

# Population health profile of the NSW Outback

## Division of General Practice

Population Profile Series: No. 31

PHIDU

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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 New South Wales Outback Division of General Practice

### Introduction

This profile has been designed to provide a description of the population of the NSW Outback 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 14.

### 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. country New South Wales and Australia) and Aboriginal and Torres Strait Islanders elsewhere in Australia. Specific topics covered for the NSW Outback Division include:

- a socio-demographic profile (pages 2-5);
- GP workforce data (page 7);
- immunisation rates (page 7); and
- rates of premature death (page 8).

### Key indicators

**Location:** New South Wales

**Division number:** 233

<b>Population‡:</b>	<b>No.</b>	<b>%</b>
<b>Indigenous:</b>	4,439	
<25	2,371	53.4%
65+	177	4.0%
<b>Non-Indigenous:</b>	12,955	
<25	4,127	31.9%
65+	1,439	11.1%

**Disadvantage score<sup>1</sup>:** 904

**GP services per head of population:**

Division‡	5.2
Australia	4.7

**Population per FTE GP:**

Division‡	1,065
Australia	1,403

**Premature death rate<sup>2</sup>:**

Division‡	447.2
Australia	290.4

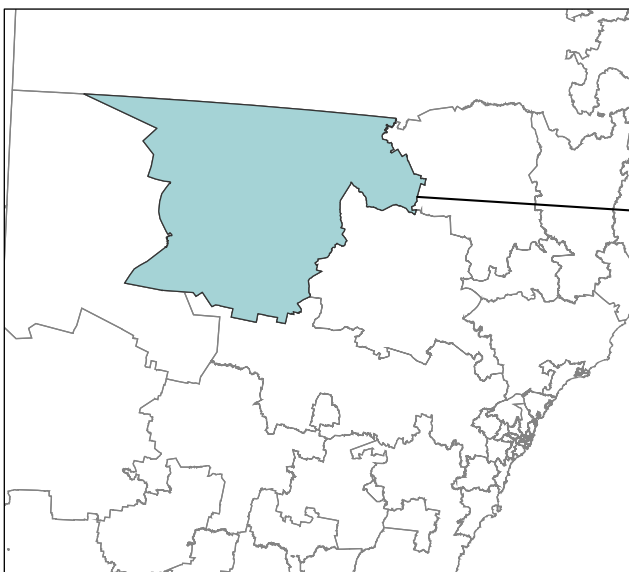
<sup>1</sup> Numbers below 1000 (the index score for Australia) indicate the Division is relatively disadvantaged

<sup>2</sup> Deaths at ages 0 to 74 years per 100,000 population

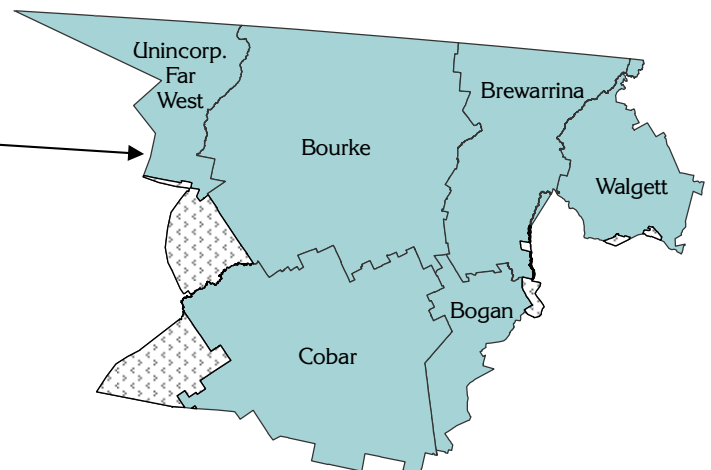
‡ See note “Data converters and mapping” re calculation of Division Total

### NSW Outback Division of General Practice

NSW Divisions of General Practice



NSW Outback DGP by SLA



# Socio-demographic profile

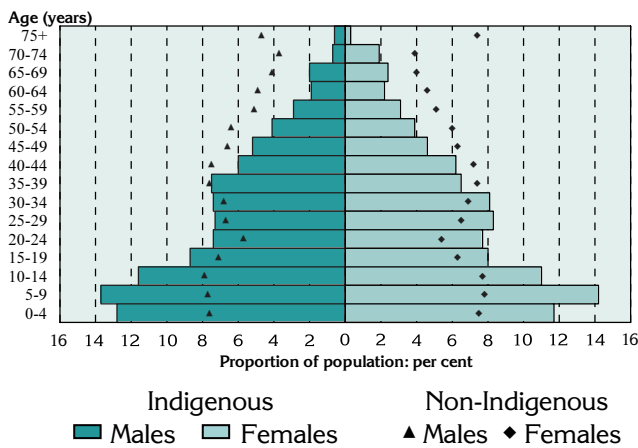
## Population

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.

