.4 **People aged 15 years or over who had completed year 12 or equivalent as highest level of schooling, by Indigenous status, August 2006<sup>a</sup>**

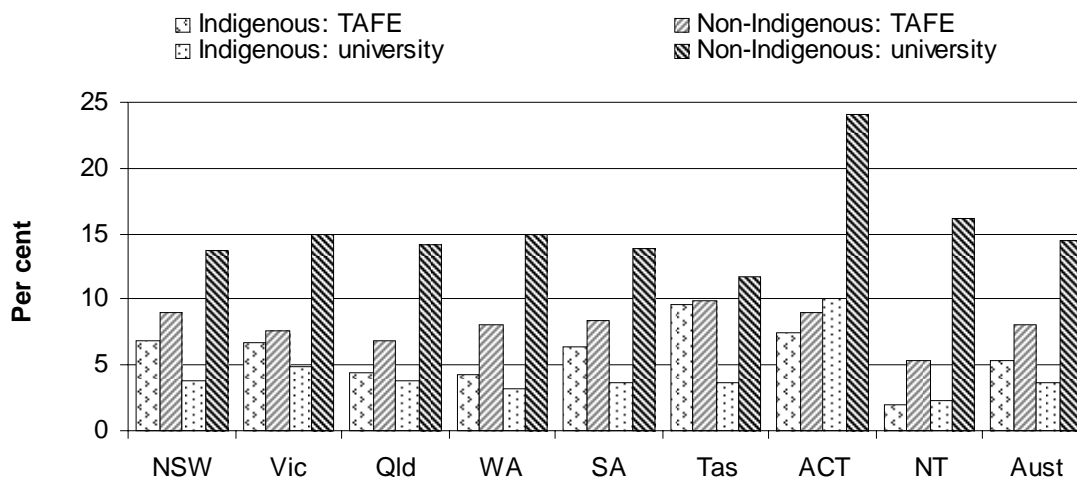


<sup>a</sup> 'Australia' includes other territories.

Source: ABS (unpublished) *2006 Census of Population and Housing*, Cat. no. 2068.0; table AA.8; 2008 Report, figure A.11, p. A.13.

In August 2006, the proportion of the Indigenous tertiary students who were attending TAFE was highest in Tasmania (9.5 per cent) and lowest in the NT (2.0 per cent). At August 2006, the proportion of non-Indigenous students (14.4 per cent) attending university was considerably higher than the proportion of Indigenous students (3.7 per cent). Across jurisdictions, the proportion of non-Indigenous students attending university ranged from 24.0 per cent in the ACT to 11.7 per cent in Tasmania. For Indigenous students the proportion ranged from 10.0 per cent in the ACT to 2.2 per cent in the NT (figure A.5).

**Figure A.5 Proportion of students attending tertiary education institutions, by Indigenous status, August 2006<sup>a, b</sup>**



<sup>a</sup> 'Australia' includes other territories. <sup>b</sup> Includes 'technical and further educational institution (including TAFE colleges)'.

Source: ABS (unpublished) 2006 Census of Population and Housing, Cat. no. 2068.0; table AA.9; 2008 Report, figure A.13, p. A.14.

## Statistical concepts used in the Report — age standardisation of data

### *How age profiles can distort observed service usage patterns*

The age profile of Australians varies across jurisdictions and across different cultural and linguistic backgrounds (see for example the different age profiles of Indigenous and all Australians, figure A.1). Variations in age profiles are important because the likelihood of needing certain services (such as aged care services) increases with age. As a result, observed differences in service usage rates by different cohorts within the community may arise from different age profiles, rather than from different usage patterns. One method of eliminating this distortion from the data is to standardise for the age profiles of different groups.

### *Method of standardisation*

Either direct or indirect standardisation can be used. Indirect standardisation is presented here because it is more appropriate when comparing small populations. This method applies standard age-specific usage rates (in this case, average Australian rates) to actual populations (different groups within states and territories), and compares observed numbers of clients with the numbers that would

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have been expected if average rates had applied. Comparisons are made via the standardised incidence ratio. A value greater than 1.0 in this ratio means that use is higher than would be expected if the particular group had the same usage rate as that of the Australian population as a whole. A value below 1.0 means use is lower than would be expected. Age standardisation generally covers use by all age groups, so the resulting standardised incidence ratios compare use by complete population groups.

