Population health profile of the Central Australian Division of General Practice

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The data in this report are designed to be used for needs assessment and planning purposes: while they are based on the best available data and analytic processes, data available by postcode or Statistical Local Area, as used in this report, cannot be precisely translated to Division. Division totals in the report should, therefore, be seen as estimates. Interpretation of differences between data in this profile and similar data from other sources needs to be undertaken with care, as such differences may be due to the use of different methodology to produce the data.

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Population health profile
of the *Central Australian Division of General Practice*

Introduction

This profile has been designed to provide a description of the population of the Central Australian Division of General Practice, and aspects of their health. Its purpose is to provide information to support a population health approach, which aims to improve the health of the entire population and to reduce health inequalities among population groups: a more detailed discussion of a population health approach is provided in the supporting information, page 15.

Contents

The profile includes a number of tables, maps and graphs to profile population health in the Division and provides comparisons with other areas (eg. Top End DGP and Australia) and Aboriginal and Torres Strait Islanders elsewhere in Australia. Specific topics covered for the Central Australian Division include:

- a socio-demographic profile (pages 3-7);
- GP workforce data (page 8);
- immunisation rates (page 8); and
- rates of premature death (page 9).

Key indicators

Location:	Northern Territory	
Division number:	802	
Population‡:	**No.**	**%**
Indigenous:	**19,202**	
<25	10,374	54.0%
65+	732	3.8%
Non-Indigenous:	**26,074**	
<25	9,911	35.3%
65+	1,136	4.0%
Disadvantage score[1]:	925	
GP services per head of population:		
Division‡	2.1	
Australia	4.7	
Population per FTE GP:		
Division‡	2,191	
Australia	1,403	
Premature death rate[2]:		
Division‡	580.6	
Australia	290.4	

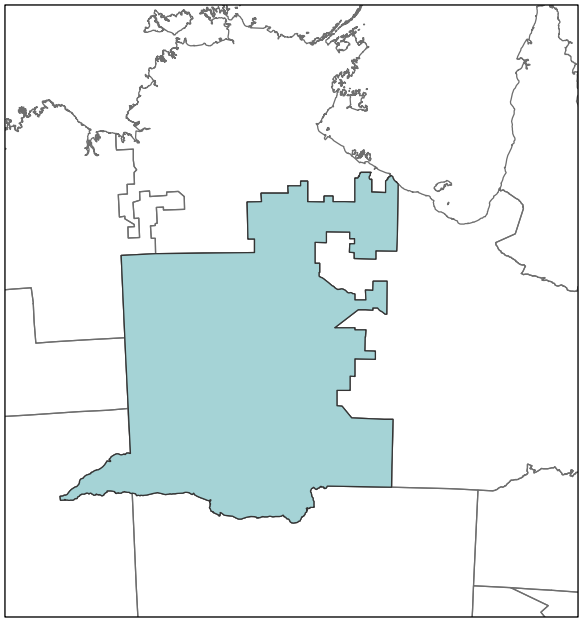
[1] **Numbers below 1000 (the index score for Australia) indicate the Division is relatively disadvantaged**

[2] **Deaths at ages 0 to 74 years per 100,000 population**

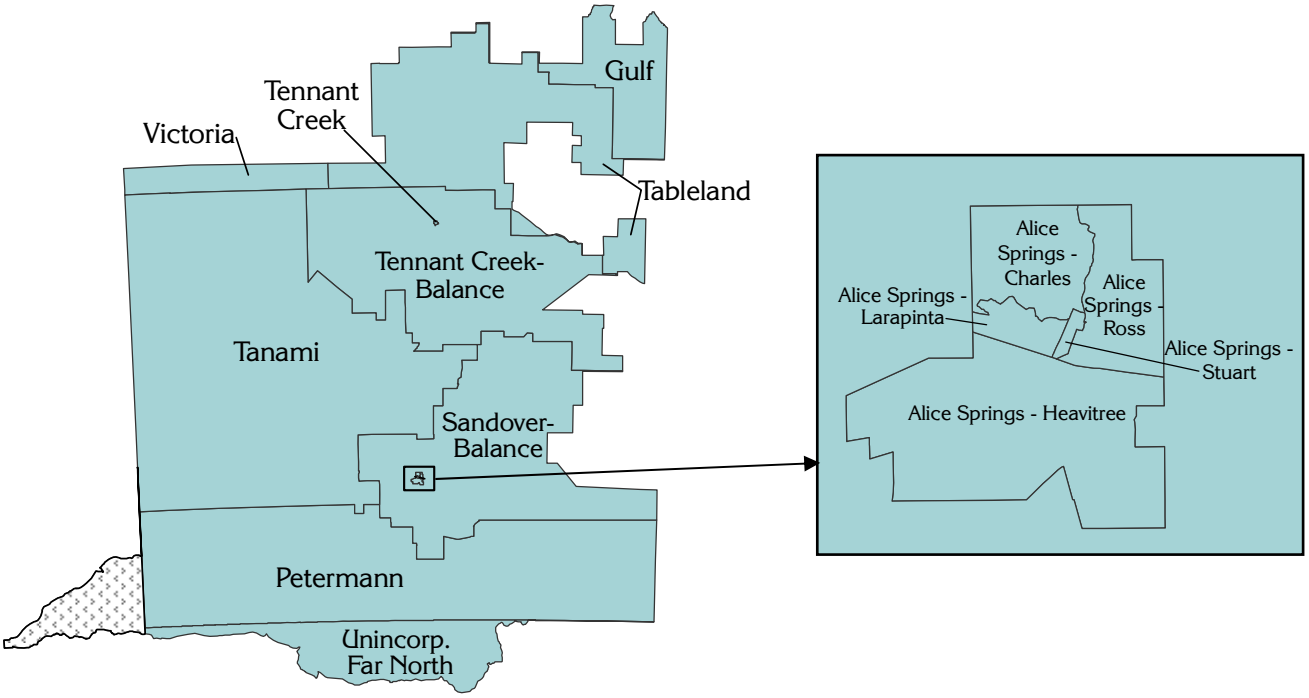
‡ **See note "Data converters and mapping" re calculation of Division Total**

Central Australian Division of General Practice

NT Divisions of General Practice



Central Australian DGP by SLA



Socio-demographic profile

Population

The population figures used here have been adjusted to take account of the estimated under-counting at the 2001 Census of Aboriginal and Torres Strait Islander people.

The Central Australian Division had a population of 47,276 at the 2001 Census. Aboriginal and Torres Strait Islander people comprised over a third (40.6%) of the population of the Division, and had a markedly younger age structure than for the non-Indigenous population in the Division. The bars in the chart for the 0 to 4 years age group clearly show the effect of high Indigenous birth rates in the Division (although with a notably lower proportion than in the next age group); which give the chart a generally triangular shape, other than at the oldest ages, where the proportions increase (Figure 1). There is a gradual drop in the proportion of the Indigenous between each age group (with a more marked drop for females between the 10 to 14 and 15 to 19 year age groups) suggesting that from 5 to 9 years extremely high death rates are occurring through to the oldest ages.

The profile for the non-Indigenous population (shown by the shapes) is quite different and shows the impact of a lower birth rate and, from the 15 to 24 years of age, possible out-migration for schooling and further education. There are smaller reductions in the population from age 40 through to the 60 to 64 years age group: the marked decline in proportions at older ages is suggestive of the non-Indigenous population moving out of the Division to retire elsewhere in Australia.