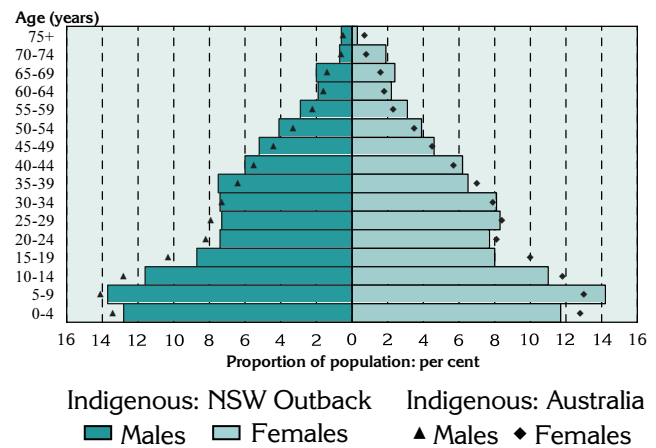
The NSW Outback DGP had a population of 17,394 at the 2001 Census. Aboriginal and Torres Strait Islander people comprised a quarter (25.5%) of the population of the Division, and had a markedly younger age structure than for the non-Indigenous population in the Division. The bars in the chart for the 0 to 4 years age group clearly show the effect of high Indigenous birth rates in the Division, particularly for males; this gives the chart a largely triangular shape (Figure 1). The very marked drop in the proportion of the Indigenous population between each age group from 5 to 9 years suggests extremely high death rates (and, possibly, out-migration) are occurring from that age group through to 19 years of age.

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 15 to 24 years of age, possible out-migration for further education and employment opportunities, with smaller reductions in the population from age 40 through to the 60 to 64 year age group: the noticeable change in the rate of decline for males from the 65 to 69 year age group, and the marked increase at the oldest ages for females, is suggestive of the non-Indigenous population moving into the Division from other areas to retire.

**Figure 1: Population in NSW Outback DGP‡ by Indigenous status, age and sex, 2001**



**Figure 2: Indigenous population in NSW Outback DGP‡ 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:

- lower proportions of children aged 0 to 4 years, but a higher proportion of females aged 5 to 9 years;
- lower proportions of children aged 10 to 14 years, and young people aged 15 to 24 years; and
- at older ages – slightly higher proportions, for males aged 30 to 74 years, and for females aged 30 to 34 years, 40 to 59 years and 65 to 74 years.

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

**Table 1: Population by Indigenous status and age\*, NSW Outback DGP‡ and Australia, 2001**

Age group (years)	NSW Outback DGP‡				Australia			
	Indigenous		Non-Indigenous		Indigenous		Non-Indigenous	
	No.	%	No.	%	No.	%	No.	%
0-14	1,665	37.5	2,753	21.2	178,622	39.0	3,807,808	20.1
15-24	705	15.9	1,374	10.6	83,942	18.3	2,570,934	13.6
25-44	1,270	28.6	4,141	32.0	128,474	28.0	5,715,858	30.2
45-64	621	14.0	3,249	25.1	54,206	11.8	4,435,376	23.4
65-74	157	3.5	922	7.1	10,249	2.2	1,310,587	6.9
75+	20	0.5	517	4.0	2,768	0.6	1,111,844	5.9
<b>Total</b>	<b>4,439</b>	<b>100.0</b>	<b>12,955</b>	<b>100.0</b>	<b>458,261</b>	<b>100.0</b>	<b>18,952,407</b>	<b>100.0</b>

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

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

Over one third (an estimated 1,620 people, 36.5%) of the Indigenous population in NSW Outback DGP lived in Walgett Statistical Local Area (SLA – see page 16), with smaller proportions in Brewarrina (1,173 people, 26.4%) and Bourke (1,144 people, 25.8%) (Table 2).

**Table 2: Population by Indigenous status\*, SLAs in NSW Outback DGP‡, 2001**

Statistical Local Area	Indigenous		Non-Indigenous		Total	
	No.	%	No.	%	No.	%
Walgett	1,620	36.5	4,826	37.3	3,446	37.1
Brewarrina	1,173	26.4	866	6.7	2,039	11.7
Bourke	1,144	25.8	2,807	21.7	3,951	22.7
Cobar	469	10.6	4,187	32.3	4,656	26.8
Other	502	11.3	4,456	34.4	4,958	28.5
<b>Total</b>	<b>4,439</b>	<b>100.0</b>	<b>12,955</b>	<b>100.0</b>	<b>17,394</b>	<b>100.0</b>

\* 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 16,988.

