

# Population health profile of the Riverland

## Division of General Practice: supplement

Population Profile Series: No. 94a

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Australian Government

Australian Institute of  
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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 Riverland Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Riverland Division of General Practice*, dated November 2005, available from [www.publichealth.gov.au](http://www.publichealth.gov.au). This supplement includes an update of the population of the Riverland Division of General Practice, as well as additional indicators and aspects of the Division's socioeconomic status, use of GP services and health. The contents are:

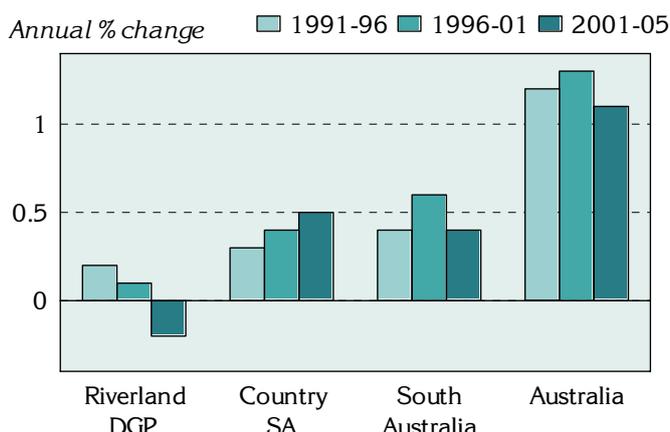
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions
- Avoidable mortality

For further information on the way Division totals in this report have been estimated, please refer to the 'Notes on the data' section of the *Population health profile*, November 2005 ([www.publichealth.gov.au](http://www.publichealth.gov.au)).

## Population

The Riverland Division had an Estimated Resident Population of 34,992 at 30 June 2005.

**Figure 1: Annual population change, Riverland DGP, country South Australia, South Australia and Australia, 1991 to 1996, 1996 to 2001 and 2001 to 2005**



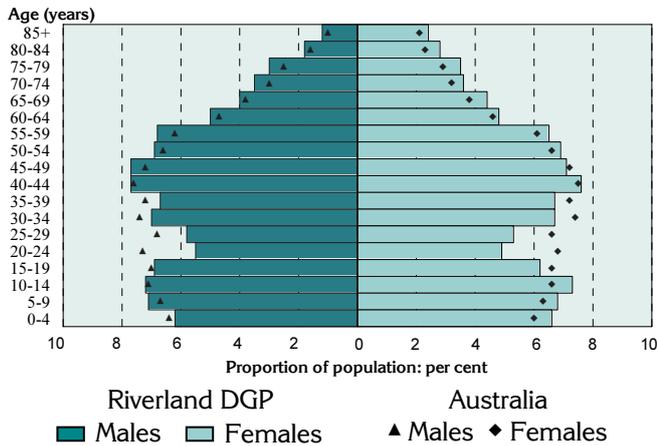
Over the five years from 1991 to 1996, the Division's population increased by 0.2% on average each year, lower than in country South Australia (0.3%) and South Australia (0.4%). From 1996 to 2001, the annual percentage increase in the Division was 0.1%, again lower than for country South Australia (0.4%) and South Australia (0.6%). The Division's population decreased by 0.2% per year on average from 2001 to 2005, compared to small annual increases for country South Australia (0.5%) and South Australia (0.4%).

**Table 1: Population by age, Riverland DGP and Australia, 2005**

Age group (years)	Riverland DGP		Australia	
	No.	%	No.	%
0-14	7,200	20.6	3,978,221	19.6
15-24	4,128	11.8	2,819,834	13.9
25-44	9,354	26.7	5,878,107	28.9
45-64	9,030	25.8	4,984,446	24.5
65-74	2,702	7.7	1,398,831	6.9
75-84	1,948	5.6	954,143	4.7
85+	631	1.8	315,027	1.5
<b>Total</b>	<b>34,992</b>	<b>100.0</b>	<b>20,328,609</b>	<b>100.0</b>

As shown in the accompanying table and the age-sex pyramid (Figure 2), the Riverland DGP had fewer young people aged 15 to 24 years (11.8%) and people aged 25 to 44 years (26.7%) compared to Australia (with 13.9% and 28.9%) (Table 1). Conversely, the proportions of the population aged 45 years and over were higher than those for Australia.