Figure 1: Population in Central Australian DGP‡ by Indigenous status, age and sex, 2001

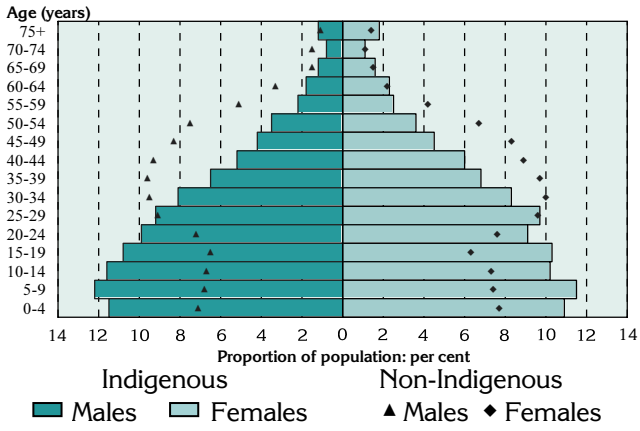
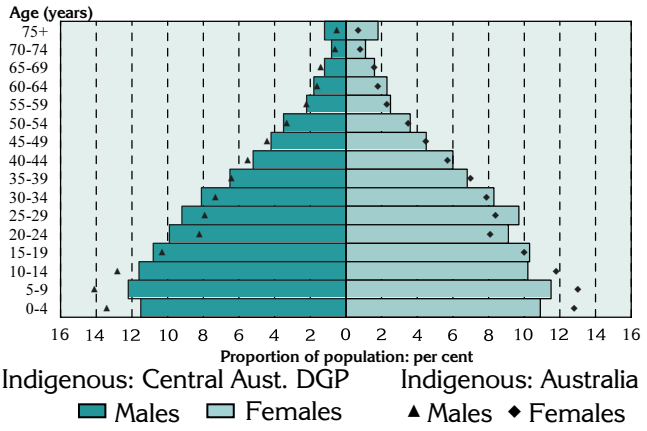


Figure 2: Indigenous population in Central Australian‡ and Australia, by age and sex, 2001



‡ See note under 'Data converters and mapping' re calculation of Division totals

The profile of the Indigenous population in the Division is similar to that for Indigenous people across Australia (Figure 2). The major differences are that the Division had:

- notably lower proportions of children aged 0 to 14 years;
- higher proportions of males and females aged 15 to 34 years; and
- at older ages - higher proportions at ages 75 years and over.

Table 1 provides the data on which the charts in Figures 1 and 2 are based. The data highlight differences in the age distribution of the Indigenous and non-Indigenous populations.

Table 1: Population by Indigenous status and age*, Central Australian DGP‡ and Australia, 2001

Age group (years)	Central Australian DGP‡				Australia			
	Indigenous		Non-Indigenous		Indigenous		Non-Indigenous	
	No.	%	No.	%	No.	%	No.	%
0-14	6,529	34.0	6,023	21.5	178,622	39.0	3,807,808	20.1
15-24	3,845	20.0	3,889	13.9	83,942	18.3	2,570,934	13.6
25-44	5,730	29.8	10,610	37.8	128,474	28.0	5,715,858	30.2
45-64	2,365	12.3	6,417	22.9	54,206	11.8	4,435,376	23.4
65-74	446	2.3	781	2.8	10,249	2.2	1,310,587	6.9
75+	287	1.5	355	1.3	2,768	0.6	1,111,844	5.9
Total	**19,202**	**100.0**	**28,074**	**100.0**	**458,261**	**100.0**	**18,952,407**	**100.0**

* Experimental estimates of Aboriginal and Torres Strait Islander people, ABS 2001

‡ See note under 'Data converters and mapping' re calculation of Division totals

Almost three tenths (28.4%) of the Indigenous population in Central Australian DGP lived in Tanami Statistical Local Area (SLA – see page 17), with just less than one quarter (25.3%, 4,873 people) in Alice Springs and one sixth (2,924 people, 15.2%) living in Sandover - Balance SLA. Tennant Creek comprised one seventh (2696 people, 14.0%) of the Division's Indigenous population.

Table 2: Population by Indigenous status*, SLAs in Central Australian DGP‡, 2001

Statistical Local Area	Indigenous		Non-Indigenous		Total	
	No.	%	No.	%	No.	%
Tanami	5,448	28.4	734	2.6	6,182	13.1
Sandover - Balance	2,924	15.2	530	1.9	3,454	7.3
Alice Springs - Larapinta	1,486	7.7	7,682	27.4	9,168	19.4
Tennant Creek	1,353	7.0	1,649	5.9	3,002	6.3
Tennant Creek - Balance	1,343	7.0	136	0.5	1,479	3.1
Petermann	1,221	6.4	1,623	5.8	2,844	6.0
Alice Springs - Charles	1,180	6.1	3,914	13.9	5,094	10.8
Alice Springs - Ross	1,080	5.6	6,733	24.0	7,813	16.5
Unincorporated Far North	955	5.0	1,263	4.5	2,218	4.7
Alice Springs - Stuart	612	3.2	1,587	5.7	2,199	4.7
Alice Springs - Heavitree	515	2.7	1,731	6.2	2,246	4.8
Tableland	508	2.6	340	1.2	848	1.8
Other	577	3.0	152	0.5	729	1.5
Total	**19,202**	**100.0**	**28,074**	**100.0**	**47,276**	**100.0**

* **Experimental estimates of Aboriginal and Torres Strait Islander people, ABS 2001**
‡ **See note under 'Data converters and mapping' re calculation of Division totals**

At 30 June 2004, the Estimated Resident Population of the Division was 46,633.

Socioeconomic status and Indigenous status

The indicators presented in this section describe geographic variations in the distribution of the population for a number of key socioeconomic influences, which impact on the health and wellbeing of populations. Where data are available, comparisons are made between the Indigenous and non-Indigenous populations.

At the 2001 Census, 40.6% of the population of the Central Australian DGP were estimated to be of Aboriginal or Torres Strait Islander origin, a significantly higher proportion than the Australian average of 2.4% (Figure 3 and Table 3) and the second highest proportion among the Divisions (after Kimberley DGP, 47.3%). Of these, 20.6% reported poor proficiency in English (determined when Indigenous people reported in the Census speaking an Aboriginal or Torres Strait Islander language, and speaking English 'not well' or 'not at all'), higher than the proportion in Top End DGP (15.9%) and Australia (3.0%).

The proportion of Indigenous single parent families in the Division (23.2%) was similar to the Indigenous proportion in Top End DGP (23.8%), and more than twice that of the non-Indigenous population (10.1%).