## 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, 25.5% of the population of NSW Outback DGP were estimated to be of Aboriginal or Torres Strait Islander origin, more than ten times the Australian average of 2.4% (Figure 3, Table 3). The proportion of Indigenous single parent families in the Division (25.9%) was marginally below the rate for the Indigenous population in country New South Wales (27.5%), but over three times the rate for the Division's non-Indigenous population (8.2%).

Less than half (44.6%) of Indigenous 16 year olds were involved in full-time secondary school education, notably lower than the Indigenous participation rate in country New South Wales<sup>1</sup> (52.5%), and two thirds the participation rate of the Division's non-Indigenous 16 year olds (68.6%).

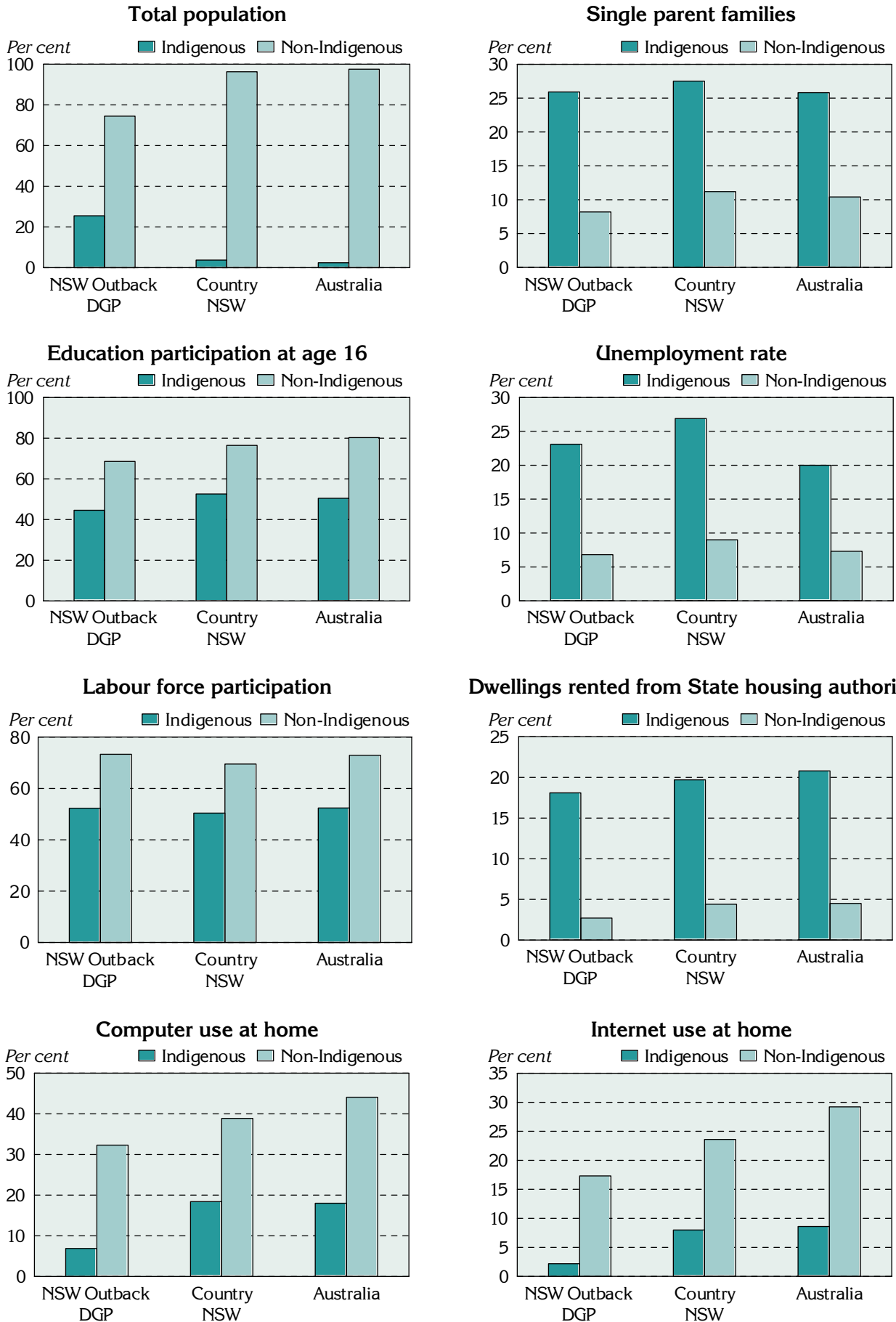
A marginally higher proportion of the Indigenous population lived in dwellings rented from the State housing authority (18.1%) compared to the Indigenous rate in country New South Wales (19.7%), and seven times the rate for the Division's non-Indigenous population (2.6%). The proportion of people (Indigenous and non-Indigenous combined) in the Division receiving rent assistance from Centrelink (14.0%), was lower than in country New South Wales (18.3%).