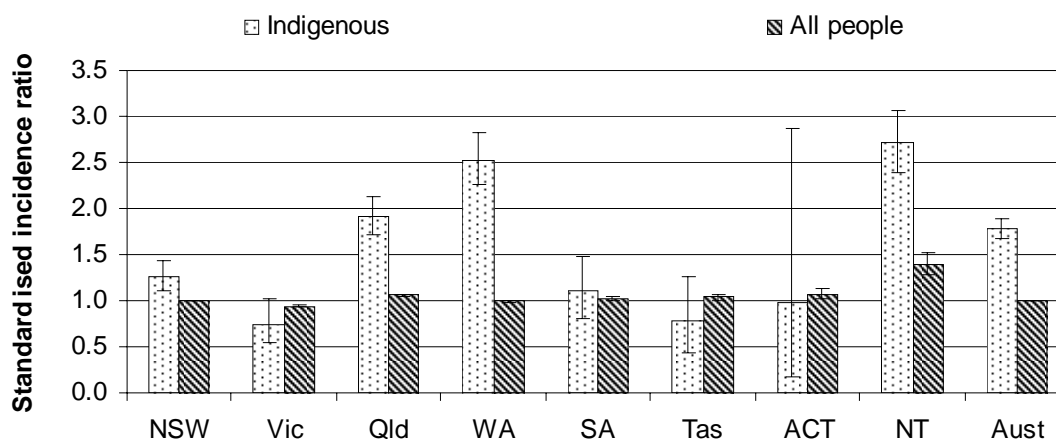
### *Application of indirect standardisation*

In the following illustration, the combined use of permanent residential aged care and Community Aged Care Packages (CACPs) by Indigenous people is compared with average service use by all Australians (using 2001 data). The resulting standardised incidence ratios are presented in figure A.6. The error bars in the figure show how accurate the comparisons are — if an error bar goes across the value of 1.0, then the usage rate by Indigenous people in that jurisdiction is not significantly different from the average use by all Australians.

Figure A.6 shows that Indigenous people had a higher than average combined use of CACPs and permanent residential aged care — nationally, about 80 per cent higher. This result reflects the higher age-specific usage rates of CACPs for Indigenous people at all ages, and of permanent residential aged care for those Indigenous people aged under 75 years (table A.1). Results vary across jurisdictions.



Figure A.6 **Standardised incidence ratio for use of CACP and permanent residential aged care (combined), 30 June 2001<sup>a, b, c</sup>**



<sup>a</sup> The Indigenous ratio is per 1000 Indigenous people aged 50 or over, the all people ratio is per 1000 Indigenous people aged 50 or over and non-Indigenous people aged 70 or over. <sup>b</sup> The calculations use indirect age standardisation against use by all people Australia-wide. <sup>c</sup> ACT data are based on a very small Indigenous population and have high standard errors.

Source: AIHW (unpublished); table AA.12; 2008 Report, figure A.15, p. A.22.

Table A.1 **Age-specific usage rates of CACPs and permanent residential aged care, 30 June 2005, (per 1000 people)<sup>a, b</sup>**

| Age (years) | CACP recipients |                | Permanent aged care residents |                |
|-------------|-----------------|----------------|-------------------------------|----------------|
|             | Indigenous      | Non-Indigenous | Indigenous                    | Non-Indigenous |
| 50–54       | 4.1             | 0.1            | 2.5                           | 0.7            |
| 55–59       | 9.8             | 0.3            | 5.8                           | 1.4            |
| 60–64       | 19.2            | 0.8            | 8.8                           | 2.8            |
| 65–69       | 36.3            | 1.8            | 15.4                          | 5.9            |
| 70–74       | 48.5            | 3.9            | 28.7                          | 13.5           |
| 75+         | 82.1            | 17.8           | 106.8                         | 102.0          |