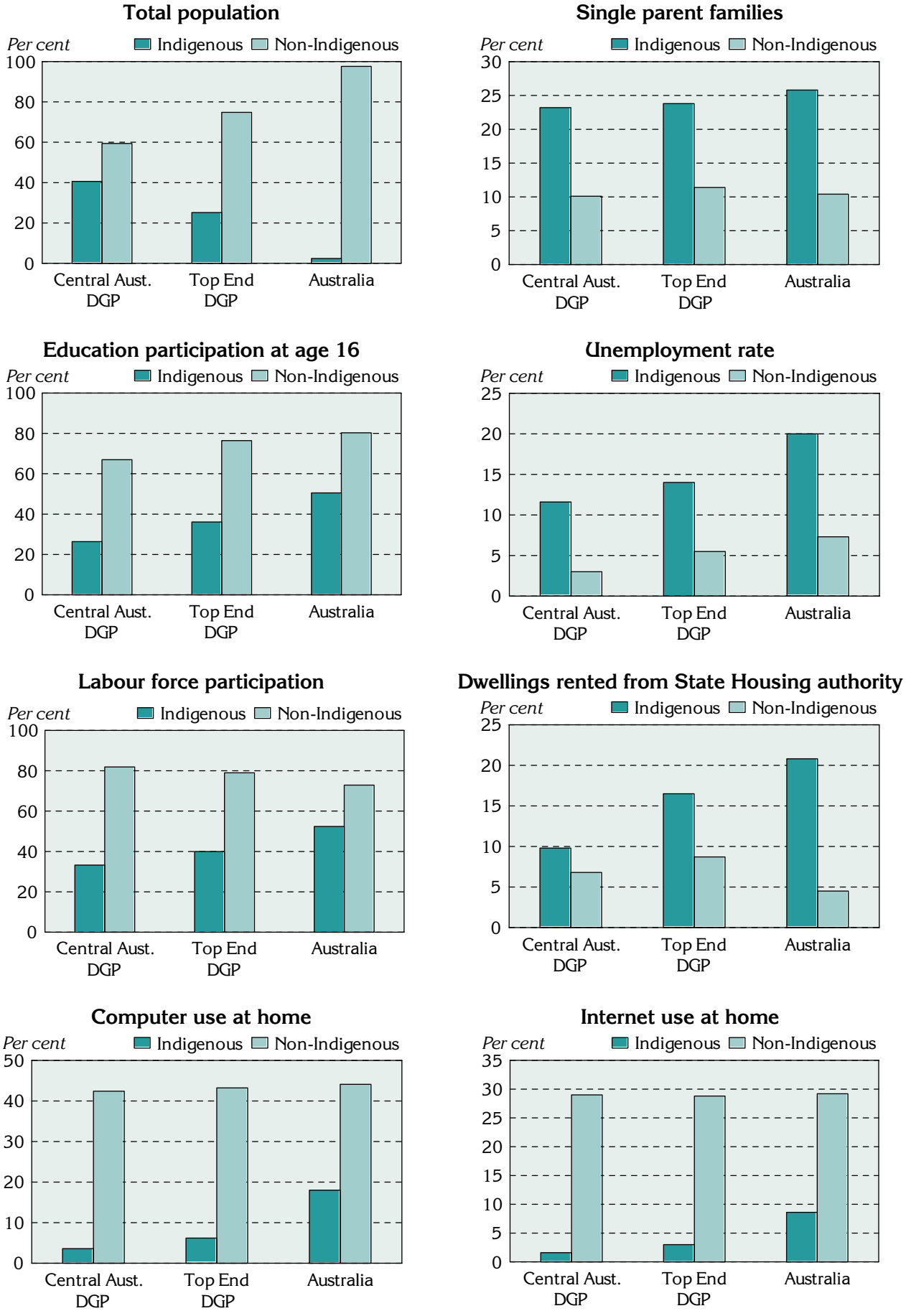
One quarter (26.4%) of Indigenous 16 year olds living in the Division were involved in full-time secondary school education, which was lower than the Indigenous rate for Top End DGP overall (36.1%), and notably less than the non-Indigenous population. (67.0%).

A lower proportion of the Indigenous population lived in dwellings rented from the State housing authority (9.8%) compared to the rate for Indigenous in Top End DGP (16.5%): this rate was higher than for the non-Indigenous population (6.8%). The proportion of households (Indigenous and non-Indigenous combined) in the Division receiving rent assistance from Centrelink (7.6%) was notably lower than that for the Top End DGP (11.9%).

The rate of computer use at home by the Indigenous population in Central Australian DGP (3.6%) was substantially below that of the Indigenous population in Top End DGP (6.2%), and one tenth of the non-Indigenous population in the Division (42.4%). Similarly, the rate of home Internet use for the Indigenous population in the Central Australian DGP (1.6%) was lower than the Indigenous rate for Top End DGP (3.0%), and substantially lower than that for the non-Indigenous population (29.0%).

Figure 3: Socio-demographic indicators by Indigenous status, Central Australian DGP‡, Top End DGP and Australia, 2001

Note the different scales



Note: The 'Total population' figure is based on the experimental estimates of Aboriginal and Torres Strait Islander people; the remaining figures are based on ABS Census data

‡ See note under 'Data converters and mapping' re calculation of Division totals

Data Sources: see 'Data sources and limitations' at end of report

Table 3: Socio-demographic indicators, Central Australian DGP‡, Top End DGP and Australia, 2001*

Indicator	Central Australian DGP‡		Top End DGP		Australia	
	No.	%	No.	%	No.	%
Population						
- Indigenous	19,202	40.6	38,479	25.2	458,261	2.4
- Non-Indigenous	28,074	59.4	114,092	74.8	18,952,407	97.6
Indigenous with poor proficiency in English[1]	3,597	20.6	5,450	15.9	12,208	3.0
Single parent families						
- Indigenous	855	23.2	1,750	23.8	26,487	25.7
- Non-Indigenous	612	10.1	3,034	11.4	503,382	10.4
Full-time secondary school education at age 16						
- Indigenous	107	26.4	281	36.1	5,997	50.5
- Non-Indigenous	204	67.0	971	76.4	327,055	80.3
Dwellings rented from State housing authority						
- Indigenous	320	9.8	1,098	16.5	23,974	20.8
- Non-Indigenous	582	6.8	2,982	8.7	284,502	4.5
People who used a computer at home						
- Indigenous	635	3.6	2,137	6.2	73,636	18.0
- Non-Indigenous	12,274	42.4	47,708	43.2	7,761,390	44.1
People who used the Internet at home						
- Indigenous	279	1.6	1,023	3.0	35,384	8.6
- Non-Indigenous	8,406	29.0	31,804	28.8	5,135,445	29.2
Households receiving rent assistance	937	7.6	5,154	11.9	1,006,599	15.0

[1] **Calculated on Indigenous persons who reported speaking an Aboriginal or Torres Strait Islander language and speaking English 'not well' or 'not at all'**

‡ **See note under 'Data converters and mapping' re calculation of Division totals**

The Indigenous unemployment rate of 11.6% in Central Australian DGP was lower than the Australian average for the Indigenous population (20.0%) and almost four times that of the non-Indigenous population (3.0%) (Table 4). Taking into account the Indigenous population receiving payments as part of the Community Development Employment Projects (CDEP) scheme (effectively an Aboriginal work-for-the-dole scheme), the 'real' Indigenous unemployment rate of 58.9% was substantially higher, but consistent with the 'real' Indigenous unemployment rate of 57.8% for Top End DGP, and notably higher than the Indigenous unemployment rate of 34.2% for Australia as a whole.

Table 4: Unemployment and labour force participation, Central Australian DGP‡, Top End DGP and Australia, 2001

Labour force indicators	Central Aust DGP‡		Top End DGP		Australia	
	No.	%	No.	%	No.	%
Unemployment rate						
- Indigenous	419	11.6	1,164	14.0	24,930	20.0
- Non-Indigenous	524	3.0	3,523	5.5	624,337	7.3
Labour force participation (incl. CDEP as employed)						
- Indigenous	3,602	33.3	8,336	40.0	124,517	52.4
- Non-Indigenous	17,669	81.9	64,162	79.0	8,609,525	72.9
Female labour force participation (incl. CDEP as employed)						
- Indigenous	1,559	30.4	3,603	36.0	52,981	46.6
- Non-Indigenous	7,149	81.6	26,021	77.4	3,564,409	69.8
Indigenous unemployment rate (incl. CDEP)						
- excluding CDEP	419	11.6	1,164	14.0	24,930	20.0
- CDEP	1,703	47.3	3,647	43.8	17,662	14.2
- Total (including CDEP)	2,122	58.9	4,881	57.8	42,592	34.2

‡ **See note under 'Data converters and mapping' re calculation of Division totals**