The proportion of the Indigenous population who reported using a computer at home (7.3%) was less than half that of the Indigenous population in country New South Wales (18.4%), and substantially lower than the Division's non-Indigenous population (34.2%). The rate of home Internet use by the Indigenous population (2.5%) was also notably lower than for the Indigenous population in country New South Wales (8.0%), and for the Division's non-Indigenous population (18.6%).

<sup>1</sup>References to 'country New South Wales' relate to New South Wales excluding the Sydney Statistical Division

**Figure 3: Socio-demographic indicators by Indigenous status, NSW Outback DGP‡, country New South Wales Australia 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

**Table 3: Socio-demographic indicators, NSW Outback DGP‡, country New South Wales and Australia, 2001**

Indicator	NSW Outback‡		Country NSW		Australia	
	No.	%	No.	%	No.	%
Population						
- Indigenous	4,439	25.5	91,036	3.7	458,261	2.4
- Non-Indigenous	12,955	74.5	2,355,909	96.3	18,952,407	97.6
Single parent families						
- Indigenous	235	25.9	5,881	27.5	26,587	25.8
- Non-Indigenous	248	8.2	67,924	11.2	503,382	10.4
Full-time secondary school education at age 16						
- Indigenous	30	44.6	938	52.5	5,997	50.5
- Non-Indigenous	71	68.6	24,828	76.5	327,055	80.3
Dwellings rented from State housing authority						
- Indigenous	187	18.1	4,868	19.7	23,974	20.8
- Non-Indigenous	120	2.7	35,585	4.4	284,502	4.5
People who used a computer at home						
- Indigenous	265	6.9	14,924	18.4	73,636	18.0
- Non-Indigenous	3,996	32.3	854,211	38.9	7,761,390	44.1
People who used the Internet at home						
- Indigenous	86	2.2	6,454	8.0	35,384	8.6
- Non-Indigenous	2,141	17.3	518,491	23.6	5,135,445	29.2
Households receiving rent assistance	803	14.0	156,074	18.3	1,006,599	15.0

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

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

The Indigenous unemployment rate in NSW Outback DGP (23.1%) was lower than the rate for the Indigenous population in country New South Wales (26.9%), but more than three times that for the Division's non-Indigenous population (6.8%) (Table 4). Taking into account the proportion of 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 47.9% was substantially higher, and notably higher than the 'real' Indigenous unemployment rate for country New South Wales (34.1%).

**Table 4: Unemployment and labour force participation, NSW Outback DGP‡, country New South Wales and Australia, 2001**

Labour force indicators	NSW Outback‡		Country NSW		Australia	
	No.	%	No.	%	No.	%
Unemployment rate						
- Indigenous	270	23.1	6,155	26.9	24,930	20.0
- Non-Indigenous	421	6.8	87,454	9.0	624,337	7.3
Labour force participation (incl. CDEP as employed)						
- Indigenous	1,172	52.3	22,902	50.4	124,517	52.4
- Non-Indigenous	6,169	73.3	972,088	69.5	8,609,525	72.9
Female labour force participation (incl. CDEP as employed)						
- Indigenous	453	45.1	9,403	44.3	52,981	46.6
- Non-Indigenous	2,140	69.6	390,835	67.2	3,564,409	69.8
Indigenous unemployment rate (incl. CDEP)						
- excluding CDEP	270	23.1	6,155	26.9	24,930	20.0
- CDEP	291	24.8	1,650	7.2	17,662	14.2
- Total (including CDEP)	561	47.9	7,805	34.1	42,592	34.2

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

Labour force participation for the Indigenous population in the Division (in this case with those under the CDEP counted as employed) was 52.3%, marginally above the Indigenous rate for country New South Wales (50.4%), but just two thirds that of the non-Indigenous population (73.3%) (Table 4).