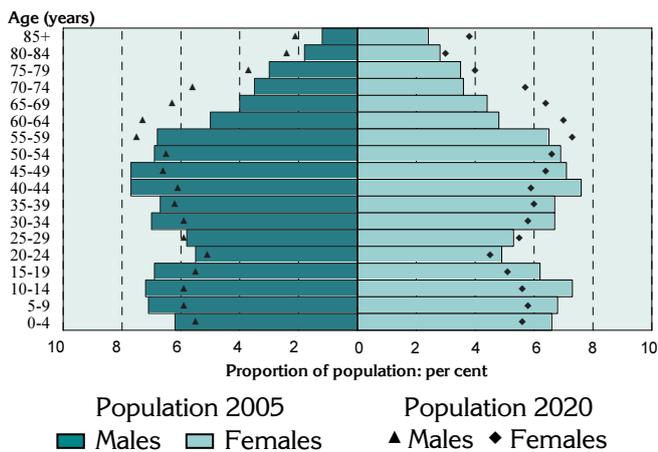
**Figure 2: Population in Riverland DGP and Australia, by age and sex, 2005**



The most notable differences in the age distribution of the Division's population (when compared to Australia overall) are:

- at younger ages – slightly fewer male children aged 0 to 4 years, and relatively more female children aged 0 to 14 years and male children aged 5 to 14 years;
- from 15 to 39 years – relatively fewer males and females; and
- from 45 years and over – slightly more males, and females aged 50 years and over.

**Figure 3: Population projections for Riverland DGP, by age and sex, 2005 and 2020**



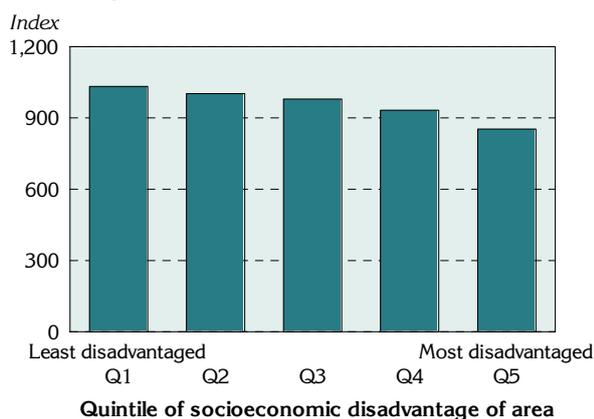
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- at younger ages – relatively fewer children, young people and young adults aged 0 to 24 years;
- from 30 to 54 years – relatively fewer males and females; and
- from 55 years onwards – noticeably higher proportions, particularly between 60 and 74 years, of both males and females.

## Additional socio-demographic indicators

Please refer to the earlier *Population health profile of the Riverland Division of General Practice*, dated November 2005, available from [www.publichealth.gov.au](http://www.publichealth.gov.au), for other socio-demographic indicators.

**Figure 4: Index of Relative Socio-Economic Disadvantage, Riverland DGP, 2001**



One of four socioeconomic indexes for areas produced at the 2001 ABS Census is the Index of Relative Socio-Economic Disadvantage.

The Riverland DGP has an index score of 961, above the score for Australia of 1000: this score varies across the Division, from a score of 853 in the most disadvantaged areas to 1032 in the least disadvantaged areas.

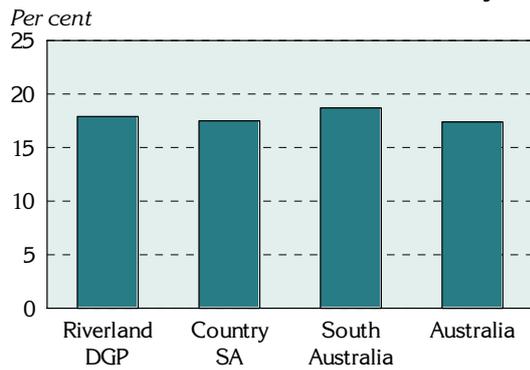
Note: each 'quintile' comprises approximately 20% of the population of the Division.

A new indicator, produced for the first time at the 2001 ABS Census, shows the number of jobless families with children under 15 years of age. There were similar numbers of jobless families in the Riverland DGP (17.9%), compared to country South Australia as a whole (17.5%) (Figure 5, Table 2).