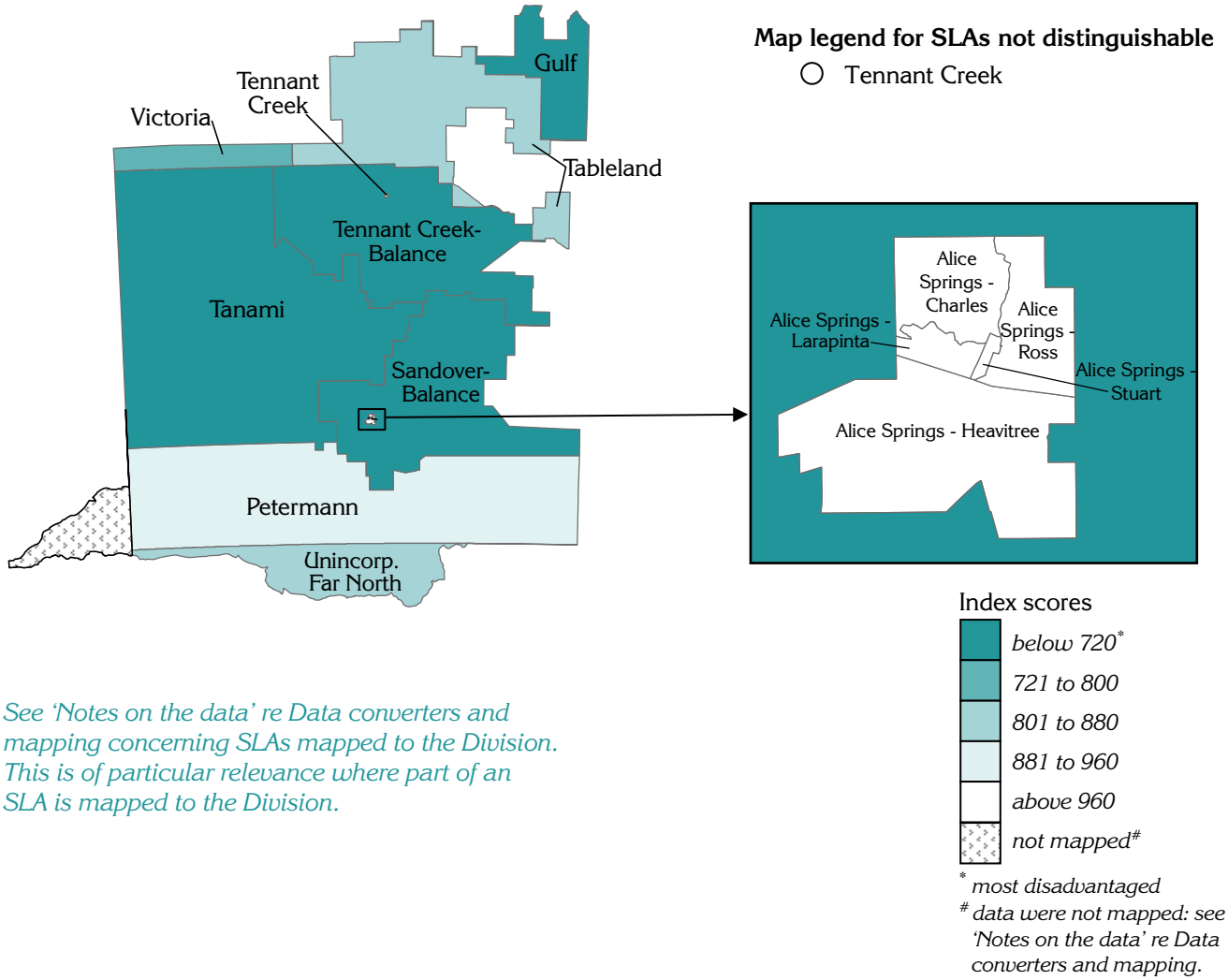
Labour force participation in the Division (in this case with those under the CDEP counted as employed) was substantially lower for the Indigenous population (32.6%) compared to the rate for the non-Indigenous population (82.0%) (Table 4). The female labour force participation rate in the Division was also lower (29.6%) compared to the non-Indigenous female population (81.7%). Both rates were below those for the Indigenous population in Central Australian DGP (40.0% and 36.0%, respectively).

Summary of the socioeconomic ranking of the Central Australian DGP

Following the 2001 Census, the Australian Bureau of Statistics (ABS) produced four socioeconomic indexes for areas (SEIFA) which describe various aspects of the socioeconomic profile of populations in areas. The scores for these indexes for each Statistical Local Area (SLA) or part SLA in Central Australian DGP are shown in the supporting information in Table 12, page 16: SLAs are described in the supporting information, page 17.

The Central Australian DGP area's SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) score is 925, 7.5% below the average score for Australia (1000) and lower than that for Top End DGP (958); this highlights the relatively lower socioeconomic status profile of the Central Australian DGP population. However, there are some substantial variations in the IRSD at the SLA level (Map 1).

Map 1 Index of Relative Socio-Economic Disadvantage by SLA, Central Australian DGP, 2001



See 'Notes on the data' re Data converters and mapping concerning SLAs mapped to the Division. This is of particular relevance where part of an SLA is mapped to the Division.

General medical practitioner (GP) supply

A total of 21.3 full-time equivalent (FTE) GPs and 21.6 full-workload equivalent (FWE[1]) GPs worked in the Division over 2003/04 (Table 5). Of the FWE GPs, 38.9% were female, and 18.3% were over 55 years of age (compared to 39.5% and 30.5%, respectively, for the Northern Territory).

Apart from the day-time population, the rates of population per FTE varied, depending on the population measure used, from a high of 2,256 people per GP (calculated on the 1 August 2001 Census count – all people counted in the Division on Census night, including visitors from Australia and overseas), to a low of 2,030 people per GP (calculated on the Usual Resident Population (URP) – usual residents of the Division counted in Australia on Census night). The rates of population per FWE GP were lower, ranging from 2,003 (calculated on the URP) to 2,225 (calculated on the Census count). When calculated on the estimated day-time population, the rates in the Division were 8.9% below those calculated on the URP.

Based on the ERP, the rates of population per GP in Central Australian DGP differed little from the rates for the Northern Territory, but the Division's rates were substantially above those for Australia, indicating a much lower level of provision of GP services in the Division.

Table 5: Population per GP in Central Australian DGP, Northern Territory and Australia, 2003/04

Population measure	Population	GPs		Population per GP	
		FTE	FWE	FTE	FWE
Central Australian DGP					
Census count (adjusted)*	48,063	21.3	21.6	2,256	2,225
Usual Resident Population (URP) (adjusted)*	43,264	..	..	2,030	2,003
Estimated Resident Population (ERP)	46,685	..	..	2,191	2,161
Day-time population (estimated on URP)* ‡	39,414	..	..	1,850	1,825
Northern Territory (ERP)	199,229	95	98	2,097	2,033
Australia (ERP)	19,989,303	14,246	16,872	1,403	1,185

* **The Census count, Usual Resident Population and Day-time population were adjusted to reflect population change between 2001 and 2003/04, as measured by the ERP**

‡ **See note under 'Data converters and mapping' re calculation of Division totals**

Immunisation

Data from the Australian Childhood Immunisation Register show that 86.9% of children in the Division in 2002 were fully immunised at age one, lower than the Australian proportion of 94.2%. Immunisation by provider type for children between the ages of 0 to 6 is shown in Table 6. Two thirds (66.3%) of immunisations were provided at a community health centre, or by a community health worker, with 17.4% at an Aboriginal health service, or by an Aboriginal health worker, and 13.2% at a public hospital. Only 3.2% of children who were immunised were immunised by a general practitioner (compared with 70.0% for Australia).

