Population health profile of the Southern Queensland Rural Division of General Practice

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of the *Southern Queensland Rural Division of General Practice*

Introduction

This profile has been designed to provide a description of the population of the Southern Queensland Rural 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 23.

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 Queensland and Australia) and Aboriginal and Torres Strait Islanders elsewhere in Australia. Specific topics covered for the Southern Queensland Rural Division include:

- a socio-demographic profile (pages 3-8)

- GP workforce data (page 9);

- immunisation rates (page 9);

- rates of premature death (page 10); and

- estimates of the prevalence of chronic disease and risk factors (pages 11-15).

Key indicators

Location:		Queensland
Division number:		414
Population‡:	**No.**	
Indigenous:	**8,318**	
<25	4,952	59.5%
65+	228	2.7%
Non-Indigenous:	**159,450**	
<25	53,996	33.9%
65+	20,314	12.7%

Disadvantage score[1]: 972

GP services per head of population:

Division‡	4.2
Australia	4.7

Population per FTE GP:

Division‡	1,428
Australia	1,403

Premature death rate[2]:

Division‡	307.3
Australia	290.4

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

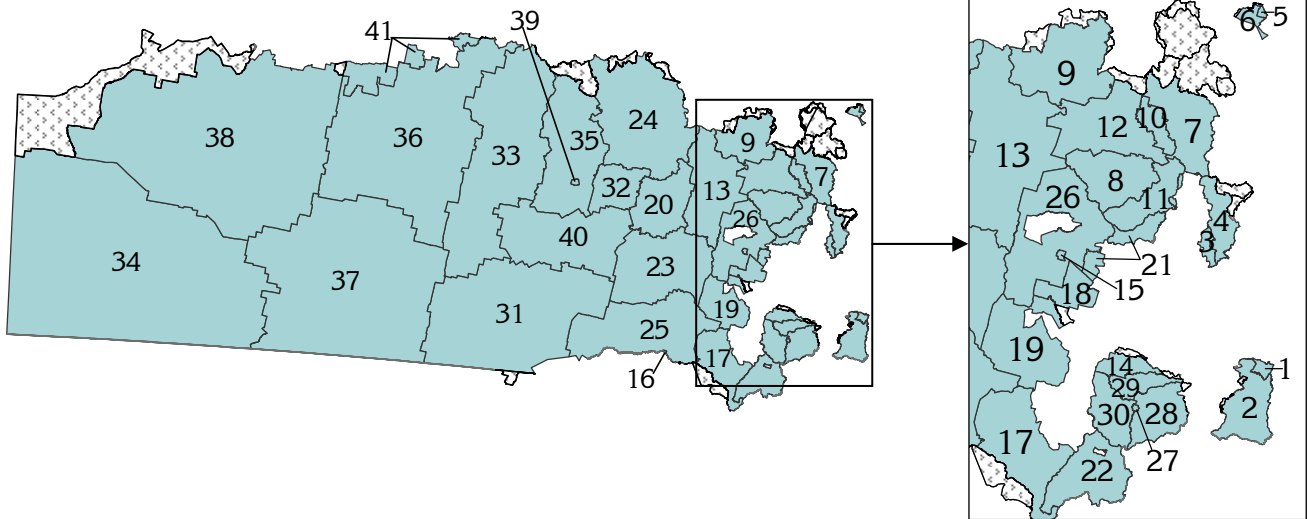[2] **Deaths at ages 0 to 74 years per 100,000 population**

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

Southern Queensland Rural Division of General Practice

Queensland Divisions of General Practice
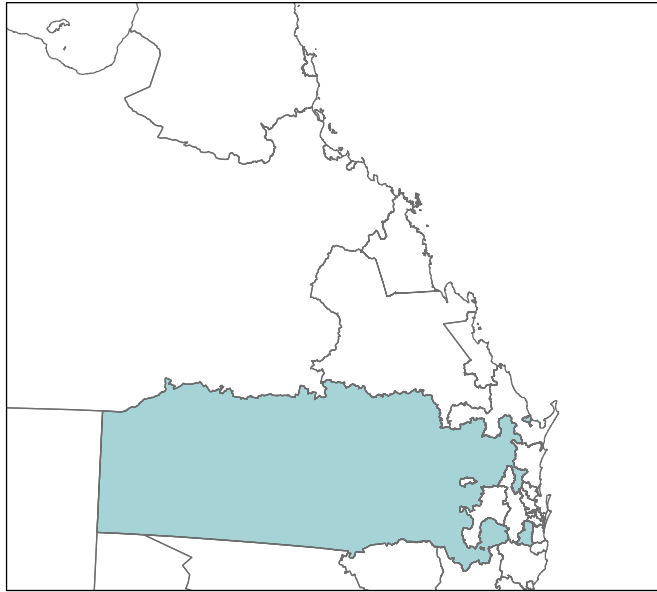
Southern Queensland Rural DGP by SLA/SLA group

* **Map legend: see page 8**

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 Southern Queensland Rural DGP had a population of 167,768 at the 2001 Census. Aboriginal and Torres Strait Islander people comprised one twentieth (5.0%) 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 9 years age groups clearly show the effect of high Indigenous birth rates in the Division, particularly for males: this gives the chart a triangular shape (Figure 1). The very marked drop in the proportion of the Indigenous population between each age group from age nine suggests extremely high death rates are occurring from this age group through to 24 years of age.

The profile for the non-Indigenous population (shown by the shapes) is quite different and shows the impact, at younger ages, of a lower birth rate (and, possibly, out-migration for schooling and further education), with higher proportions in the 25 to 29 and 30 to 34 year age groups, and much smaller reductions in the population at older ages.

Figure 1: Population in Southern Qld Rural ‡ by Indigenous status, age and sex, 2001

Figure 2: Indigenous population in Southern Qld Rural ‡ and Australia, by age and sex, 2001
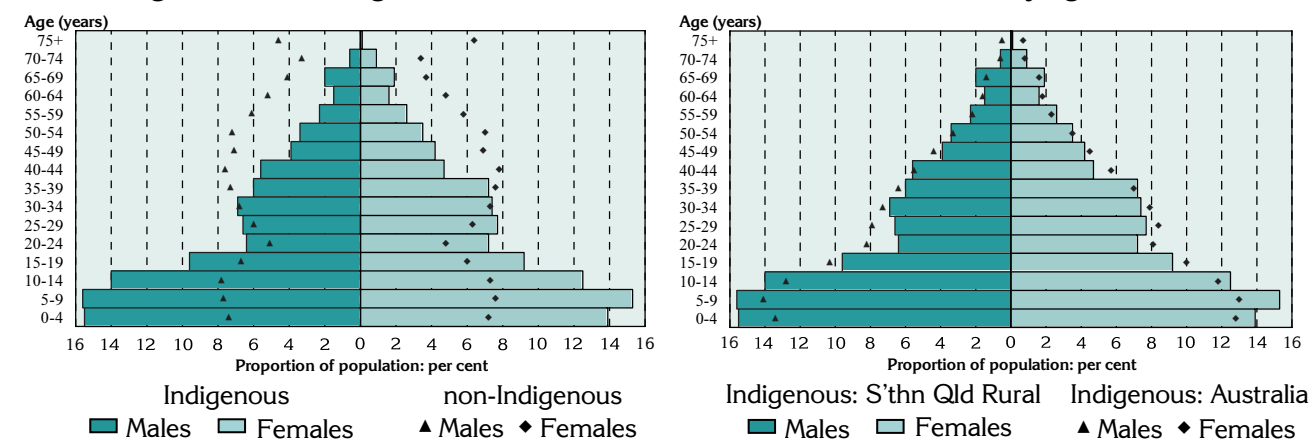
‡ **See note under 'Data converters and mapping' re calculation of Division totals**

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 has:

- a higher proportion of children aged 0 to 14 years;
- a lower proportion of young people, particularly males, aged 15 to 34 years; and
- a smaller proportion of older people aged 75 years and over.

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 Southern Queensland Rural DGP and Australia.

Table 1: Population by Indigenous status and age[*], Southern Queensland Rural DGP‡ and Australia, 2001

| Age group (years) | Southern Queensland Rural DGP‡ | | | | Australia | | | |
| | Indigenous | | Non-Indigenous | | Indigenous | | Non-Indigenous | |
	No.	%	No.	%	No.	%	No.	%
0-14	3,605	43.3	35,898	22.5	178,622	39.0	3,807,808	20.1
15-24	1,347	16.2	18,099	11.4	83,942	18.3	2,570,934	13.6
25-44	2,175	26.2	45,132	28.3	128,474	28.0	5,715,858	30.2
45-64	962	11.6	40,007	25.1	54,206	11.8	4,435,376	23.4
65-74	222	2.7	11,581	7.3	10,249	2.2	1,310,587	6.9
75+	6	0.1	8,733	5.5	2,768	0.6	1,111,844	5.9
Total	**8,318**	**100.0**	**159,450**	**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**

Just less than one fifth (19.3%) of the Indigenous population in Southern Queensland Rural DGP lived in Murgon Statistical Local Area (SLA – see page 25) with Balonne (9.6%), Paroo (7.9%) and Dalby (7.3%) SLAs comprising a further one quarter of the population (Table 2).