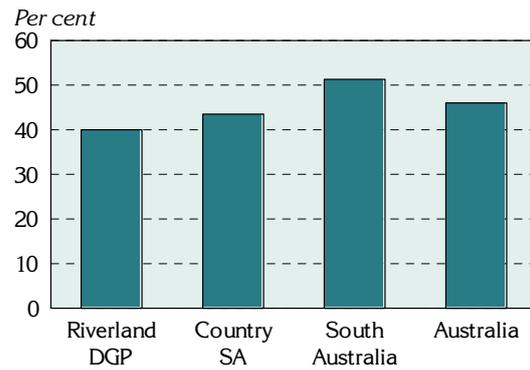
With the introduction of the 30% rebate for private health insurance premiums, there was a once-off registration process, providing information of the postcode and residence of those who had such insurance (these data are not available at this area level for later dates). In 2001, the Division had a lower proportion of people with private health insurance (40.0%), compared to country South Australia (43.5%) (Figure 5, Table 2).

**Figure 5: Socio-demographic indicators, Riverland DGP, country South Australia, South Australia and Australia, 2001**

**Jobless families with children under 15 years old**



**Private health insurance, 30 June**



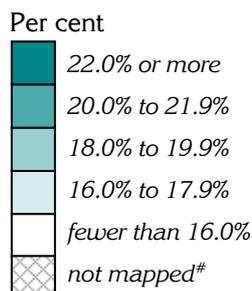
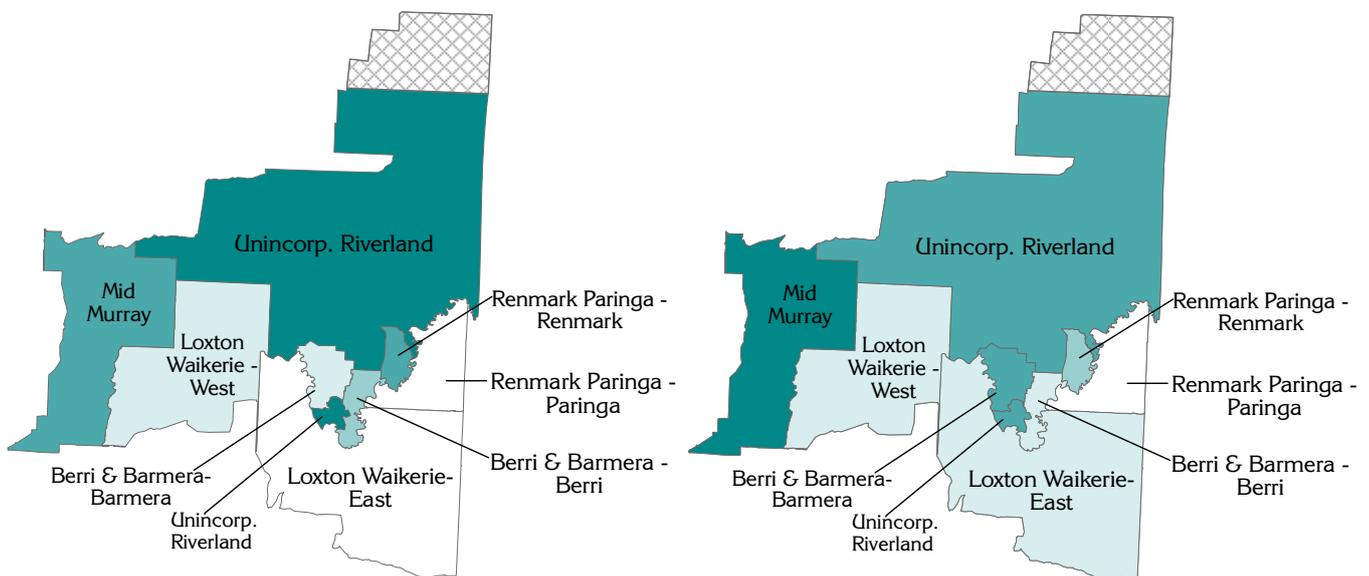
**Table 2: Socio-demographic indicators, Riverland DGP, country South Australia, South Australia and Australia, 2001**

Indicator	Riverland DGP		Country SA		South Australia		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	693	17.9	7,725	17.5	29,203	18.7	357,563	17.4
Private health insurance (30 June)	13,911	40.0	173,066	43.5	754,598	51.3	8,671,106	46.0

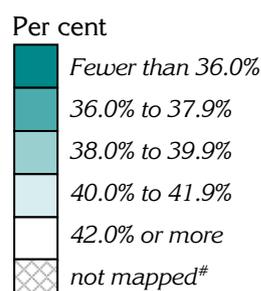
Details of the distribution of jobless families (Map 1) and of the population covered by private health insurance (Map 2) are shown by Statistical Local Area (SLA) in Maps 1 and 2, respectively.