Table 6: Childhood immunisation at ages 0 to 6 by provider type, Central Australian DGP and Australia, 2003/04

Provider	Central Australian	Australia
	%	%
General practitioner	3.2	70.0
Local government council	0.0	16.6
Community health centre/ worker	66.3	9.8
Public hospital	13.2	2.1
Aboriginal health service/ worker	17.4	0.9
Other*	0.0	0.6
Total: Per cent	**100.0**	**100.0**
Number	**16,543**	**3,843,610**

* **Includes immunisations in/ by State Health Departments, RFDS and private hospitals**

[1] The FWE value is calculated for each GP location by dividing the GPs total Medicare billing (Schedule fee value of services provided during the reference period) by the mean billing of full-time doctors in that derived major speciality for the reference period. Thus, a GP earning 20% more than the mean billing of full-time doctors is shown as 1.2 FWE: this differs from full-time equivalent (FTE) counts, where the FTE value of any GP cannot exceed 1.0

Premature mortality

Deaths at ages below 75 years are used as an indicator of health status, as they largely reflect premature deaths, given the current levels of life expectancy in Australia.

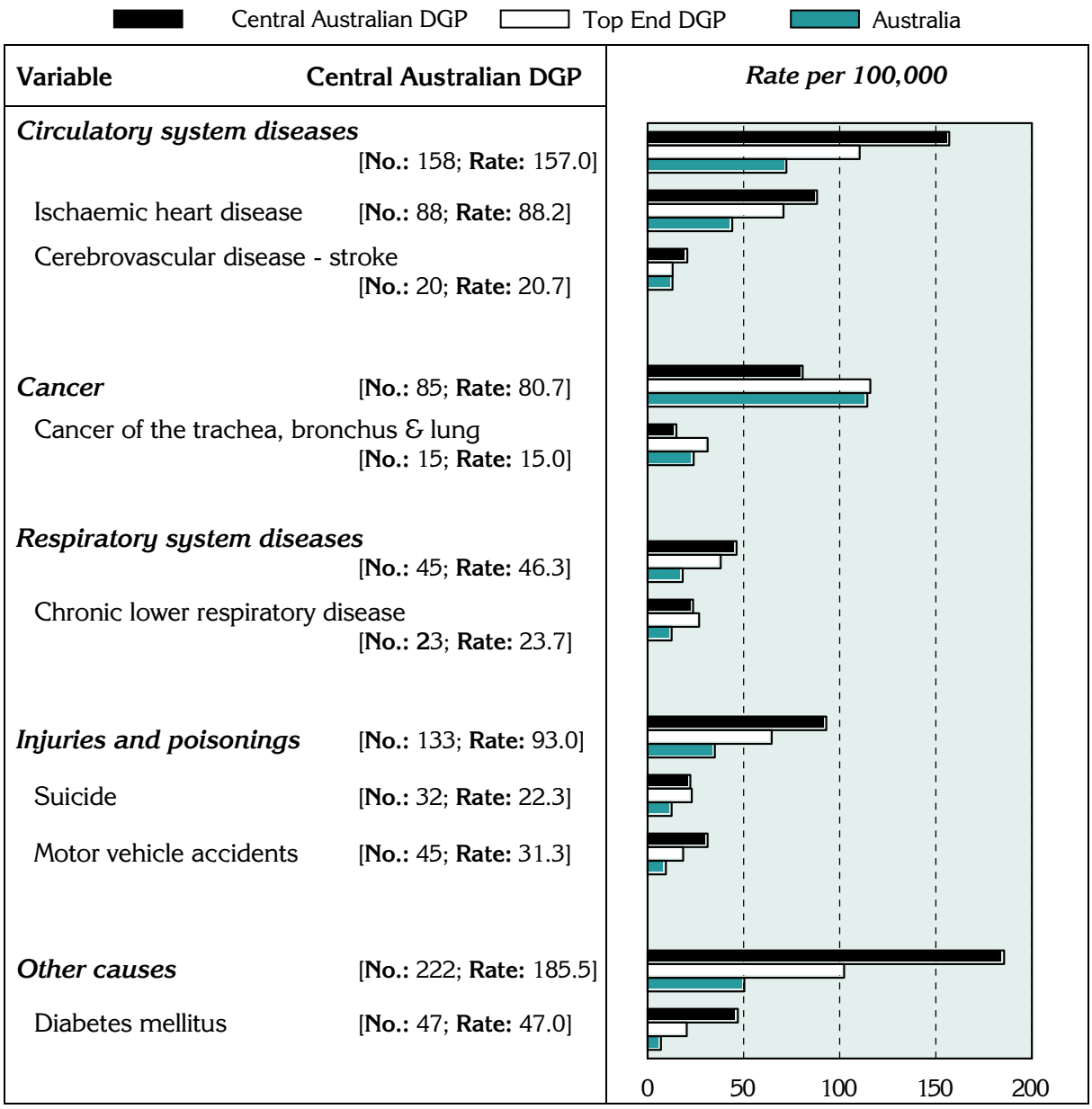
The 'all causes' death rate in the Division at ages 0 to 74 years (580.6 deaths per 100,000 population) is substantially (33.8%) higher than the rate for Top End DGP (439.2) and more than double the rate for Australia (290.4): the rates have been age standardised to allow for comparisons between areas, regardless of differences in age profiles between the Division and Australia.

The major causes of premature mortality in the Division are the 'other causes' group and diseases of the circulatory system (Figure 4), which substantially higher than the rates for the Top End DGP and the rates for Australia. With the exception of cancer, and cancer of the trachea, bronchus and lung, death rates in the Division for the major conditions and causes shown were higher than those for Australia as a whole. Death rates in the Division were also higher than for the Top End DGP, apart from cancer, and cancer of the trachea, bronchus and lung, chronic lower respiratory disease and suicide.

The data on which the following chart is based are in Table 15.

Figure 4: Deaths before 75 years of age, by major condition group and selected cause, Central Australian DGP‡, Top End DGP and Australia, 2000-02*

Indirectly age standardised rate per 100,000 population



* **'No.' is the total number of deaths for the 2000-02 period; 'Rate' is an annual rate, based on the 3 year average**

‡ **See note under 'Data converters and mapping' re calculation of Division totals**

Health and wellbeing of Aboriginal and Torres Strait Islanders in remote areas

Background

For the majority of Divisions, these profiles have included estimates of the prevalence of chronic diseases and risk factors: such estimates are not available for Divisions in the remote areas – see Box.

Given the relatively high proportion of Indigenous population, some data available from the 2002 National Aboriginal and Torres Strait Islander Social Survey and the 2001 National Health Survey have been included in this profile. These data provide a description of aspects of the health and wellbeing of Aboriginal and Torres Strait Islander people living in remote areas; in some cases they also allow for a comparison of aspects of the health of Indigenous and non-Indigenous populations and, in others, for a comparison of people living in remote and non-remote areas. More detailed disaggregations than those shown here (eg. for the non-Indigenous population in remote areas) were not available from these surveys.

Remote areas in this context cover 86.4% of Australia's land mass; and, while they comprise just 3.0% of the total population, a large proportion (28.0%) of the Indigenous population lives in these areas. The Central Australian Division is classed as Remote under the ARIA+ remoteness classification (see *Notes on the data,* page 14); under this classification the majority of the Division is classed as Remote or Very Remote.

Although these data can provide a guide to average levels of health and wellbeing in the Division, they should not be read to say that Indigenous health and wellbeing in the Central Australian DGP is the same as is shown by these data. Clearly, the large area of Australia covered by this term 'remote' is very diverse in nature: it includes a range of population groups, living in a variety of situations, from urban to rural to isolated communities. Other data are available from a variety of sources (including State and Territory health agencies) and those of relevance to Divisions could be included in subsequent editions of the profiles.

Estimates of the prevalence of chronic diseases and risk factors

Estimates of chronic disease and associated risk factors have been made for Divisions largely characterised as urban or regional. These estimates are not available for Divisions in the remote areas of Australia (as defined by DoHA – see Data sources, *page 14), as the data on which the estimates were calculated (the 2001 National Health Survey) were not collected in remote areas.*

It may, however, be possible to produce these estimates for all Divisions when the 2004-05 Indigenous Health Survey and National Health Survey results become available in 2006, as these surveys covered the remote areas with relatively large sample sizes.