Indigenous people constituted smaller proportions of the population in Roma, Murweh, Warwick – Central, Hervey Bay – Part A and other remaining SLAs.

Table 2: Population by Indigenous status[*], SLAs in Southern Queensland Rural DGP‡, 2001

Statistical Local Area/ SLA group	Indigenous		Non-Indigenous		Total	
	No.	%	No.	%	No.	%
Murgon	1,609	19.3	3,225	2.0	4,834	2.9
Balonne	801	9.6	4,577	2.9	5,378	3.2
Paroo	655	7.9	1,559	1.0	2,214	1.3
Dalby	610	7.3	9,503	6.0	10,113	6.0
Roma	570	6.9	6,134	3.8	6,704	4.0
Murweh	518	6.2	4,514	2.8	5,032	3.0
Warwick – Central	417	5.0	10,915	6.8	11,332	6.8
Beaudesert - Part B	300	3.6	13,706	8.6	14,006	8.3
Greenbank/Beaudesert[#]	200	2.4	11,123	7.0	11,323	6.7
Goondiwindi	198	2.4	4,595	2.9	4,793	2.9
Kingaroy	189	2.3	11,619	7.3	11,808	7.0
Nanango	188	2.3	6,508	4.1	6,696	4.0
Wondai	181	2.2	4,048	2.5	4,229	2.5
Other	1,894	22.8	67,412	42.3	69,306	41.3
Total	**8,318**	**100.0**	**159,450**	**100.0**	**167,768**	**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**
[#]**SLA group: see Table 14 for codes for the individual SLAs in this group**

At 30 June 2004 the Estimated Resident Population was 172,591.

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, 5.0% of the population of the Southern Queensland Rural DGP were estimated to be of Aboriginal or Torres Strait Islander origin, more than double the Australian rate of 2.4% (Figure 3 and Table 3).

The proportion of Indigenous single parent families in the Division (23.8%) was marginally lower than the Indigenous rate for country Queensland (26.6%), but almost four times that for the Division's non-Indigenous population (8.3%).

Just over half (54.2%) of Indigenous 16 year olds living in the Division were involved in full-time secondary school education, slightly below the rate for country Queensland (56.8%), and notably lower than the participation rate for the Division's non-Indigenous 16 year olds (72.4%).

The proportion of the Division's Indigenous population who lived in dwellings rented from the State housing authority (10.9%) was notably lower than that for country Queensland (16.0%), but was eight times the rate for the non-Indigenous population in the Division (1.4%). The proportion of the Division's population (Indigenous and non-Indigenous combined) receiving rent assistance from Centrelink (15.4%) was lower than for country Queensland (21.3%).

The proportion of the Indigenous population in Southern Queensland Rural DGP who reported using a computer at home (16.4%) was marginally higher than the Indigenous rate in country Queensland (14.5%), but less than half the rate of the Division's non-Indigenous population (36.4%). The rate of home Internet use by the Indigenous population in the Division (6.0%) was similar to that for the Indigenous population in country Queensland (6.1%), but was one-third the rate for the Division's non-Indigenous population (19.0%).

Figure 3: Socio-demographic indicators by Indigenous status, Southern Queensland Rural DGP‡, country Queensland Australia and Australia, 2001

Note the different scales

Total population

Per cent — Indigenous / Non-Indigenous

Single parent families

Per cent — Indigenous / Non-Indigenous

Education participation at age 16

Per cent — Indigenous / Non-Indigenous

Unemployment rate

Per cent — Indigenous / Non-Indigenous

Labour force participation

Per cent — Indigenous / Non-Indigenous

Dwellings rented from State housing authority

Per cent — Indigenous / Non-Indigenous

Computer use at home

Per cent — Indigenous / Non-Indigenous

Internet use at home

Per cent — Indigenous / Non-Indigenous

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, Southern Queensland Rural DGP‡, country Queensland and Australia, 2001[*]

Indicator	Southern Qld Rural DGP‡		Country Queensland		Australia	
	No.	%	No.	%	No.	%
Population						
- Indigenous	8,318	5.0	96,267	4.9	458,261	2.4
- Non-Indigenous	159,450	95.0	1,882,257	95.1	18,952,407	97.6
Single parent families						
- Indigenous	458	23.8	5,495	26.6	26,487	25.8
- Non-Indigenous	3,860	8.3	54,430	11.2	503,382	10.4
Full-time secondary school education at age 16						
- Indigenous	83	54.2	1,041	56.8	5,997	50.5
- Non-Indigenous	1,786	72.4	20,143	78.3	327,055	80.3
Dwellings rented from State housing authority						
- Indigenous	233	10.9	3,642	16.0	23,974	20.8
- Non-Indigenous	808	1.4	17,056	2.7	284,502	4.5
People who used a computer at home						
- Indigenous	1,247	16.4	12,423	14.5	73,636	18.0
- Non-Indigenous	60,983	36.4	724,438	40.1	7,761,390	44.1
People who used the Internet at home						
- Indigenous	458	6.0	5,261	6.1	35,384	8.6
- Non-Indigenous	31,819	19.0	453,756	25.1	5,135,445	29.2
Households receiving rent assistance	8,920	15.4	145,862	21.3	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'**
Note: The 'Total population' data is 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**

Southern Queensland Rural DGP's Indigenous population had a marginally lower unemployment rate (18.0%) than the Indigenous rates for country Queensland (19.6%) and Australia (20.0%), but three times the rate of the Division's non-Indigenous population (6.4%) (Figure 3, Table 4). However, 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 in the Division (31.1%) was a substantially higher 31.1%, but lower than the 'real" Indigenous unemployment rates for country Queensland (37.4%) and Australia (34.2%).

Table 4: Unemployment and labour force participation, Southern Queensland Rural DGP‡, country Queensland and Australia, 2001

Labour force indicators	Southern Qld Rural DGP‡		Country Queensland		Australia	
	No.	%	No.	%	No.	%
Unemployment rate						
- Indigenous	412	18.0	5,335	19.6	24,930	20.0
- Non-Indigenous	5,079	6.4	71,885	8.4	624,337	7.3
Labour force participation (incl. CDEP as employed)						
- Indigenous	2,283	56.4	27,155	55.4	124,517	52.4
- Non-Indigenous	79,886	73.1	854,115	71.8	8,609,525	72.9
Female labour force participation (incl. CDEP as employed)						
- Indigenous	964	48.5	11,395	48.8	52,981	46.6
- Non-Indigenous	29,979	67.8	345,139	69.2	3,564,409	69.8
Indigenous unemployment rate (incl. CDEP)						
- excluding CDEP	412	18.0	5,335	19.6	24,930	20.0
- CDEP	298	13.1	4,822	17.8	17,662	14.2
- Total (including CDEP)	710	31.1	10,157	37.4	42,592	34.2

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

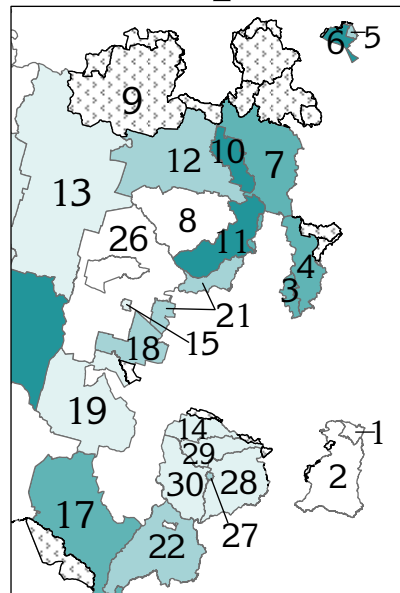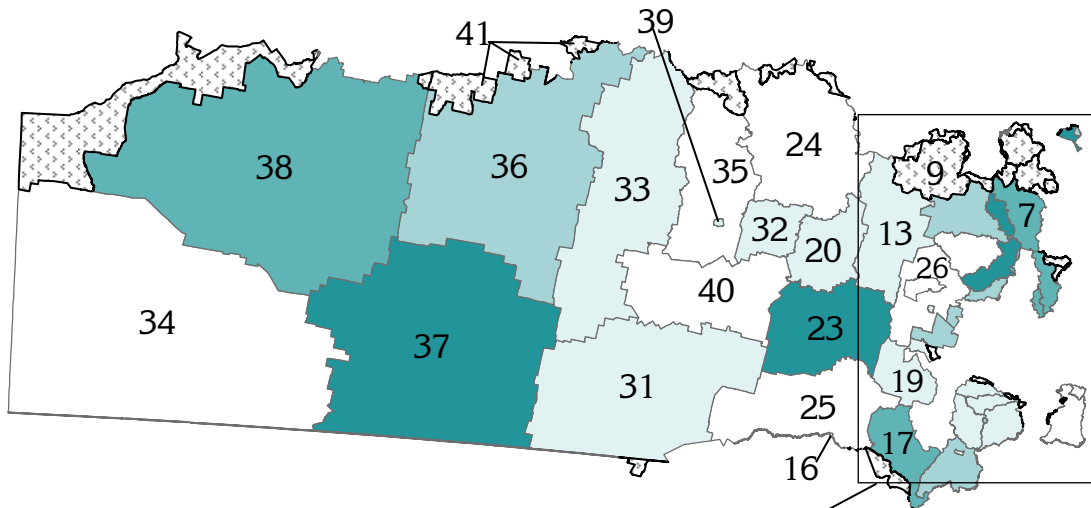Data Sources: see 'Data sources and limitations' at end of report