**Map 1: Jobless families with children under 15 years of age by SLA, Riverland DGP, 2001**

**Map 2: People covered by private health insurance by SLA, Riverland DGP, 30 June 2001**



<sup>#</sup> data were not mapped: see 'Mapping' note under Methods



<sup>#</sup> data were not mapped: see 'Mapping' note under Methods

## GP services to residents of the Riverland DGP

The following tables include information, purchased from Medicare Australia, of the movement of patients and GPs between Divisions. Note that the data only include unreferred attendances recorded under Medicare: unreferred attendances not included are those for which the cost is met by the Department of Veterans' Affairs or a compensation scheme; or are provided by salaried medical officers in hospitals, community health services or Aboriginal Medical Services, and which are not billed to Medicare. At any attendance, one or more services may have been provided.

The majority (90.6%) of all unreferred attendances to residents of Riverland DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 128,368 GP unreferred attendances (Table 3). A further 1.2% of unreferred attendances to residents were provided by GPs with a provider number in Adelaide Central and Eastern DGP, with 1.2% provided by GPs in Adelaide Northern DGP.

**Table 3: Patient flow – People living<sup>1</sup> in Riverland DGP by Division where attendance occurred<sup>2</sup>, 2003/04**

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
509	Riverland DGP	128,368	90.6
504	Adelaide Central and Eastern DGP	1,749	1.2
502	Adelaide Northern DGP	1,657	1.2
501	Adelaide Western DGP	1,484	1.0
506	Barossa DGP	1,332	0.9
505	Southern DGP	1,315	0.9
Other	..	5,771	4.2
<b>Total</b>	<b>..</b>	<b>141,676</b>	<b>100.0</b>

<sup>1</sup> Based on address in Medicare records

<sup>2</sup> Division of GP based on provider number

<sup>3</sup> Proportion of all unreferred attendances of patients with an address in Division 509 by Division in which attendance occurred

The majority (95.7%) of unreferred attendances provided by GPs with a provider number in Riverland DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). The remaining 4.3% of unreferred attendances by GPs in the Division were to residents of surrounding Divisions.

**Table 4: GP catchment – Unreferred attendances provided by GPs<sup>1</sup> in Riverland DGP by Division of patient address<sup>2</sup>, 2003/04**

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
509	Riverland DGP	128,368	95.7
513	Murray Mallee DGP	807	0.6
505	Southern DGP	610	0.5
503	Adelaide North East DGP	479	0.4
502	Adelaide Northern DGP	458	0.3
506	Barossa DGP	384	0.3
501	Adelaide Western DGP	374	0.3
332	Mallee DGP	355	0.3
Other	..	2,337	1.6
<b>Total</b>	<b>..</b>	<b>134,172</b>	<b>100.0</b>

<sup>1</sup> Division of GP based on provider number

<sup>2</sup> Based on address in Medicare records

<sup>3</sup> Proportion of all unreferred attendances to GPs with a provider number in Division 509 by Division of patient address

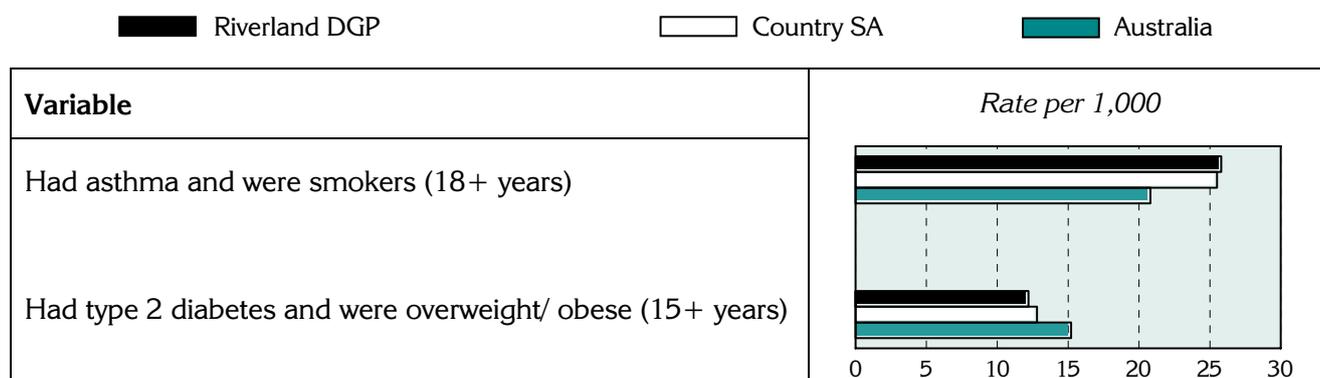
## Additional prevalence estimates: chronic diseases and risk factors combined