The female labour force participation rate (45.1%) was slightly higher than the Indigenous rate for country New South Wales (44.3%), and two thirds that of the Division’s non-Indigenous population (69.9%).

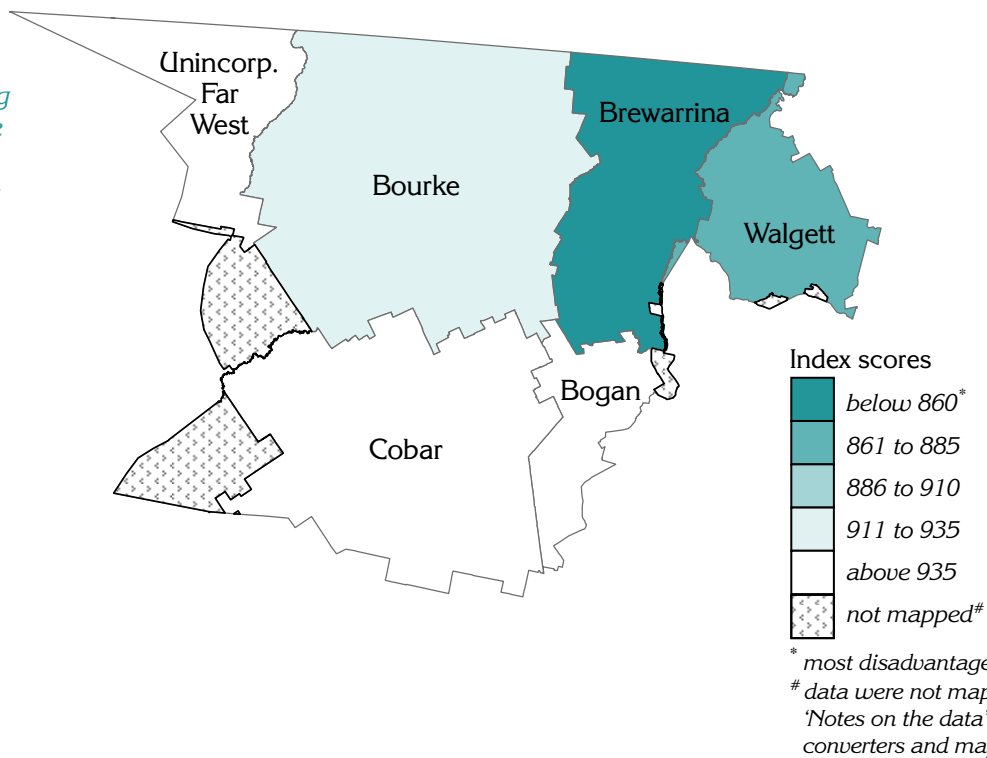
**Summary of the socioeconomic ranking of the NSW Outback DGP**

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 NSW Outback DGP are shown in the supporting information, Table 12, page 15: SLAs are described on page 16.

The NSW Outback DGP area’s SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) score from the 2001 Census is 904, well below (9.6%) the average score for Australia (1000) and below that for country New South Wales (973); this highlights the low socioeconomic status profile of the Division’s population. Variations in the IRSD within the Division are shown at the SLA level in Map 1.

**Map 1: Index of Relative Socio-Economic Disadvantage by SLA, NSW Outback 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 practitioners (GPs): activity and supply

A total of 16.0 full-time equivalent (FTE) GPs and 19.9 full-workload equivalent (FWE<sup>2</sup>) GPs worked in the Division in 2003/04 (Table 5). Of the FWE GPs, 11.3% were female, and 14.3% were over 55 years of age (compared to 26.4% and 33.4%, respectively, for New South Wales).

Apart from the day-time population, the rates of population per FTE GP varied, depending on the population measure used, from a high of 1,065 people per GP (calculated on the average Estimated Resident Population (ERP) as at 30 June 2003 and 2004), to a low of 1,021 people per GP (calculated on the 1 August 2001 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 821 (calculated on the URP) to 857 (calculated on the ERP). When calculated on the estimated day-time population, the rates of population in the Division were 1.1% below those calculated on the URP.

Based on the ERP, the rates of population per GP in the NSW Outback Division were lower than the rates for New South Wales and Australia, indicating a higher level of provision of GP services in the Division.