The Division's Indigenous labour force participation rate of 56.4% (in this case with those under the CDEP counted as employed) was consistent with the rate for country Queensland (55.4%), marginally higher than the rate for Australia (52.4%), but notably lower than the rate for the non-Indigenous population in the Division (73.1%) (Table 4). The female Indigenous labour force participation rate (48.5%) was similar to the Indigenous rates for country Queensland (48.8%) and Australia (46.6%), but much lower than the rate for the Division's non- Indigenous females population (67.8%).

Summary of the socioeconomic ranking of the Southern Queensland Rural DGP

Following the 2001 Census, the Australian Bureau of Statistics (ABS) produced four socioeconomic indexes for areas (SEIFA) which described aspects of the socioeconomic profile of populations in areas. The scores from these indexes for each Statistical Local Area (SLA) or groups of SLAs in Southern Queensland Rural DGP are shown in the supporting information, Table 13, page 24: SLAs are described on page 25.

The Southern Queensland Rural DGP area's Index of Relative Socio-Economic Disadvantage (IRSD) score from the 2001 Census is 972, 2.8% below the average for Australia (1000), and below the score for country Queensland (978); this highlights the marginally lower socioeconomic status profile of the Division's population. The marked variations in the IRSD within the Division at SLA level are shown in Map 1.

Map 1: Index of Relative Socio-Economic Disadvantage by SLA/SLA group, Southern Queensland Rural DGP, 2001

See note under 'Methods' 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.

Index scores

below 930*
931 to 950
951 to 970
971 to 990
above 990
not mapped#
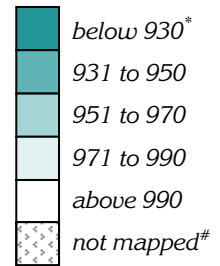
* most disadvantaged
# data were not mapped: see note under 'Methods' re Data converters and mapping.

<table>
<tr><td colspan="6" align="center">Alphabetical key to SLAs/SLA groups, Southern Qld Rural DGP, 2001</td></tr>
<tr><td>Balonne</td><td>31</td><td>Inglewood</td><td>17</td><td>Rosalie - Part B</td><td>21</td></tr>
<tr><td>Beaudesert - Part B</td><td>2</td><td>Jondaryan - Part B</td><td>18</td><td>Stanthorpe</td><td>22</td></tr>
<tr><td>Bendemere</td><td>32</td><td>Kilcoy</td><td>4</td><td>Tambo</td><td>41</td></tr>
<tr><td>Booringa</td><td>33</td><td>Kilkivan</td><td>7</td><td>Tara</td><td>23</td></tr>
<tr><td>Bulloo</td><td>34</td><td>Kingaroy</td><td>8</td><td>Taroom</td><td>24</td></tr>
<tr><td>Bungil</td><td>35</td><td>Millmerran</td><td>19</td><td>Waggamba</td><td>25</td></tr>
<tr><td>Chinchilla</td><td>13</td><td>Mundubbera</td><td>9</td><td>Wambo</td><td>26</td></tr>
<tr><td>Clifton</td><td>14</td><td>Murgon</td><td>10</td><td>Warroo</td><td>40</td></tr>
<tr><td>Dalby</td><td>15</td><td>Murilla</td><td>20</td><td>Warwick - Central</td><td>27</td></tr>
<tr><td>Esk</td><td>3</td><td>Murweh</td><td>36</td><td>Warwick - East</td><td>28</td></tr>
<tr><td>Goondiwindi</td><td>16</td><td>Nanango</td><td>11</td><td>Warwick - North</td><td>29</td></tr>
<tr><td>Greenbank/Beaudesert</td><td>1</td><td>Paroo</td><td>37</td><td>Warwick - West</td><td>30</td></tr>
<tr><td>Hervey Bay - Part A</td><td>5</td><td>Quilpie</td><td>38</td><td>Wondai</td><td>12</td></tr>
<tr><td>Hervey Bay - Part B</td><td>6</td><td>Roma</td><td>39</td><td></td><td></td></tr>
</table>

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

General medical practitioner (GP) supply

A total of 120.3 full-time equivalent (FTE) GPs, and 144.9 full-time workload equivalent (FWE[1]) GPs worked in the Southern Queensland Rural DGP in 2003/04 (Table 5). Of the FWE GPs, 27.2% were female, and 18.3% were over 55 years of age (compared to 26.7% and 25.2%, respectively, for Queensland).

Apart from the day-time population, the rates of population per FTE GP varied, depending on the population measure used, from a high of 1,428 people per GP (calculated on the average Estimated Residential Population (ERP) as at 30 June 2003 and 2004), to a low of 1,390 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 1,142 (calculated on the URP) to 1,185 (calculated on the ERP). When calculated on the estimated day-time population, the rates of population were 2.1% below the URP.

Based on the ERP, the rates of population per GP in Southern Queensland Rural DGP differed little from the rates for Queensland and Australia, indicating a similar level of provision of GP services.

Table 5: Population per GP in Southern Queensland Rural DGP, Queensland and Australia, 2003/04

Population measure	Population	GPs		Population per GP	
		FTE	FWE	FTE	FWE
Southern Queensland Rural DGP					
Census count (adjusted)*	167,231	120.3	144.9	1,390	1,154
Usual Resident Population (URP) (adjusted)*	165,524	..	..	1,376	1,142
Estimated Resident Population (ERP)	171,692	..	..	1,428	1,185
Day-time population (estimated on URP)* ‡	162,057	..	..	1,347	1,118
Queensland (ERP)	3,841,538	2,739	3,256	1,403	1,180
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 94.9% of children in the Division in 2002 were fully immunised at age one, consistent with 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 proportion of children in the Division who were immunised by a general practitioner was 79.7% compared to 70.0% for Australia, with 8.8% immunised at a public hospital, and 6.9% at a community health centre, or by a community health worker.

Table 6: Childhood immunisation at ages 0 to 6 by provider type, Southern Queensland Rural DGP and Australia, 2003/04

Provider	Southern Qld Rural	Australia
	%	%
General practitioner	79.7	70.0
Local government council	2.8	16.6
Community health centre/ worker	6.9	9.8
Public hospital	8.8	2.1
Aboriginal health service/ worker	1.2	0.9
Other*	0.5	0.6
Total: Per cent	**100.0**	**100.0**
Number	**34,870**	**3,843,610**