Please refer to the earlier *Population health profile of the Riverland Division of General Practice*, dated November 2005, available from [www.publichealth.gov.au](http://www.publichealth.gov.au), for the separate prevalence estimates of chronic disease; measures of self-reported health and risk factors. The process by which the estimates have been made, and details of their limitations, are also described in the 'Notes on the data' section of this earlier profile.

In this section two estimates, which combine the prevalence of selected chronic diseases with a risk factor, are shown for the Division. The measures are of people who *had asthma and were smokers*, and people who *had type 2 diabetes and were overweight or obese*: note that the estimates have been predicted from self-reported data, and are not based on clinical records or physical measures.

It is estimated that there were relatively more people in Riverland DGP who had asthma and were smokers, compared to Australia as a whole (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher (although they were consistent with the rate for country South Australia overall). However, there were fewer people in Riverland DGP who had type 2 diabetes and were overweight/obese, compared to country South Australia or Australia.

**Figure 6: Estimates of selected chronic diseases and risk factors, Riverland DGP, country South Australia and Australia, 2001**



**Table 5: Estimates of selected chronic diseases and risk factors, Riverland DGP, country South Australia, South Australia and Australia, 2001**

Variable	Riverland DGP		Country SA		South Australia		Australia	
	No. <sup>1</sup>	Rate <sup>2</sup>	No. <sup>1</sup>	Rate <sup>2</sup>	No. <sup>1</sup>	Rate <sup>2</sup>	No. <sup>1</sup>	Rate <sup>1</sup>
Had asthma & smoked <sup>3</sup>	847	25.8	9,057	25.5	32,487	22.3	397,734	20.8
Had type 2 diabetes & were overweight/ obese <sup>4</sup>	465	12.2	5,425	12.8	23,187	14.9	283,176	15.2

<sup>1</sup> No. is a weighted estimate of the number of people in Riverland DGP reporting these chronic conditions/ with these risk factors and is derived from synthetic predictions from the 2001 NHS

<sup>2</sup> Rate is the indirectly age-standardised rate per 1,000 population

<sup>3</sup> Population aged 18 years and over

<sup>4</sup> Population aged 15 years and over

## Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions

The rationale underlying the concept of avoidable hospitalisations is that timely and effective care of certain conditions, delivered in a primary care setting, can reduce the risk of hospitalisation. Admissions to hospital for these ambulatory care sensitive (ACS) conditions can be avoided in three ways. Firstly, for conditions that are usually preventable through immunisation or nutritional intervention, disease can be prevented almost entirely. Secondly, diseases or conditions that can lead to rapid onset problems, such as dehydration and gastroenteritis, can be treated. Thirdly, chronic conditions, such as congestive heart failure, can be managed to prevent or reduce the severity of acute flare-ups to avoid hospitalisation.

This measure does not include other aspects of avoidable morbidity, namely potentially preventable hospitalisations (hospitalisations resulting from diseases preventable through population based health promotion strategies, e.g. alcohol-related conditions; and most cases of lung cancer) and hospitalisations avoidable through injury prevention (e.g. road traffic accidents).

For information on the ambulatory care sensitive conditions and ICD codes included in the analysis in this section, please refer to the *Atlas of Avoidable Hospitalisations in Australia: ambulatory care-sensitive conditions*, available from [www.publichealth.gov.au](http://www.publichealth.gov.au).

In 2001 to 2002, the 1,393 admissions from ambulatory care sensitive (ACS) conditions accounted for 10.1% of all hospitalisations in the Riverland DGP (Table 6, Figure 7), markedly above the levels in South Australia (8.5) and Australia (8.7%).