**Table 5: Population per GP in NSW Outback DGP, New South Wales and Australia, 2003/04**

Population measure	Population	GPs		Population per GP	
		FTE	FWE	FTE	FWE
<b>NSW Outback DGP</b>					
Census count (adjusted)*	16,874	16.0	19.9	1,053	847
Usual Resident Population (URP) (adjusted)*	16,363	..	..	1,021	821
Estimated Resident Population (ERP)	17,079	..	..	1,065	857
Day-time population (estimated on URP)* ‡	16,174	..	..	1,009	812
<b>New South Wales (ERP)</b>	6,706,674	4,819	5,969	1,392	1,124
<b>Australia (ERP)</b>	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 91.2% 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. The majority of children (61.0%) were immunised at a public hospital, with 21.8% immunised by a general practitioner, and a further 17.2% at a community health centre, or by a community health worker.

**Table 6: Childhood immunisation at ages 0 to 6 by provider type, NSW Outback DGP and Australia, 2003/04**

Provider	NSW Outback DGP	Australia
	%	%
General practitioners	21.8	70.0
Local government council	0.0	16.6
Community health centre/ worker	17.2	9.8
Public hospital	61.0	2.1
Aboriginal health service/ worker	0.0	0.9
Other*	0.0	0.6
<b>Total: Per cent</b>	<b>100.0</b>	<b>100.0</b>
<b>Number</b>	<b>4,382</b>	<b>3,843,610</b>

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

<sup>2</sup> The FWE value is calculated for each GP location by dividing the GP's 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 (447.2 deaths per 100,000 population) is substantially higher than for both country New South Wales (318.3) and 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.

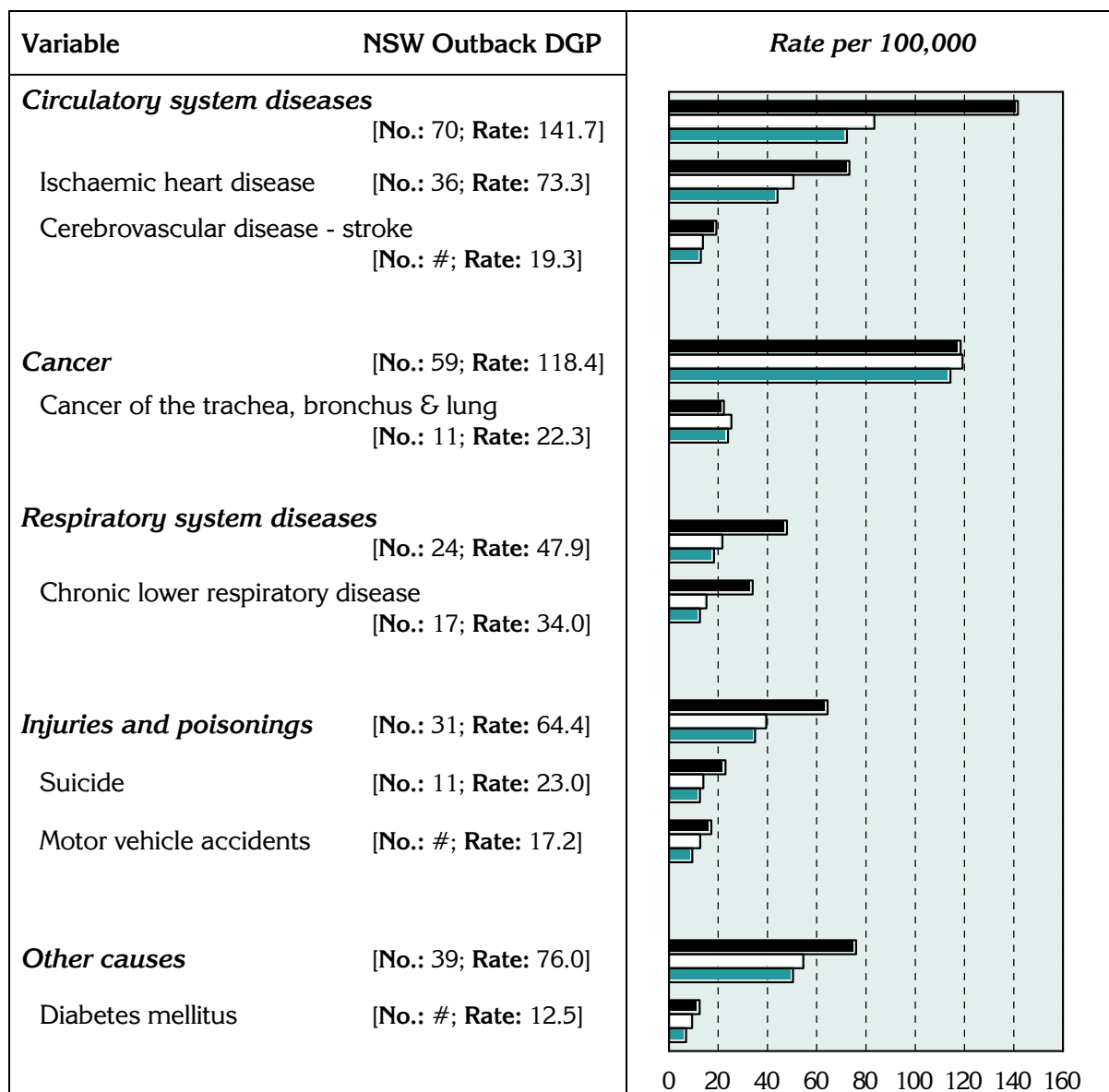
The major causes of premature mortality in the Division, as for country New South Wales and Australia as a whole, are cancer and diseases of the circulatory system (Figure 4). With the exception of cancer, death rates in the Division for the major conditions and selected causes were higher than, or similar to, those for Australia and country New South Wales.