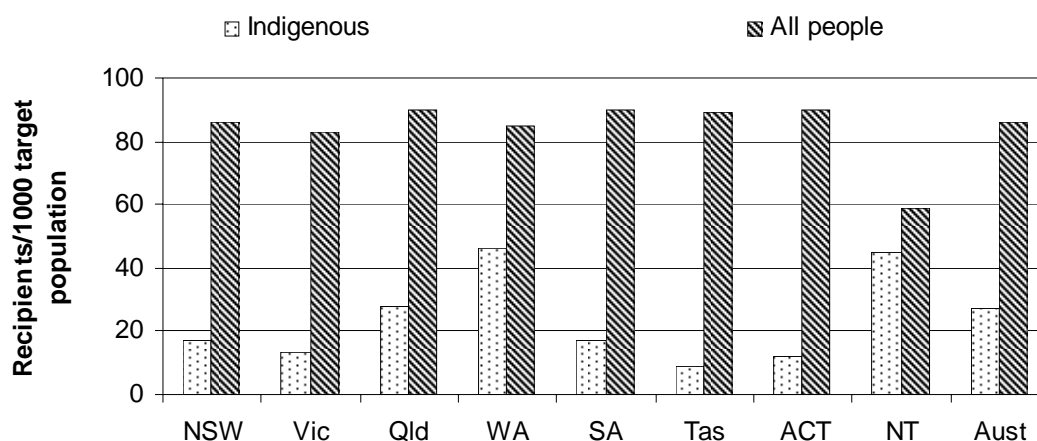
<sup>a</sup> Excludes clients of multipurpose and flexible services. <sup>b</sup> Cases with missing data on Indigenous status have been pro-rated within gender/age groups.

Source: AIHW (2006) *Residential Aged Care in Australia 2004–05: A Statistical Overview*, Cat. no. AGE 45, Aged Care Statistics Series no. 22; AIHW (2006) *Community Aged Care Packages in Australia 2004–05: A Statistical Overview*, Cat. no. AGE 47, Aged Care Statistics Series no. 23; 2008 Report, table A.1, p. A.23.

The age standardised rates are quite different from those that result from comparing use with the target group population (clients per 1000 in the target group). The target group measure (figure A.7) suggests that combined use of CACPs and permanent residential aged care is much lower for Indigenous people than for all people. Figure A.8 also suggests that use of the two services for all people is much lower in the NT than in other jurisdictions; this difference is not apparent after age

standardisation (figure A.6), indicating that the difference in this measure is the result of the relatively young age structure of the NT (even within the two subgroups of people 70 years and over, and Indigenous people 50 years and over).

**Figure A.7 Ratio of CACP recipients and permanent residents (combined) to 1000 persons in target population, 30 June 2001<sup>a</sup>**



<sup>a</sup> Indigenous ratio is per 1000 Indigenous people aged 50 years or over, 'all people' ratio is per 1000 Indigenous people aged 50 years or over and non-Indigenous people aged 70 years or over.

Source: AIHW (unpublished); table AA.12; 2008 Report, figure A.16, p. A.23.

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## Attachment tables

Attachment tables for data within this chapter are contained in the attachment to the compendium. These tables are identified in references throughout this chapter by an 'AA' suffix (for example, table AA.3 is table 3 in the statistic appendix attachment). The tables included in the attachment are listed below.

### Population

- Table AA.1** Persons by country of birth, August 2006 ('000)
- Table AA.2** Persons by language spoken at home, August 2006 ('000)
- Table AA.3** Experimental estimated resident Australian Indigenous population, 30 June 2006
- Table AA.4** Experimental projection of the Indigenous population, 2000 to 2009 (number)
- Table AA.5** Language spoken at home by Indigenous people and proficiency in spoken English, by sex, August 2006 (number)

### Family and household

- Table AA.6** Families and persons in families in occupied private dwellings by Indigenous status and family/household composition, August 2006

### Income and employment

- Table AA.7** Persons aged 15 years and over by weekly individual income and Indigenous status, August 2006
- Table AA.8** People aged 15 years or over, by highest level of schooling completed and Indigenous status, August 2006 ('000)
- Table AA.9** Type of educational institution attending by Indigenous status, August 2006 ('000)

### General economic indicators

- Table AA.10** Gross State Product, 2001-02 to 2005-06, (2005-06 dollars)
- Table AA.11** Gross Domestic Product price deflator (index)

### Statistical concepts

- Table AA.12** Age standardisation data, June 2001