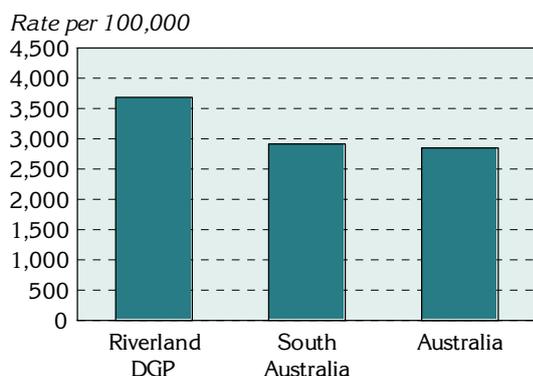
**Table 6: Avoidable<sup>1</sup> and unavoidable hospitalisations, Riverland DGP, South Australia, and Australia, 2001/02**

Category	Riverland DGP			South Australia			Australia		
	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%
Avoidable <sup>1</sup>	1,393	3,684.1	10.1	47,247	2,915.7	8.5	552,786	2,847.5	8.7
Unavoidable	12,382	33,904.4	89.9	507,053	32,039.4	91.5	5,818,199	29,970.7	91.3
<b>Total</b>	<b>13,775</b>	<b>37,603.3</b>	<b>100.0</b>	<b>554,300</b>	<b>34,952.2</b>	<b>100.0</b>	<b>6,370,985</b>	<b>32,818.2</b>	<b>100.0</b>

<sup>1</sup> Admissions resulting from ACS conditions

<sup>2</sup> Rate is the indirectly age-standardised rate per 100,000 population

**Figure 7: Avoidable hospitalisations<sup>1</sup>, Riverland DGP, South Australia and Australia, 2001/02**



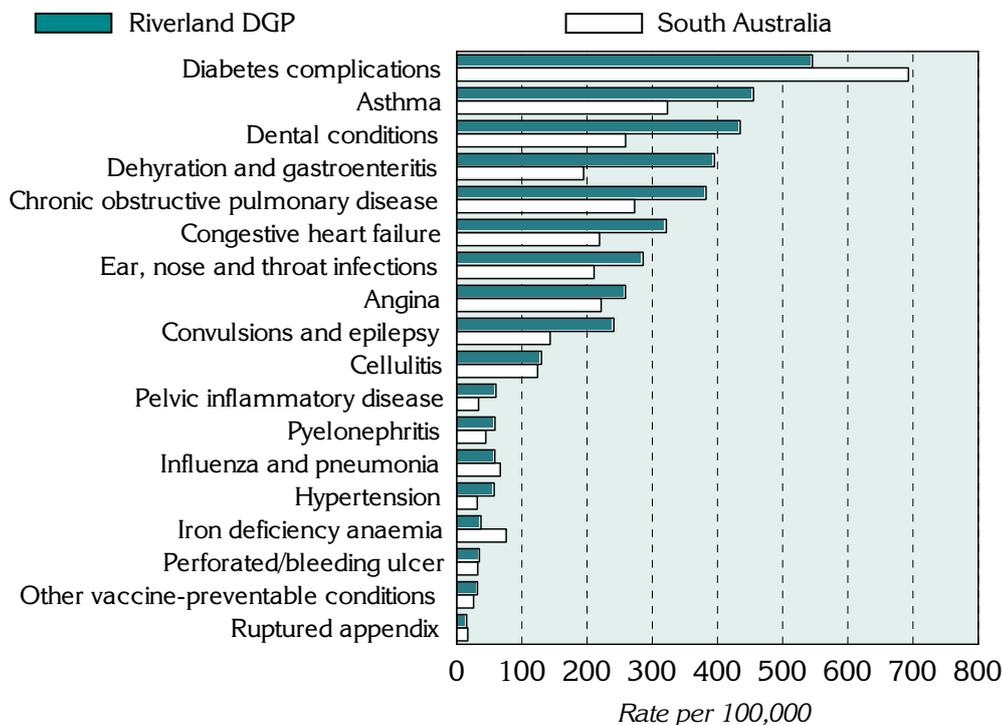
The rate of avoidable hospitalisations in Riverland DGP is markedly higher, a rate of 3,684.1 admissions per 100,000 population, compared to both South Australia (a rate of 2,915.7), and Australia (2,847.5).

<sup>1</sup> Admissions resulting from ACS conditions

Diabetes complications; asthma; dental conditions; dehydration and gastroenteritis; and chronic obstructive pulmonary disease, were the five conditions with the highest rates of avoidable hospitalisations in the Riverland DGP (Figure 8, Table 7).

Table 7 shows the number, rate and proportion of avoidable hospitalisations, for the individual ACS conditions, as well as the vaccine-preventable; acute; and chronic sub-categories. The majority of avoidable hospitalisations are attributable to chronic health conditions. The predominance of hospitalisations for chronic conditions in this period can be primarily attributed to the large number of admissions for diabetes complications. Dental conditions and dehydration and gastroenteritis, have the highest rates of avoidable hospitalisations for the acute conditions.