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

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[1]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 (307.3 deaths per 100,000 population) is higher than for country Queensland (278.5) 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.
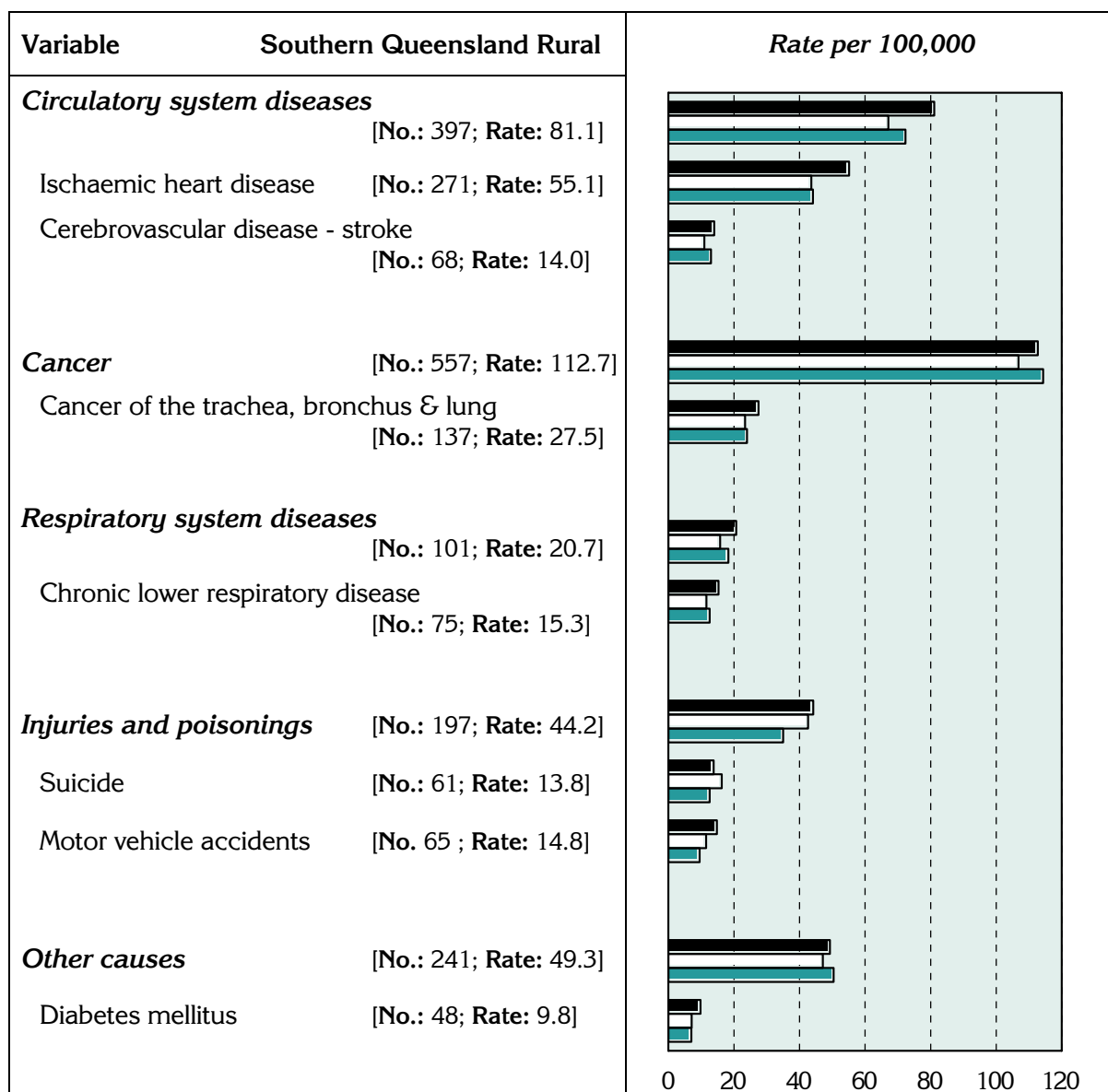
The major causes of premature mortality in the Division, as for country Queensland and Australia as a whole, are cancer and diseases of the circulatory system (Figure 4). With the exception of cancer, death rates in the Division for the major conditions and selected causes are higher than those for Australia. The Division's rates, apart from suicide, were also higher than those for country Queensland.

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, Southern Queensland Rural DGP‡, country Queensland and Australia, 2000-02*

Indirectly age standardised rate per 100,000 population

■ Southern Qld Rural DGP   □ Country Qld   ■ Australia

Variable Southern Queensland Rural	Rate per 100,000
Circulatory system diseases [**No.:** 397; **Rate:** 81.1]	
Ischaemic heart disease [**No.:** 271; **Rate:** 55.1]	
Cerebrovascular disease - stroke [**No.:** 68; **Rate:** 14.0]	
Cancer [**No.:** 557; **Rate:** 112.7]	
Cancer of the trachea, bronchus & lung [**No.:** 137; **Rate:** 27.5]	
Respiratory system diseases [**No.:** 101; **Rate:** 20.7]	
Chronic lower respiratory disease [**No.:** 75; **Rate:** 15.3]	
Injuries and poisonings [**No.:** 197; **Rate:** 44.2]	
Suicide [**No.:** 61; **Rate:** 13.8]	
Motor vehicle accidents [**No.** 65 ; **Rate:** 14.8]	
Other causes [**No.:** 241; **Rate:** 49.3]	
Diabetes mellitus [**No.:** 48; **Rate:** 9.8]	

0   20   40   60   80   100   120

* '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

Chronic diseases and risk factors

The term "chronic disease" describes health problems that persist across time and require some degree of health care management (WHO 2002). Chronic diseases tend to have complex causes, are often long lasting and persistent in their effects, and can produce a range of complications (Thacker et al. 1995). They are responsible for a significant proportion of the burden of disease and illness in Australia and other westernised countries. Given the ageing of the population, this trend is likely to continue.

At different life stages, risk factors for chronic diseases and their determinants include genetic predisposition; poor diet and lack of exercise; alcohol misuse and tobacco smoking; poor intra-uterine conditions; stress, violence and traumatic experiences; and inadequate living environments that fail to promote healthy lifestyles (NPHP 2001). Risk factors are also more prevalent in areas of low socioeconomic status, and in communities characterised by low levels of educational attainment; high levels of unemployment; substantial levels of discrimination, interpersonal violence and exclusion; and poverty. There is a higher prevalence of risk factors among Indigenous communities, and other socioeconomically disadvantaged Australians (NPHP 2001).

Background

In this section, estimates of the prevalence of selected chronic diseases and risk factors, and two summary measures of health, are shown for the Division‡, and for non-remote SLAs within the Division. These estimates are only available for some SLAs in this Division – generally the 'non-remote' areas – as remote areas were not included in the 2001 National Health Survey. Note that the estimates have been predicted from self-reported data, and are not based on clinical records or physical measures. The chronic diseases and risk factors are those for which sufficiently reliable estimates can be made for the Division from national survey data. The process by which the estimates have been made, and details of their limitations, are described in the Notes section, pages 21-22. The data on which the following charts are based are in Table 16.

The estimates provide information of relevance to a number of the National Health Priority Areas (NHPAs – asthma; cardiovascular health; diabetes mellitus; injury prevention and control; mental health; and arthritis and musculoskeletal conditions: estimates have not been made for cancer control, the other NHPA). The risk factors for which estimates have been made are those which are accepted as being associated with these important chronic conditions. They are overweight (not obese), obesity, smoking, lack of exercise and high-risk alcohol use.

The numbers are estimates for an area, not measured events as are death statistics: they should be used as indicators of likely levels (and not actual levels) of a condition or risk factor in an area.

Prevalence estimates: chronic disease‡

It is estimated that, with the exception of musculoskeletal system diseases, similar, or smaller proportions of the population in Southern Queensland Rural DGP reported having any of the selected chronic conditions than in Australia as a whole (Figure 5): that is, the prevalence rates per 1,000 population were higher.