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, NSW Outback DGP‡, country New South Wales and Australia, 2000-02\***

*Indirectly age standardised rate per 100,000 population*

■ NSW Outback DGP      □ Country NSW      ■ Australia



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

# Not shown, as there were less than 10 cases over the period

‡ 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 limited range of data available to describe the health and wellbeing of the population of the NSW Outback Division, and in particular for Aboriginal and Torres Strait Islander people, 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 landmass; and, while they comprise just 3.0% of the total population, a large proportion (28.0%) of the Indigenous population live in these areas. The NSW Outback Division is classed as Remote under the ARIA+ remoteness classification (see *Notes on the data*, page 13); under this classification 100% 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 New South Wales Outback 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 13), 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 7 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	
<b>Family and culture</b>				
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
<b>Health and disability</b>				
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
<b>Educational attainment</b>				
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
<b>Employment</b>				
Employed: CDEP				
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
<b>Financial stress</b>				
Unable to raise \$2,000 in a week for something important	73.0	2.02	3.55	1.54
<b>Law and justice</b>				
Victim of physical, threatened violence in last 12 months	22.7	0.89	1.82	0.91
<b>Transport access</b>				
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
<b>Mobility</b>				
Moved dwellings in last 12 months	27.2	0.80	1.26	0.84
<b>Information technology</b>				
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 (i.e. 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	
<b>Selected long-term conditions</b>					
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 <sup>#</sup>	17 <sup>#</sup>	1.12 <sup>#</sup>
Asthma	15	18	0.83	12	1.42
Back problems	21	22	0.95 <sup>#</sup>	21 <sup>#</sup>	1.05
No long-term condition	29	20	1.45 <sup>#</sup>	22 <sup>#</sup>	1.00
<b>Health-related actions<sup>1</sup></b>					
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 <sup>#</sup>	24 <sup>#</sup>	1.13
Dental consultation	7	5	1.40 <sup>#</sup>	6 <sup>#</sup>	0.83
Consultation with other health professional	27	16	1.69	13	1.38
Day(s) away from work/study	11	9	1.22 <sup>#</sup>	10 <sup>#</sup>	1.00

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

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

<sup>#</sup> Difference between total Indigenous and non-Indigenous data is not statistically significant

<sup>1</sup> 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**
<b>Influenza</b>						
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 <sup>#</sup>	43	37	0.37	41	0.90
<b>Pneumonia</b>						
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 <sup>#</sup>	3 <sup>#</sup>	..	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

<sup>#</sup> 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 (and also more likely than the non-Indigenous population); they are also more likely to have had 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**
<b>Mammograms (aged 40 years and over)</b>						
Has regular mammograms	36 <sup>#</sup>	45	43	0.80	46	0.93
Never had a mammogram	41	20	25	2.05	25	1.00
<b>Pap Smear test</b>						
Has regular Pap smear tests	56	48	50	1.17	55	0.91
Never had a Pap smear test	19	8	11	2.38	12	0.92
<b>Breastfeeding history</b>						
Children breastfed	77	59	63	1.31	53	1.19
Children not breastfed	4 <sup>#</sup>	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

<sup>#</sup> 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

### General

References to 'country New South Wales' relate to New South Wales, excluding Sydney Statistical Division.