National Aboriginal and Torres Strait Islander Social Survey and Health Survey

The data in this section are from the ABS publications 2001 National Health Survey and National Aboriginal and Torres Strait Islander Social Survey, Australia, 2002 (or were provided by the ABS as special data extractions from data in this survey). The data are self-reported and are not based on clinical records or physical measures.

Just over half (54.2%) of the Indigenous population in the remote areas of Australia reported speaking an Indigenous language. Those in the lowest income group were almost two and a half times more likely (than those in the three highest income groups) to do so: for ease of reading, these income groups are referred to in the text below as 'low' and 'high'. The difference in this characteristic between people in remote and non-remote areas is over six times (6.3). Note that almost one quarter (23.6%) of Aboriginal and Torres Strait Islander people in the remote areas did not have an income defined in the NHS, so were not included in the comparisons by income group. For almost all of the characteristics in Table 7, the outcome for those where an income was not defined showed poorer health, or greater disadvantage, than those for whom income was available. For example, Indigenous people living in remote areas and for whom an income was not available were 37% more likely (than those reporting an income) to speak an Indigenous language (a rate ratio of 1.37).

The information in Table 9 has been restricted to show the rate (proportion) for the remote areas only, and the rate ratios between income groups and the remote and non-remote areas: the data from which the rate ratios have been calculated are available on the PHIDU web site.

Table 7: Summary characteristics of Aboriginal and Torres Strait Islander people, by remoteness and income group, Australia, 2002

Characteristic	Remote areas	Low income cf. with high income (RR*)		Remote cf. with non-remote (RR**)
	Per cent	Remote	Non-remote	
Family and culture				
Able to get support in time of crisis from outside household	86.9	0.99	0.93	0.95
At least one stressor experienced in last 12 months	85.5	1.09	1.03	1.06
Speaks an Indigenous language	54.2	2.45	1.69	6.30
Health and disability				
Self-assessed health status				
Excellent/very good	44.2	0.94	0.66	1.00
Fair/poor	20.0	1.25	2.34	0.82
Disability or long term health condition	35.4	1.30	1.64	0.96
Risk behaviour/characteristic				
Current daily smoker	50.4	1.16	1.66	1.05
Risky/high risk alcohol consumption in last 12 months	16.8	0.81	0.97	1.16
Educational attainment				
Has a post-school qualification	18.1	0.36	0.47	0.57
Does not have a post-school qualification				
Completed Year 12	9.0	0.72	0.31	0.83
Completed Year 10 or Year 11	27.8	0.97	1.34	1.01
Completed Year 9 or below, or did not attend	45.1	2.06	3.01	1.51
Total with no post-school qualification	81.9	1.35	1.44	1.20
Employment				
Employed: CDEP	32.5	1.01	1.35	7.22
Non-CDEP	19.2	0.11	0.12	0.48
Total employed	51.7	0.39	0.17	1.17
Unemployed	5.9	4.52	3.38	0.35
Not in the labour force	42.5	3.91	4.99	1.09
Financial stress				
Unable to raise $2,000 in a week for something important	73.0	2.02	3.55	1.54
Law and justice				
Victim of physical, threatened violence in last 12 months	22.7	0.89	1.82	0.91
Transport access				
Can easily get to the places needed	65.6	0.74	0.71	0.91
Cannot, or often has difficulty, getting to places needed	16.6	3.96	3.31	1.69
Mobility				
Moved dwellings in last 12 months	27.2	0.80	1.26	0.84
Information technology				
Used computer in last 12 months	34.4	0.45	0.63	0.54
Accessed the Internet in last 12 months	21.6	0.37	0.50	0.45

* **RR is ratio of the rate for the 20% of the Indigenous population with the lowest income to the rate for the 60% with the highest income**

** **RR is ratio of the rate for the Indigenous population in the remote areas compared to that in the non-remote areas**

Source: ABS 2002 NATSIS, 2002 (unpublished data)

The relevance of the measure of self-reported health for Aboriginal and Torres Strait Islander people has been questioned. For example, while 20% of Aboriginal and Torres Strait Islander people in the remote areas reported their health to be fair or poor, this was 18% fewer than in the non-remote areas, a finding that would not appear to be supported by other data.

Despite this result, there is a variation within the remote areas, with low income Aboriginal and Torres Strait Islander people 25% more likely than those with a high income to report their health as fair, or poor (a rate ratio of 1.25).

In the remote areas, disability and smoking (reported by 35.4% and 50.4%, respectively) show a relationship with disadvantage (higher rates in low, compared with high, income groups), but risky/high risk levels of alcohol consumption over the previous 12 months do not. However, reported rates of alcohol consumption at high risk levels (reported by 16.8%) are 16% higher in remote than in non-remote areas.

Similarly, there is a clear association for Aboriginal and Torres Strait Islander people between high levels of educational attainment and income. For example, Aboriginal and Torres Strait Islander people in the low income group were more likely to report having no post-school qualifications (ie. no qualification beyond secondary school) (35% higher for low income than high income groups); and those in remote areas 20% higher compared with those in non-remote areas.

Not surprisingly, the employment rate (including CDEP) is extremely strongly related to income levels, with 61% fewer in the low income group having employment (a rate ratio of 39%) in remote areas: conversely, four and a half times the number in the low income group are unemployed, compared with the high income group. Similarly striking differentials apply in the non-remote areas.

The impact of disadvantage among Aboriginal and Torres Strait Islander people in remote areas is evident in a number of the remaining variables, with almost three quarters (73.0%) unable to raise $2,000 in a week for something important, two thirds (65.6%) reporting difficulty with transport and high proportions reporting lack of access to a computer and the Internet.

Reporting by Aboriginal and Torres Strait Islander people of selected long-term conditions (Table 8) is generally higher in remote than non-remote areas; the differentials for a number of conditions are even larger between the Indigenous and non-Indigenous populations. The impacts on the Indigenous community of diabetes and circulatory problems/ diseases are examples of these differences. The situation is similar for health-related actions, with the notable exception of doctor consultations, which are 11% lower in remote areas than non-remote areas for the Indigenous population; however, the Indigenous population across Australia as a whole reported more doctor consultations than did the non-Indigenous population.

Table 8: Summary health characteristics, by Indigenous status and remoteness, Australia, 2001

Age standardised rates (as per cent)

Health characteristic	Indigenous			Non-Indigenous	RR**
	Remote	Non-remote	RR*	Total	
Selected long-term conditions					
Diabetes	16	9	1.78	3	3.67
Eye/sight problems	38	49	0.78	51	0.90
Ear/hearing problems	17	18	0.94	14	1.29
Circulatory problems/diseases	24	18	1.33#	17#	1.12#
Asthma	15	18	0.83	12	1.42
Back problems	21	22	0.95#	21#	1.05
No long-term condition	29	20	1.45#	22#	1.00
Health-related actions[1]					
Admitted to hospital	21	19	1.11	12	1.67
Visited casualty/outpatients	9	5	1.80	3	2.00
Doctor consultation (GP and/or specialist)	24	27	0.89#	24#	1.13
Dental consultation	7	5	1.40#	6#	0.83
Consultation with other health professional	27	16	1.69	13	1.38
Day(s) away from work/study	11	9	1.22#	10#	1.00

* **RR is ratio of % in remote to % in non-remote for the Indigenous population**

** **RR is ratio of % Indigenous to % non-Indigenous**

\# **Difference between total Indigenous and non-Indigenous data is not statistically significant**

[1] **Hospital admissions relate to the 12 months prior to interview. All other health-related actions relate to the two weeks prior to interview**

Source: ABS 2001 NHS Cat. No. 4714.0, Table 1

Details of the immunisation status of adult Australians are not available from administrative sources (as are children's immunisations) so self-reported data again provide the only picture of the characteristics of the population groups who are immunised against various conditions (Table 9). Aboriginal and Torres Strait Islander people living in remote areas were 67% more likely than those living in non-remote areas to have reported having a vaccination for influenza in last 12 months; and overall (the Indigenous population living in remote and non-remote areas) were 9% more likely to have had this vaccination than the non-Indigenous population. The ratio of the rates for those reporting having a vaccination for pneumonia in last 12 months were substantially stronger, being 2.53 (more than two and a half times higher for Indigenous population in remote areas) and 1.79 (79% higher for Indigenous compared with non-Indigenous).