Prevalence estimates: self-reported health‡

The NHS includes two measures of self-reported health. One is the Kessler Psychological Distress Scale–10 items (K–10). This is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the four weeks prior to interview, asked of respondents 18 years and over (ABS 2002). The other asks respondents aged 15 years and over to rate their health on a scale from 'excellent', through 'very good', 'good' and 'fair', to 'poor' health.
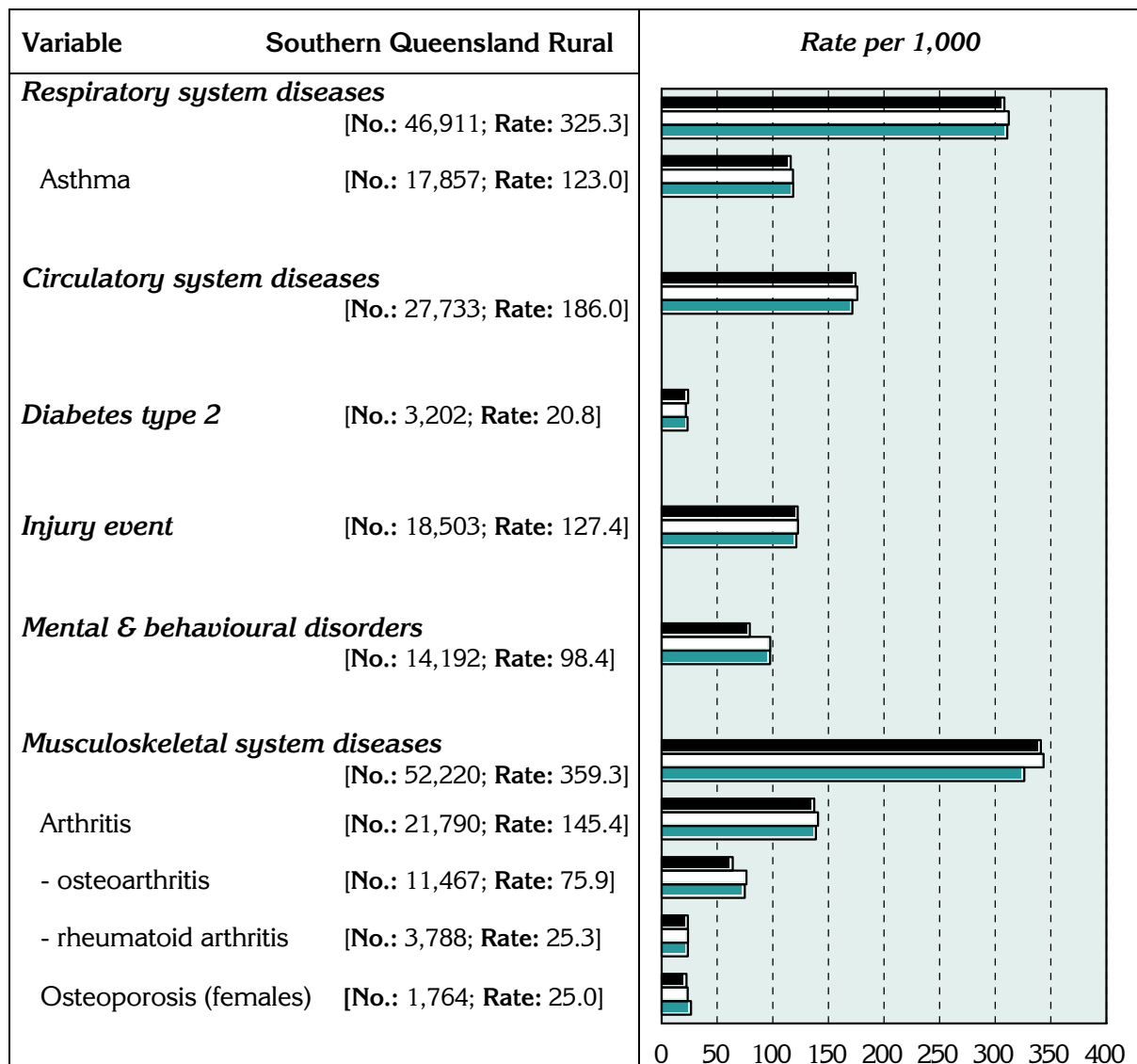
The population of the Division aged 18 years and over is estimated to have a similar proportion with very high psychological distress levels as measured by the K–10 compared to Australia as a whole (Figure 6). The proportion of the population aged 15 years and over estimated to have reported their health as 'fair' or 'poor' is also above the national average.

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

Figure 5: Estimates[*] of chronic disease and injury, Southern Queensland Rural DGP‡, country Queensland and Australia, 2001

Indirectly age standardised rate per 1,000 population

■ Southern Qld Rural DGP ☐ Country Qld ▬ Australia

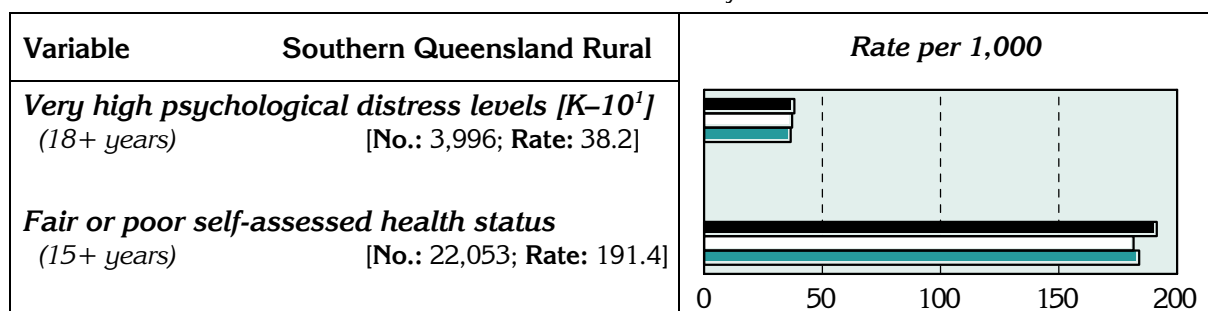| Variable	Southern Queensland Rural	Rate per 1,000
Respiratory system diseases	[**No.:** 46,911; **Rate:** 325.3]	
Asthma	[**No.:** 17,857; **Rate:** 123.0]	
Circulatory system diseases	[**No.:** 27,733; **Rate:** 186.0]	
Diabetes type 2	[**No.:** 3,202; **Rate:** 20.8]	
Injury event	[**No.:** 18,503; **Rate:** 127.4]	
Mental & behavioural disorders	[**No.:** 14,192; **Rate:** 98.4]	
Musculoskeletal system diseases	[**No.:** 52,220; **Rate:** 359.3]	
Arthritis	[**No.:** 21,790; **Rate:** 145.4]	
- osteoarthritis	[**No.:** 11,467; **Rate:** 75.9]	
- rheumatoid arthritis	[**No.:** 3,788; **Rate:** 25.3]	
Osteoporosis (females)	[**No.:** 1,764; **Rate:** 25.0]	

(Horizontal axis: 0 50 100 150 200 250 300 350 400)

[*] 'No.' is a weighted estimate of the number of people in Southern Queensland Rural DGP reporting each chronic condition and is derived from synthetic predictions from the 2001 NHS
‡ See note under 'Data converters and mapping' re calculation of Division totals

Figure 6: Estimates[*] of measures of self-reported health, Southern Queensland Rural DGP, country Queensland and Australia, 2001

Indirectly age standardised rate per 1,000 population

■ Southern Qld Rural DGP ☐ Country Qld ▬ Australia

Variable	Southern Queensland Rural	Rate per 1,000
Very high psychological distress levels [K–10[1]] (18+ years)	[**No.:** 3,996; **Rate:** 38.2]	
Fair or poor self-assessed health status (15+ years)	[**No.:** 22,053; **Rate:** 191.4]	

(Horizontal axis: 0 50 100 150 200)

[*] 'No.' is a weighted estimate of the number of people in Southern Queensland Rural DGP reporting under these measures and is derived from synthetic predictions from the 2001 NHS
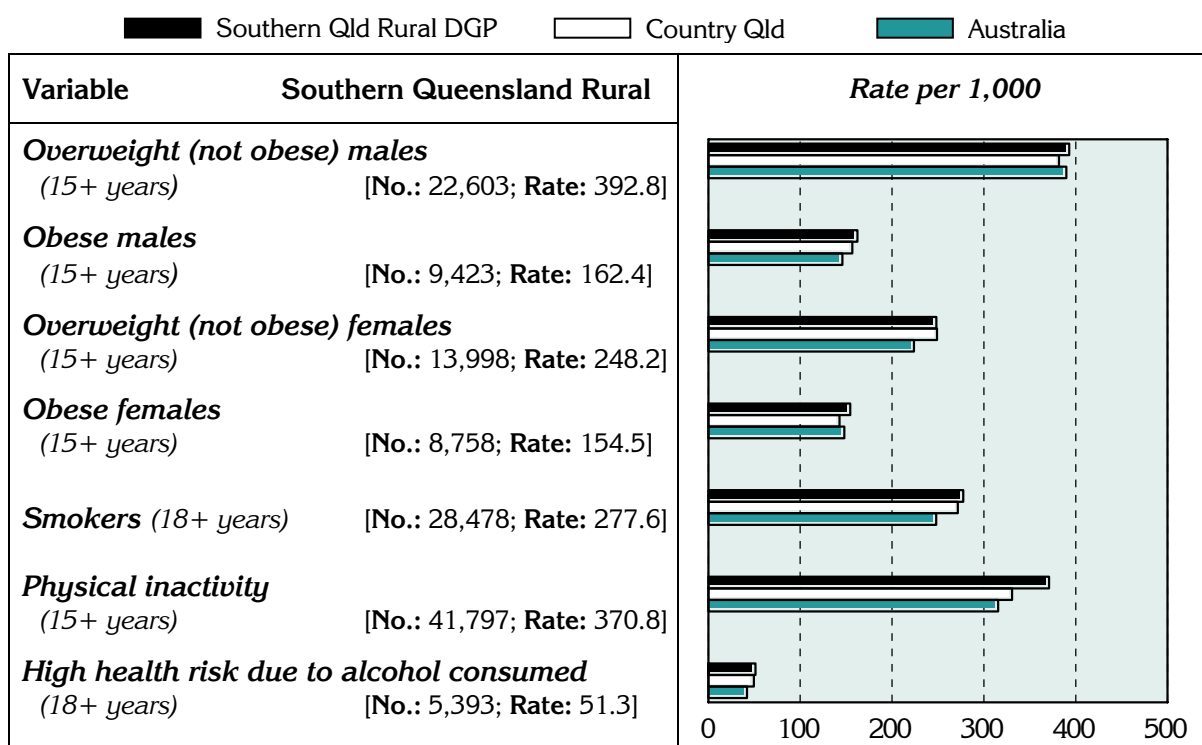[1] Kessler 10
‡ See note under 'Data converters and mapping' re calculation of Division totals

Prevalence estimates: risk factors‡

The relatively higher rates (when compared with the Australian population) for all of the selected risk factors (Figure 7) are consistent with the socioeconomic status profile of the area.