### 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
<b>Key indicators</b>	
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
<b>Socio-demographic profile</b>	
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: - <i>Total population</i> – Experimental estimates, ABS 2001 (unpublished) - <i>Full-time secondary education participation at age 16</i> – Census 2001 (unpublished) - <i>Households receiving rent assistance</i> – Centrelink, December Quarter 2001 (unpublished)
Map 1; Table 12	ABS SEIFA package, Census 2001
<b>General medical practitioner (GP) supply</b>	
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 <sup>1</sup> , ABS Population Census 2001, scaled to 2003/04 - Usual Resident Population <sup>2</sup> , ABS Population Census 2001, scaled to 2003/04 - Day-time population: calculated from journey to work data, ABS Population Census (JRP) 2001 (unpublished); and 2001 Census JRP, scaled to 2003/04 - Estimated Resident Population, ABS, June 2003/2004
<b>Immunisation</b>	
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)
<b>Premature mortality</b>	
Figure 4; Table 15	ABS Deaths, 2000 to 2002 (unpublished)
<b>National Aboriginal and Torres Strait Islander Social Survey and Health Survey</b>	
Table 7	ABS 2002 NATSIS, 2002 (unpublished)
Tables 8, 9 and 10	ABS 2001 NHS Cat. No. 4714.0 – Tables 1, 19 and 22

<sup>1</sup> *Census count* - those counted in the Division on Census night, including tourists, business people and other visitors

<sup>2</sup> *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](http://www.publichealth.gov.au).

### A definition of population health

Population health, in the context of general practice, has been defined<sup>1</sup> 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".<sup>2</sup> This recognises the importance of achieving improvements to Aboriginal and Torres Strait Islander health and respects the particular health issues facing Indigenous people.

<sup>1</sup> "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)

<sup>2</sup> 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](http://www.abs.gov.au). The scores for these indexes for each Statistical Local Area (SLA) or part SLA in NSW Outback 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, NSW Outback DGP, 2001**

SLA code	SLA name (% per cent of SLA in the Division)	Index score			
		Disadvantage	Advantage	Economic Resources	Education & Occupation
10950	Bogan (7.7)	949	917	916	926
11150	Bourke (100.0)	931	959	953	965
11200	Brewarrina (94.2)	845	907	912	915
11750	Cobar (89.8)	960	961	990	929
17900	Walgett (77.4)	876	896	898	907

\* 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

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 NSW Outback DGP

The NSW Outback DGP covers 125,366 square kilometres, based on 2001 SLA data.

The postcodes in the Division (as per the Department of Health and Ageing website) are shown below (Table 13).

**Table 13: Postcodes in NSW Outback DGP, 2004**

Postcode	Per cent of postcode population in the Division*	Postcode	Per cent of postcode population in the Division*
2831	75	2838	100
2832	100	2839	100
2834	100	2840	100
2835	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, SLAs are equivalent to Local Government Areas (LGAs): unincorporated areas of the State are also SLAs. The SLAs that comprise the Division are listed in Table 14.

**Table 14: SLAs in NSW Outback 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
10950	Bogan	7.7	240
11150	Bourke	100.0	3,918
11200	Brewarrina	94.2	2,015
11750	Cobar	89.8	4,503
17900	Walgett	77.4	6,256
18809	Unincorporated Far West	6.7	#

\* 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, NSW Outback DGP‡, country New South Wales and Australia, 2000-02\***

*Indirectly age standardised rate per 100,000 population*

Variable	NSW Outback DGP		Country NSW		Australia	
	No.	Rate	No.	Rate	No.	Rate
<b>Circulatory system diseases</b>	70	141.7	6,468	83.4	38,357	72.3
Ischaemic heart disease	36	73.3	3,929	50.6	23,364	44.1
Cerebrovascular disease – stroke	#	19.3	1,080	13.8	6,920	13.0
<b>Cancer</b>	59	118.4	9,113	119.2	60,603	114.3
Cancer of the trachea, bronchus & lung	11	22.3	1,980	25.4	12,715	24.0
<b>Respiratory system diseases</b>	24	47.9	1,700	21.7	9,726	18.3
Chronic lower respiratory disease	17	34.0	1,209	15.3	6,657	12.6
<b>Injuries and poisonings</b>	31	64.4	2,541	39.5	18,573	35.0
Suicide	11	23.0	888	14.0	6,706	12.6
Motor vehicle accidents	#	17.2	809	12.7	5,014	9.5
<b>Other causes</b>	39	76.0	3,998	54.6	26,735	50.4
Diabetes mellitus	#	12.5	442	9.4	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

# Not shown, as there are less than 10 cases over the period

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

## Acknowledgements

Funding for these profiles was provided by the Population Health Division of the Department of Health and Ageing (DoHA). Assistance, by way of comment on the profiles and assistance in obtaining some datasets, has also been received from the Primary Care Division of the DoHA, the ABS and the ACIR.

## 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:**

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