**Figure 8: Avoidable hospitalisations<sup>1</sup> by condition, Riverland DGP and South Australia, 2001/02**



<sup>1</sup> Admissions resulting from ACS conditions: excludes nutritional deficiencies as less than ten admissions, and gangrene as number of admissions insufficient

**Table 7: Avoidable hospitalisations<sup>1</sup> by condition, Riverland DGP, South Australia and Australia, 2001/02**

Sub-category/ condition	Riverland DGP		South Australia		Australia	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
<b>Vaccine-preventable</b>	<b>33</b>	<b>90.5</b>	<b>1,466</b>	<b>92.9</b>	<b>16,573</b>	<b>85.4</b>
Influenza and pneumonia	22	58.6	1,075	67.0	13,021	67.1
Other vaccine preventable	11	31.9	391	25.9	3,552	18.3
<b>Chronic<sup>3</sup></b>	<b>797</b>	<b>2,059.1</b>	<b>30,607</b>	<b>1,837.6</b>	<b>352,545</b>	<b>1,816</b>
Diabetes complications	213	545.8	11,640	692.9	141,345	728.1
Iron deficiency anaemia	14	37.3	1,271	76.1	16,451	84.7
Hypertension	22	57.6	532	31.6	6,354	32.7
Congestive heart failure	131	321.5	3,900	219.1	42,447	218.6
Angina	102	258.9	3,778	221.6	49,963	257.4
Chronic obstructive pulmonary disease	153	382.6	4,710	272.9	54,853	282.6
Asthma	162	455.4	4,776	323.4	41,009	211.3
<b>Acute</b>	<b>591</b>	<b>1,657.2</b>	<b>16,405</b>	<b>1,077.6</b>	<b>200,913</b>	<b>1,035</b>
Dehydration and gastroenteritis	143	395.5	3,111	194.8	37,766	194.5
Convulsions and epilepsy	86	241.2	2,153	143.6	31,137	160.4
Ear, nose and throat infections	101	286.1	3,046	210.9	32,075	165.2
Dental conditions	155	434.9	3,831	259.2	43,667	224.9
Perforated/bleeding ulcer	14	35.0	555	32.5	5,795	29.9
Ruptured appendix	5	15.4	255	17.0	3,866	19.9
Pyelonephritis	20	58.7	681	44.7	7,386	38.0
Pelvic inflammatory disease	19	60.2	497	33.7	6,547	33.7
Cellulitis	48	130.2	1,987	124.1	28,204	145.3
Gangrene	#	..	289	17.1	4,470	23.0
<b>Total avoidable hospitalisations<sup>4</sup></b>	<b>1,393</b>	<b>3,684.1</b>	<b>47,247</b>	<b>2,915.7</b>	<b>552,786</b>	<b>2,847.5</b>

<sup>1</sup> Admissions resulting from ACS conditions

<sup>2</sup> Rate is the indirectly age-standardised rate per 100,000 population

<sup>3</sup> Excludes nutritional deficiencies as less than ten admissions

<sup>4</sup> Sub-category and condition numbers and rates do not add to the reported total avoidable admissions: five conditions (influenza & pneumonia, other vaccine preventable, diabetes complications, ruptured appendix and gangrene) are counted in 'any diagnosis', so may be included in more than one condition group

# Not shown or not calculated as there are fewer than five admissions over the period

## Avoidable mortality

Avoidable and amenable mortality comprises those causes of death that are potentially avoidable at the present time, given available knowledge about social and economic policy impacts, health behaviours, and health care (the latter relating to the subset of amenable causes).

For information on the avoidable and amenable mortality conditions and ICD codes included in the analysis in this section, please refer to the *Australian and New Zealand Atlas of Avoidable Mortality*, available from [www.publichealth.gov.au](http://www.publichealth.gov.au).

Nearly three quarters (73.2%) of all deaths in Riverland DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, marginally higher than the proportion for country South Australia (72.5%) (Table 8). However, the rate in the Division is notably higher than that in country South Australia, a differential of 1.13.

Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 28.2% of all deaths at ages 0 to 74 years in Riverland DGP, lower than the 29.8% in country South Australia.