Figure 7: Estimates* of selected risk factors, Southern Queensland Rural DGP‡, country Queensland and Australia, 2001

Indirectly age standardised rate per 1,000 population

| ▉ Southern Qld Rural DGP | ☐ Country Qld | ▉ Australia |

Variable	Southern Queensland Rural	Rate per 1,000
Overweight (not obese) males (15+ years)	[**No.:** 22,603; **Rate:** 392.8]	
Obese males (15+ years)	[**No.:** 9,423; **Rate:** 162.4]	
Overweight (not obese) females (15+ years)	[**No.:** 13,998; **Rate:** 248.2]	
Obese females (15+ years)	[**No.:** 8,758; **Rate:** 154.5]	
Smokers (18+ years)	[**No.:** 28,478; **Rate:** 277.6]	
Physical inactivity (15+ years)	[**No.:** 41,797; **Rate:** 370.8]	
High health risk due to alcohol consumed (18+ years)	[**No.:** 5,393; **Rate:** 51.3]	

* **'No.' is a weighted estimate of the number of people in Southern Queensland Rural DGP with these risk factors and has been predicted using data from the 2001 NHS and known data for the Division**
‡ **See note under 'Data converters and mapping' re calculation of Division totals**

The following maps provide details of the geographic distribution, at the SLA level, of the estimated prevalence of chronic disease (Map 2), self-reported health (Map 3) and risk factors associated with chronic disease (Map 4).

In the following maps, users should note that the estimates shown for part SLAs in the Division (see Table 14, page 25, for per cent of SLA population in the Division) represent the estimates for the whole SLA, and not just the part shown. However, SLAs with only a small proportion of their population in the Division are likely to have little influence on the total estimates for the Division, which have been based on the percentage of the SLA population in the Division.

Map 2: Estimates* of chronic disease and injury by SLA/SLA group, Southern Queensland Rural DGP, 2001
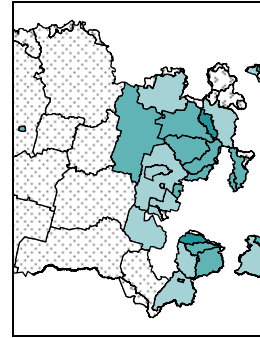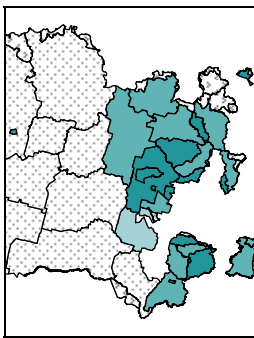
Southern Queensland Rural DGP
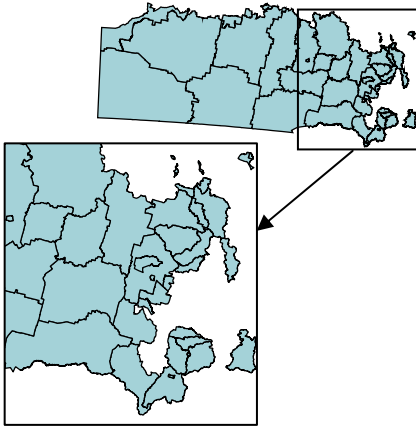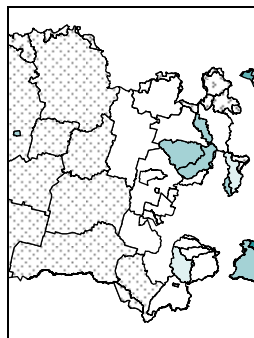

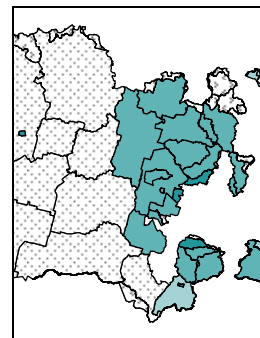**Respiratory system diseases**
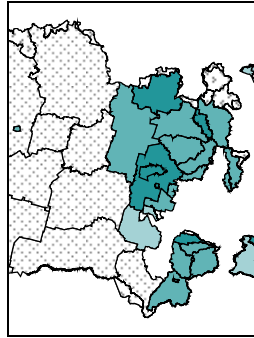
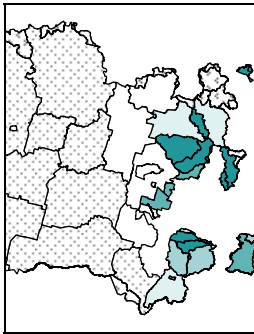*Respiratory system diseases:* Asthma

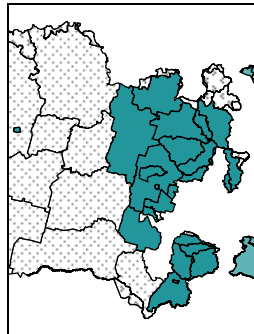**Circulatory system diseases**

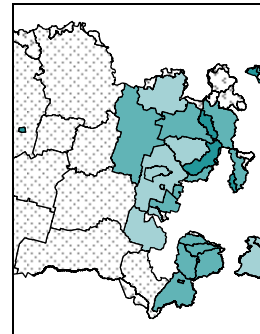**Diabetes type 2**

Injury event

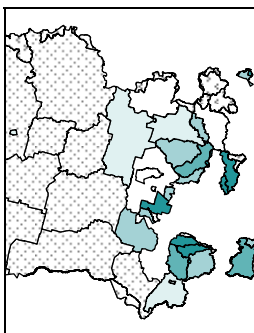**Mental & behavioural disorders**

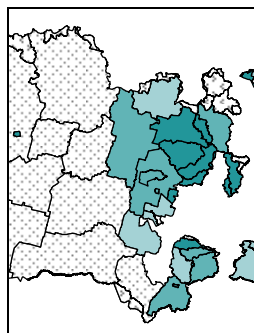**Musculoskeletal system diseases**

Musculoskeletal system diseases: Arthritis

Arthritis: Osteoarthritis

Arthritis: Rheumatoid arthritis

Osteoporosis (females)
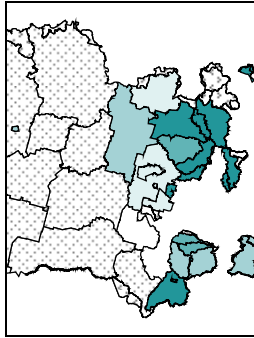
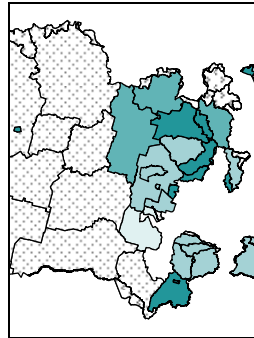Data Sources: see 'Data sources and limitations' at end of report
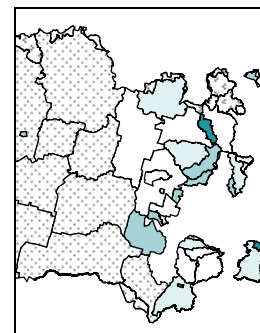
Map 3: Estimates[*] of measures of self-reported health by SLA/SLA group, Southern Queensland Rural DGP, 2001

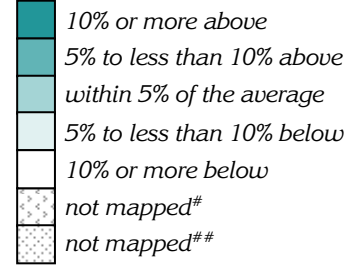### Very high psychological distress levels [K–10[1]] (18+ years)

[1] Kessler 10

Fair or poor self-assessed health status (15+ years)

Per cent difference from Australian average

- *10% or more above*
- *5% to less than 10% above*
- *within 5% of the average*
- *5% to less than 10% below*
- *10% or more below*
- *not mapped[#]*
- *not mapped[##]*

[*] *See Notes on the data re these estimates.*
[#] *Data not mapped: see 'Data converters and mapping' section under Notes on the data.*
[##] *Estimates not available for remote areas*

Map 4: Estimates[*] of selected risk factors by SLA/SLA group, Southern Queensland Rural DGP, 2001

Overweight (not obese) males (15+ years)
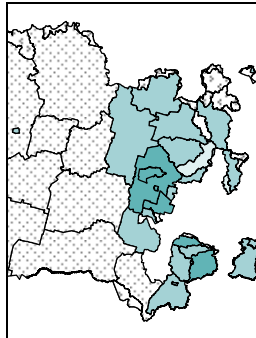
Obese males (15+ years)