Table 9: Immunisation status of people aged 50 years and over, by Indigenous status and remoteness, Australia, 2001

Per cent

Immunisation status	Indigenous				Non-Indigenous	
	Remote	Non-remote	Total	RR*	Total	RR**
Influenza						
Had vaccination for influenza in last 12 months	75	45	51	1.67	47	1.09
Had vaccination for influenza but not in last 12 mths	na	11	10	..	11	1.10
Never had vaccination for influenza	16#	43	37	0.37	41	0.90
Pneumonia						
Had vaccination for pneumonia in last 5 years	48	19	25	2.53	14	1.79
Had vaccination for pneumonia but not in last 5 years	na	4#	3#	..	1	..
Never had vaccination for pneumonia	38	75	67	0.51	84	0.80

* RR is ratio of % in remote to % in non-remote for the Indigenous population

** RR is ratio of % Indigenous to % non-Indigenous

estimate has a relative standard error of between 25% to 50% and should be used with caution

Source: ABS 2001 NHS Cat. No. 4714.0, Table 19

The limited range of health information available for Aboriginal and Torres Strait Islander women living in remote areas shows that they are more likely (than Indigenous women in non-remote areas) to have breastfed their child (77% and 59%, respectively) (and also more likely than the non-Indigenous population (53%)). Lower proportions also reported not having children (Table 10).

Indigenous women are more likely to have had a Pap smear test. However, Indigenous women who reported having a Pap smear test were more likely to be living in remote than in non-remote areas (17% higher).

Table 10: Summary women's health characteristics, by Indigenous status and remoteness, Australia, 2001

Age standardised rates (as per cent)

Women's health characteristics	Indigenous				Non-Indigenous	
	Remote	Non-remote	Total	RR*	Total	RR**
Mammograms (aged 40 years and over)						
Has regular mammograms	36#	45	43	0.80	46	0.93
Never had a mammogram	41	20	25	2.05	25	1.00
Pap Smear test						
Has regular Pap smear test	56	48	50	1.17	55	0.91
Never had a Pap smear test	19	8	11	2.38	12	0.92
Breastfeeding history						
Children breastfed	77	59	63	1.31	53	1.19
Children not breastfed	4#	12	11	0.33	9	1.22
Has not had children	13	15	14	0.87	29	0.48

* RR is ratio of % in remote to % in non-remote for the Indigenous population

** RR is ratio of % Indigenous to % non-Indigenous

estimate has a relative standard error of between 25% to 50% and should be used with caution

Source: ABS 2001 NHS Cat. No. 4714.0, Table 22

Notes on the data

Data sources and limitations

Remote areas

The Department of Health and Ageing have developed a classification of remoteness (ARIA+), subsequently amended by the ABS, which includes five area classes - Highly Accessible, Accessible, Moderately Accessible, Remote and Very Remote (a sixth category, Migratory, applies to Census data). Areas in the Remote and Very Remote classes were excluded from the 2001 National Health Survey.

Data sources

Table 11 details the data sources for the material presented in this profile.

Table 11: Data sources

Section	Source
Key indicators	
GP services per head of population	GP services data supplied by Department of Health and Ageing, 2003/04 Population data: Estimated Resident Population, ABS, mean of 30 June 2003 and 30 June 2004 populations
Socio-demographic profile	
Figures 1 and 2; Tables 1 and 2	Experimental estimates of Aboriginal and Torres Strait Islander people, ABS 2001 (unpublished)
Figure 3, Tables 3 and 4	Data were extracted by postal area from the ABS Population Census 2001, except for the following indicators: - *Total population* – Experimental estimates, ABS 2001 (unpublished) - *Full-time secondary education participation at age 16* – Census 2001 (unpublished) - *Households receiving rent assistance* – Centrelink, December Quarter 2001 (unpublished)
Map 1; Table 12	ABS SEIFA package, Census 2001
General medical practitioner (GP) supply	
Table 5	GP data supplied by Department of Health and Ageing, 2003/04 Population estimates used in calculating the population per GP rates are the: - Census count[1], ABS Population Census 2001, scaled to 2003/04 - Usual Resident Population[2], ABS Population Census 2001, scaled to 2003/04 - Day-time population: calculated from journey to work data, ABS Population Census (URP) 2001 (unpublished); and 2001 Census URP, scaled to 2003/04 - Estimated Resident Population, ABS, June 2003/2004
Immunisation	
Text comment: 1 year olds	National Centre for Immunisation Research and Surveillance, 2002
Table 6	Australian Childhood Immunisation Register, Health Insurance Commission, 2003/04 (unpublished)
Premature mortality	
Figure 4; Table 15	ABS Deaths, 2000 to 2002
National Aboriginal and Torres Strait Islander Social Survey and Health Survey	
Table 7	ABS 2002 NATSIS, 2002 (unpublished)
Tables 10, 11 and 12	ABS 2001 NHS Cat. No. 4714.0 – Tables 1, 19 and 22

[1] ***Census count*** **- those counted in the Division on Census night, including tourists, business people and other visitors**
[2] ***Usual Resident Population*** **- those who usually live there and who were in Australia at the time and would have provided details in the Census at the address where they were counted**

Premature deaths

Details of deaths by SLA were purchased from the ABS. The raw numbers were then age-standardised, by the indirect method, to control for the effects of differences in the age profiles of areas.

Data converters and mapping

Conversion to Division of data available by postcode

The allocation of postcodes to Divisions was undertaken using information from the Department of Health and Ageing's web site, which shows the proportion of a postcode in a Division (Table 13).

Conversion to Division of data available by SLA

(marked in this profile as ‡ **See note under 'Data converters and mapping' re calculation of Division total**)

Where the data presented in these profiles were only available by SLA they have been converted to Division of General Practice areas using a concordance based on data at the 2001 Census. A copy of the concordance is included in the Population data: A Guide for Divisions of General Practice: it is also available from the Divisions' data area on PHIDU web site.

In brief, the concordance splits the data (eg number of deaths) for each SLA across one or more Divisions. The proportion of an SLA's data that is allocated to each Division was calculated from (a) CD level Census 2001 data that splits SLAs across approximations to postcodes (referred to as postal areas) and (b) data on the DoHA website that splits postcodes across Divisions. This concordance can be adjusted to meet any new configuration of Division boundaries based on the 2001 Collection Districts, or combinations thereof.

The estimated population of each SLA in this Division is shown in Table 14.

Mapping

In some Divisions the maps may include a very small part of an SLA which has not been allocated any population, or either has a population of less than 100 or has less than 1% of the SLA's total population: these areas are mapped with a pattern.

Supporting information

This and other information is also available at www.publichealth.gov.au.

A definition of population health

Population health, in the context of general practice, has been defined[1] as:

"The prevention of illness, injury and disability, reduction in the burden of illness and rehabilitation of those with a chronic disease. This recognises the social, cultural and political determinants of health. This is achieved through the organised and systematic responses to improve, protect and restore the health of populations and individuals. This includes both opportunistic and planned interventions in the general practice setting."

The key determinants of health are social support networks, employment and working conditions, social environments, physical environments, geographical isolation, personal health practices, healthy child development, ageing and disability, biology and genetic endowment, health services, gender and culture.