Overweight (not obese) females (15+ years)
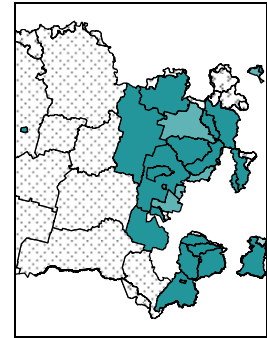
Obese females (15+ years)
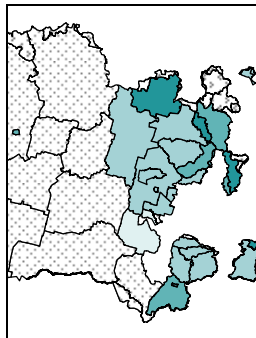
Smokers (18+ years)
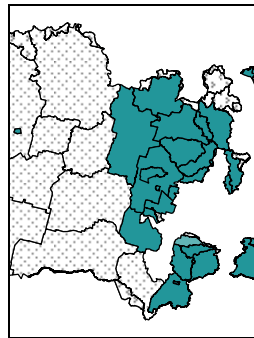
Physical inactivity (15+ years)
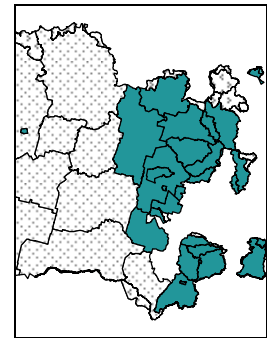
High health risk due to alcohol consumed (18+ years)
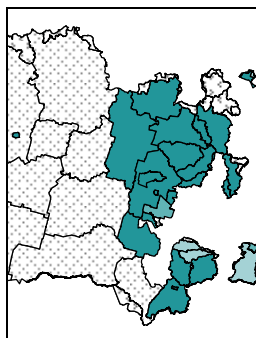
Per cent difference from Australian average
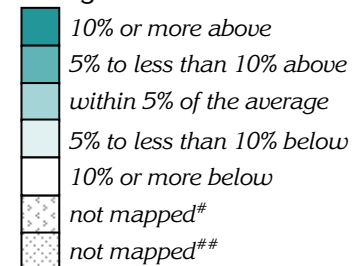
- *10% or more above*
- *5% to less than 10% above*
- *within 5% of the average*
- *5% to less than 10% below*
- *10% or more below*
- *not mapped[#]*
- *not mapped[##]*

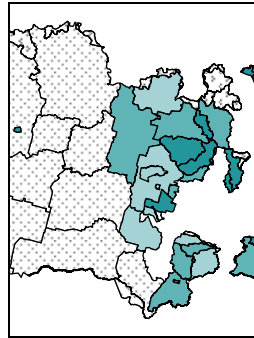[*] *See Notes on the data re these estimates.*
[#] *Data not mapped: see 'Data converters and mapping' section under Notes on the data.*
[##] *Estimates not available for remote areas*

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

Background

Estimates of the prevalence of chronic diseases and risk factors are not available for the remote areas in this Division. However, 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 Southern Queensland Rural Division is classed as partly Remote under the ARIA+ remoteness classification (see *Notes on the data,* page 21); under this classification approximately 15.0% of the Division's population lives in areas classed as Remote, with some representation in Very Remote, with the majority of the population (approximately 85.0%) living in areas classed as Moderately Accessible or Accessible.

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 Southern Queensland Rural 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 range 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.

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, so were not included in the comparisons by income group. For almost all of the characteristics in Table 12, 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	
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 (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	
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 tests	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

General

References to 'country Queensland' relate to Queensland, excluding the Brisbane Statistical Division.

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[1], 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 13	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[2], ABS Population Census 2001, scaled to 2003/04 - Usual Resident Population[3], 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
Chronic diseases and associated risk factors[4]	
Figures 5, 6 and 7; Maps 2, 3 and 4; Table 16	Estimated from 2001 National Health Survey (NHS), ABS (unpublished)
National Aboriginal and Torres Strait Islander Social Survey and Health Survey	
Table 7	ABS 2002 NATSIS, 2002 (unpublished)
Tables 8,9 and 10	ABS 2001 NHS Cat. No. 4714.0 – Tables 1, 19 and 22

[1] All data extracted from Usual Residents Profile, except for data variables only released in the Basic Community Profile
[2] *Census count* - those counted in the Division on Census night, including tourists, business people and other visitors
[3] *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
[4] See notes below

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.

Chronic diseases and associated risk factors

The data for chronic conditions and risk factors for SLAs have been estimated from the 2001 National Health Survey (NHS), conducted by the ABS: see note below on synthetic estimates. The NHS sample includes the majority of people living in private households, but excludes the most remote areas of Australia. These areas cover 86.4% of Australia's land mass and comprise just 3% of the total population, however, 28% of Australia's Indigenous population live in these areas. Thus it has not been possible to produce these estimates for Divisions with relatively high proportions of their population in the most remote areas of Australia.

The data for chronic conditions and risk factors are self-reported data, reported to interviewers in the 2001 NHS. Table 12 includes notes relevant to this data.

Table 12: Notes on estimates of chronic diseases and associated risk factors

Indicator	Notes on the data
Estimates of chronic disease and injury (Figure 5 and Map 2)	
Long term conditions	- Respondents were asked whether they had been diagnosed with any long term health condition (a condition which has lasted or is expected to last for 6 months or more), and were also asked whether they had been told by a doctor or nurse that they had asthma, cancer, heart and circulatory conditions, and/or diabetes
Injury event	- Injuries which occurred in the four weeks prior to interview
Estimates of measures of self-reported health (Figure 6 and Map 3)	
Very high psychological distress levels (K10)	- Derived from the Kessler Psychological Distress Scale-10 items (K-10), which is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the 4 weeks prior to interview. 'Very high' distress is the highest level of distress category (of a total of four categories)
Fair or poor self-assessed health status	- Respondent's general assessment of their own health, against a five point scale from excellent through to poor – 'fair' or 'poor' being the two lowest in the scale
Estimates of selected risk factors (Figure 7 and Map 4)	
Overweight (not obese)	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) - overweight: 25.0 to less than 30.0
Obese	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) – obese: 30.0 and greater
Smokers	- Respondent's undertaking regular (or daily) smoking at the time of interview
Physical inactivity	- Did not exercise in the two weeks prior to interview through sport, recreation or fitness (including walking) – excludes incidental exercise undertaken for other reasons, such as for work or while engaged in domestic duties
High health risk due to alcohol consumed	- Respondent's estimated average daily alcohol consumption in the seven days prior to interview (based on number of days and quantity consumed). Alcohol risk levels were grouped according to NHMRC risk levels for harm in the long term, with 'high risk' defined as a daily consumption of more than 75 ml for males and 50 ml for females

Note: For a full description, refer to *ABS 2001 National Health Survey,* Cat. No. 4364.0 and *ABS 2001 Health Risk Factors, Cat. No.* 4812.0

Methods

Synthetic estimates

The estimates of the prevalence of chronic disease and associated risk factors have been predicted for a majority of SLAs across Australia, using modelled survey data collected in the 2001 ABS National Health Survey (NHS) and known characteristics of the area. A synthetic prediction can be interpreted as the likely value for a 'typical' area with those characteristics: the SLA is the area level of interest for this project (where SLAs had small populations they were grouped to larger areas).   This work was undertaken by the Australian Bureau of Statistics, as they hold the NHS unit record files: the small area data were compiled by PHIDU.

The approach used is to undertake an analysis of the survey data for Australia to identify associations in the NHS data between the variables that we wish to predict at the area level (eg. prevalence of chronic conditions and risk factors) and the data we have at the area level (eg. socioeconomic status, use of health services).   The relationship between these variables for which we have area level data (the predictors) and the reporting of chronic conditions in the NHS is also a part of the model that is developed by the ABS.   For example, such associations might be between the number of people reporting specified chronic conditions in the NHS and:

> the number of hospital admissions (in total, to public and to private hospitals, by age, sex and diagnosis),
>
> socioeconomic status (as indicated by Census data, or for recipients of government pensions and benefits), and
>
> the number of visits to a general medical practitioner.

The results of the modelling exercise are then applied to the SLA counts of the predictors.   The prediction is, effectively, the likely value for a typical area with those characteristics.   The raw numbers were then age-standardised, to control for the effects of differences in the age profiles of areas.

The numbers are estimates for an area, not measured events as are death statistics: they should be used as indicators of likely levels of a condition or risk factor in an area.

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 (see page 24).

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 13) 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. Scores for these indexes for each Statistical Local Area (SLA) or part SLA in Southern Queensland Rural DGP are shown in Table 13.

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 13: SEIFA scores by SLA/SLA group, Southern Queensland Rural DGP, 2001

SLA/ SLA group name (& per cent of SLA/ SLA group in Division)		Index score			
		Disadvantage	Advantage	Economic Resources	Education & Occupation
Balonne	(96.4)	978	947	955	932
Beaudesert - Part B	(53.5)	996	964	959	964
Bendemere	(100.0)	973	908	898	918
Booringa	(100.0)	973	924	920	921
Bulloo	(100.0)	995	930	924	920
Bungil	(100.0)	1036	985	991	956
Chinchilla	(100.0)	980	911	888	937
Clifton	(94.0)	990	915	884	946
Dalby	(100.0)	990	947	952	949
Esk	(1.0)	949	902	906	906
Goondiwindi	(100.0)	995	963	981	950
Greenbank/Beaudesert#	(31.6)	992	963	998	927
Hervey Bay - Part A	(2.2)	955	912	891	946
Hervey Bay - Part B	(65.6)	911	854	849	883
Inglewood	(90.1)	950	898	881	911
Jondaryan - Part B	(11.2)	953	913	939	898
Kilcoy	(88.6)	950	891	898	895
Kilkivan	(62.5)	946	889	868	912
Kingaroy	(100.0)	993	945	934	956
Millmerran	(95.0)	976	927	953	900
Murgon	(100.0)	886	894	894	908
Murilla	(100.0)	976	927	899	943
Murweh	(100.0)	970	940	939	940
Nanango	(78.5)	928	871	863	893
Paroo	(100.0)	915	913	904	928
Quilpie	(100.0)	946	938	940	927
Roma	(100.0)	987	968	979	958
Rosalie - Part B	(44.5)	969	896	895	904
Stanthorpe	(94.3)	961	904	891	923
Tara	(100.0)	918	876	851	902
Taroom	(100.0)	996	935	934	926
Waggamba	(100.0)	1015	963	955	951
Wambo	(94.8)	996	926	901	937
Warroo	(100.0)	993	934	926	929
Warwick - Central	(100.0)	953	914	916	925
Warwick - East	(100.0)	977	911	900	924
Warwick - North	(100.0)	987	913	890	937
Warwick - West	(83.1)	983	914	903	928
Wondai	(100.0)	958	884	863	911

Note: Scores are not shown for SLAs in the Division with estimated populations of less than 100 (refer to Table 19)
SLA group: see Table 14 for codes for the individual SLAs in this group

Statistical geography of the Southern Queensland Rural DGP

The Southern Queensland Rural DGP covers 416,656 square kilometres, based on 2001 SLA data.

The postcodes in the Division are: 4280, 4285, 4287, 4357, 4360-4362, 4370-4378, 4380-4385, 4387-4388, 4390, 4402, 4404-4413, 4415-4428, 4454-4455, 4461-4462, 4465, 4467-4468, 4470-4471, 4474-4475, 4477, 4479-4480, 4486-4494, 4496-4498, 4515, 4600-4601, 4605-4608, 4610-4615, 4659, and 4662[2].

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[2] As per the 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. A number of the Local Government Areas (LGAs) in this Division have been split into SLAs. For example, the LGA of Hervey Bay is comprised of two SLAs, Part A and Part B. Parts of these SLAs, and all or parts of the other SLAs listed in Table 14 comprise the Division.

Table 14: SLAs/SLA groups in Southern Queensland Rural DGP by 2001 boundaries

SLA code	SLA/SLA group name	Per cent of SLA/SLA group's population in the Division*	Estimate of the SLA/ SLA group's 2004 population in the Division
30300	Balonne	96.4	5,393
30557	Beaudesert - Part B	53.5	15,234
30650	Bendemere	100.0	996
30850	Booringa	100.0	1,864
31750	Bulloo	100.0	475
31850	Bungil	100.0	1,962
32350	Chinchilla	100.0	6,143
32400	Clifton	94.0	2,345
32650	Dalby	100.0	10,215
33050	Esk	1.0	145
33600	Goondiwindi	100.0	5,031
30552, 34608	Greenbank/Beaudesert	31.6	12,423
33751	Hervey Bay - Part A	2.2	991
33754	Hervey Bay - Part B	65.6	2,539
33900	Inglewood	90.1	2,379
34204	Jondaryan - Part B	11.2	833
34250	Kilcoy	88.6	3,075
34300	Kilkivan	62.5	2,055
34350	Kingaroy	100.0	12,321
35000	Millmerran	95.0	3,204
35450	Mundubberra	3.2	#
35500	Murgon	100.0	4,978
35550	Murilla	100.0	2,729
35600	Murweh	100.0	5,027
35650	Nanango	78.5	6,841
35800	Paroo	100.0	2,173
36150	Quilpie	100.0	1,075
36400	Roma	100.0	6,763
36454	Rosalie - Part B	44.5	2,086
36600	Stanthorpe	94.3	9,983
36650	Tambo	10.2	#
36700	Tara	100.0	3,964
36750	Taroom	100.0	2,554
37100	Waggamba	100.0	3,011
37150	Wambo	94.8	5,023
37200	Warroo	100.0	1,065
37262	Warwick - Central	100.0	11,366
37263	Warwick - East	100.0	4,284
37265	Warwick - North	100.0	2,566
37266	Warwick - West	83.1	2,783
37450	Wondai	100.0	4,346

* **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, Southern Queensland Rural DGP‡, country Queensland and Australia, 2000-02[*]

Indirectly age standardised rate per 100,000 population

Variable	Southern Qld Rural DGP‡		Country Queensland		Australia	
	No.	Rate	No.	Rate	No.	Rate
Circulatory system diseases	397	81.1	4,146	67.1	38,357	72.3
Ischaemic heart disease	271	55.1	2,705	43.6	23,364	44.1
Cerebrovascular disease – stroke	68	14.0	681	11.0	6,920	13.0
Cancer	557	112.7	6,591	106.8	60,603	114.3
Cancer of the trachea, bronchus & lung	137	27.5	1,460	23.4	12,715	24.0
Respiratory system diseases	101	20.7	984	15.8	9,726	18.3
Chronic lower respiratory disease	75	15.3	725	11.6	6,657	12.6
Injuries and poisonings	197	44.2	2,377	42.6	18,573	35.0
Suicide	61	13.8	907	16.3	6,706	12.6
Motor vehicle accidents	65	14.8	635	11.5	5,014	9.5
Other causes	241	49.3	2,829	47.1	26,735	50.4
Diabetes mellitus	48	9.8	442	7.1	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**

The data used to illustrate the prevalence estimates of chronic disease (Figure 5), measures of self-reported health (Figure 6), and selected risk factors (Figure 7), are shown in Table 16 below.

Table 16: Estimates of chronic disease and associated risk factors, Southern Qld Rural DGP‡, country Queensland and Australia, 2001

Indirectly age standardised rate per 1,000 population

Variable	Southern Qld Rural DGP‡	Country Qld	Australia
Chronic disease and injury (Figure 5)			
Respiratory system diseases	325.3	312.2	310.8
Asthma	123.0	118.2	118.3
Circulatory system diseases	186.0	176.1	171.5
Diabetes type 2	20.8	21.9	23.4
Injury event	127.4	122.7	121.2
Mental & behavioural disorders	98.4	97.7	97.6
Musculoskeletal system diseases	359.3	343.5	326.2
Arthritis	145.4	140.7	138.8
- Osteoarthritis	75.9	76.3	74.9
- Rheumatoid arthritis	25.3	23.8	23.6
Osteoporosis (females)	25.0	23.5	26.4
Measures of self-reported health (Figure 6)			
Very high psychological distress levels (18+ years)	38.2	37.2	36.6
Fair or poor self-assessed health status (15+ years)	191.4	181.6	184.0
Risk factors (Figure 7)			
Overweight (not obese) males (15+ years)	392.8	381.8	389.7
Obese males (15+ years)	162.4	156.8	145.9
Overweight (not obese) females (15+ years)	248.2	248.9	223.9
Obese females (15+ years)	154.5	142.8	148.0
Smokers (18+ years)	277.6	271.7	248.0
Physical inactivity (15+ years)	370.8	330.7	315.5
High health risk due to alcohol consumed (18+ years)	51.3	49.5	42.1

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

References

Australian Bureau of Statistics (ABS) (2002). *2001 National Health Survey: summary of results.* Australia. (ABS Cat. No. 4364.0). Canberra: ABS.

National Public Health Partnership (NPHP) (2001). *Preventing Chronic Disease: A Strategic Framework.* Melbourne, Victoria.

Thacker S, Stroup D & Rothenberg R (1995). Public health surveillance for chronic conditions: a scientific basis for decisions. *Statistics in Medicine* 14: 629-641.

World Health Organization (2002). *The World Health Report 2002: Reducing Risks, Promoting Healthy Life.* Geneva: World Health Organization.

Acknowledgements

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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