In the Aboriginal and Torres Strait Islander context this means that a population health approach to health services will assist in ensuring "that Aboriginal and Torres Strait Islander people enjoy a healthy life equal to that of the general population, that is enshrined by a strong living culture, dignity and justice".[2] This recognises the importance of achieving improvements to Aboriginal and Torres Strait Islander health and respects the particular health issues facing Indigenous people.

[1] **"The role of general practice in population health – A Joint Consensus Statement of the General Practice Partnership Advisory Council and the National Public Health Partnership Group" (Joint Advisory Group on General Practice and Population Health 2001)**

[2] **As defined in the Strategic Framework for Aboriginal and Torres Strait Islander Health**

SEIFA scores

Following the 2001 Census, the Australian Bureau of Statistics (ABS) produced four socioeconomic indexes for areas (SEIFA). The indexes describe various aspects of the socioeconomic make-up of populations in areas, using data collected in the 2001 Census. The Index of Relative Socio-Economic Disadvantage (labelled 'Disadvantage' in Table 12) includes all variables that either reflect or measure disadvantage. The Index of Advantage/Disadvantage is used to rank areas in terms of both advantage and disadvantage: any information on advantaged persons in an area will offset information on disadvantaged persons in the area. The Index of Economic Resources and the Index of Education and Occupation were targeted towards specific aspects of advantage/disadvantage.

For further information on the composition and calculation of these indexes see the ABS Information Paper ABS Cat No. 2039.0 available on the ABS web site www.abs.gov.au. The scores for these indexes for each Statistical Local Area (SLA) or part SLA in Central Australian DGP are shown in Table 12.

In using this table, users should note that the index score shown for SLAs with less than 100 per cent in the Division represents the score for the whole SLA, and not just the part shown. However, SLAs with small proportions may have little influence on the average index score for the Division which has been based on the postcodes in the Division.

Table 12: SEIFA scores by SLA Central Australian DGP, 2001

SLA code	SLA name (& per cent of SLA in the Division)		Index score			
			Disadvantage	Advantage	Economic Resources	Education & Occupation
49589	Unincorp. Far North	(36.1)	812	930	924	938
70201	Alice Springs - Charles	(100.0)	999	1021	1051	989
70203	Alice Springs - Heavitree	(100.0)	985	995	1029	970
70205	Alice Springs - Larapinta	(100.0)	1017	1059	1079	1026
70207	Alice Springs - Ross	(100.0)	1064	1114	1138	1073
70208	Alice Springs - Stuart	(100.0)	981	1039	1031	1047
71809	Gulf	(13.0)	707	880	893	886
73009	Petermann	(100.0)	944	1012	996	1014
73209	Sandover - Balance	(100.0)	714	875	850	915
73409	Tableland	(86.2)	803	870	873	889
73609	Tanami	(100.0)	657	894	863	945
73800	Tennant Creek	(100.0)	971	1006	999	1009
74009	Tennant Creek - Balance	(100.0)	681	855	846	880
74409	Victoria	(5.0)	782	895	890	901

* **Proportions are approximate and are known to be incorrect in some cases, due to errors in the concordance used to allocate CDs to form postal areas. In addition, in a small number of cases, part(s) of an SLA can be allocated to another Division, sometimes several hundred kilometres away. Although adjustments have not been made to the concordance to correct these errors, the affected SLAs are highlighted in the table (shown in bold italic typeface)**

Note: Scores are not shown for SLAs in the Division with estimated populations of less than 100 (refer to Table 14)

Statistical geography of the Central Australian DGP

The Central Australian DGP covers 1,048,138 square kilometres, based on 2001 SLA data.

Table 13: Postcodes in Central Australian DGP, 2004

Postcode	Per cent of postcode population in the Division*	Postcode	Per cent of postcode population in the Division*
0852	5	0870	100
0860	100	0871	100
0861	100	0872	100
0862	100		

* **Proportions are approximate**

Source: Department of Health and Ageing web site (accessed online version as at February 2005): http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-divisions-divspc.htm

Statistical Local Areas (SLAs) are defined by the Australian Bureau of Statistics to produce areas for the presentation and analysis of data. In this Division, some Local Government Areas (LGAs) have been split into SLAs. For example, Alice Springs is comprised of five SLAs - Charles, Heavitree, Larapinta, Ross and Stuart. All of these SLAs, and all or part of the other SLAs listed in Table 14, comprise the Division.

Table 14: SLAs in Central Australian DGP by 2001 boundaries

SLA code	SLA name	Per cent of the SLA's population in the Division*	Estimate of the SLA's 2004 population in the Division
49589	Unincorp. Far North	36.1	1,887
70201	Alice Springs - Charles	100.0	5,071
70203	Alice Springs - Heavitree	100.0	2,294
70205	Alice Springs - Larapinta	100.0	9,002
70207	Alice Springs - Ross	100.0	7,475
70208	Alice Springs - Stuart	100.0	2,205
71209	***East Arnhem - Balance***	***0.5***	***#***
71409	***Elsey - Balance***	***4.0***	***#***
71809	Gulf	13.0	439
73009	Petermann	100.0	2,955
73209	Sandover - Balance	100.0	3,493
73409	Tableland	86.2	858
73609	Tanami	100.0	6,199
73800	Tennant Creek	100.0	2,970
74009	Tennant Creek - Balance	78.8	1,484
74409	Victoria	5.0	149
74809	***West Arnhem***	***0.4***	***#***

* **Proportions are approximate and are known to be incorrect in some cases, due to errors in the concordance used to allocate CDs to form postal areas.**

 # Not shown as the total population is less than 100

Supporting data

The data used in Figure 4 to illustrate the rates of premature mortality in the Division are shown below in Table 15.

Table 15: Deaths before 75 years of age by major condition group and selected cause, Central Australian DGP‡, Top End DGP and Australia, 2000-02*

Indirectly age standardised rate per 100,000 population

Variable	Central Australian DGP‡		Top End DGP		Australia	
	No.	Rate	No.	Rate	No.	Rate
Circulatory system diseases	158	157.0	324	110.4	38,357	72.3
Ischaemic heart disease	88	88.2	206	70.8	23,364	44.1
Cerebrovascular disease – stroke	20	20.7	37	13.1	6,920	13.0
Cancer	85	80.7	361	115.9	60,603	114.3
Cancer of the trachea, bronchus & lung	15	15.0	92	31.3	12,715	24.0
Respiratory system diseases	45	46.3	107	38.1	9,726	18.3
Chronic lower respiratory disease	23	23.7	73	26.9	6,657	12.6
Injuries and poisonings	133	93.0	290	64.6	18,573	35.0
Suicide	32	22.3	104	23.0	6,706	12.6
Motor vehicle accidents	45	31.3	83	18.5	5,014	9.5
Other causes	222	185.5	371	102.3	26,735	50.4
Diabetes mellitus	47	47.0	60	20.4	3,734	7.0

* **'No.' is the total number of deaths for the 2000-02 period; 'Rate' is an annual rate, based on the 3-year average**

‡ See note under 'Data converters and mapping' re calculation of Division totals

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Further developments and updates

Subject to agreement and funding, a number of developments could be undertaken:

- Details of hospitalisations potentially avoidable through ambulatory care interventions are currently being prepared and will be forwarded to Divisions (and posted on the PHIDU web site) when they are available. Other enhancements will be considered as appropriate datasets become available.

The profiles could be updated as the data are updated. For example:

- Population estimates, avoidable hospitalisations, immunisation, and GP activity and workforce data – annually;
- Chronic disease estimates – three-yearly;
- Census data – five-yearly.

Any developments would be informed by consultation, including with Divisions.

PHIDU contact details

For general comments, data issues or enquiries re information on the web site, please contact PHIDU:

Phone: 08-8303 6236 or e-mail: PHIDU@publichealth.gov.au