**Table 8: Avoidable and unavoidable mortality (0 to 74 years) by area, Riverland DGP, country South Australia, South Australia and Australia, 1997 to 2001**

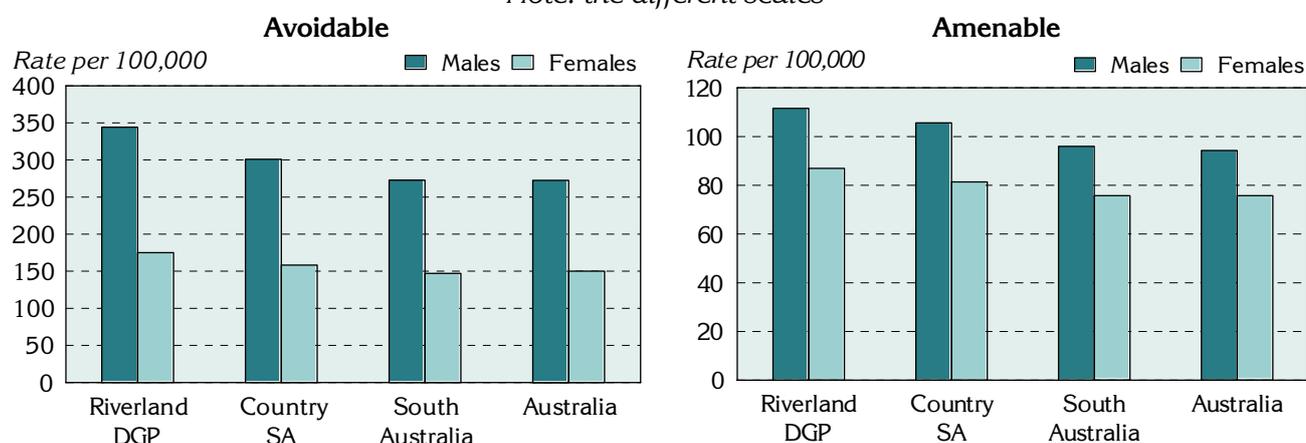
Mortality category	Riverland DGP		Country SA		South Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
Avoidable	468	260.5	4,852	230.3	15,938	210.4	189,845	211.8
% of total	73.2	..	72.5	..	71.4	..	71.5	..
(Amenable)	(180)	(99.4)	(1,993)	(93.6)	(6,556)	(85.9)	(76,249)	(85.1)
(% of total)	(28.2)	(..)	(29.8)	(..)	(29.4)	(..)	(28.7)	(..)
Unavoidable	171	94.8	1,837	86.5	6,369	83.7	75,582	84.3
% of total	26.8	..	27.5	..	28.6	..	28.5	..
<b>Total mortality</b>	<b>639</b>	<b>355.3</b>	<b>6,688</b>	<b>316.8</b>	<b>22,307</b>	<b>294.1</b>	<b>265,427</b>	<b>296.1</b>
%	100.0	..	100.0	..	100.0	..	100.0	..

<sup>1</sup> Rate is the indirectly age-standardised rate per 100,000 population

Rates of avoidable mortality were higher for males than for females in each of the comparator areas. Riverland DGP's rate of avoidable mortality for males was 344.1 deaths per 100,000 males, higher than the rate of 175.1 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 111.6, compared to 86.9 for females, a rate ratio of 1.28 (Figure 9, Table 9).

**Figure 9: Avoidable and amenable mortality by sex (0 to 74 years), Riverland DGP, country South Australia, South Australia and Australia, 1997 to 2001**

*Note: the different scales*



**Table 9: Avoidable and amenable mortality (0 to 74 years) by sex, Riverland DGP, country South Australia, South Australia and Australia, 1997 to 2001**

Mortality category and sex	Riverland DGP		Country SA		South Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
<b>Avoidable</b>								
Males	319	344.1	3,259	300.9	10,326	272.8	123,026	272.6
Females	149	175.1	1,593	158.3	5,612	147.2	66,819	150.1
<b>Total</b>	<b>468</b>	<b>260.5</b>	<b>4,852</b>	<b>230.3</b>	<b>15,938</b>	<b>210.4</b>	<b>189,845</b>	<b>211.8</b>
<b>Rate ratio-M:F<sup>2</sup></b>	<b>..</b>	<b>1.97**</b>	<b>..</b>	<b>1.90**</b>	<b>..</b>	<b>1.85**</b>	<b>..</b>	<b>1.82**</b>
<b>Amenable</b>								
Males	105	111.6	1,169	105.6	3,671	96.0	42,568	94.3
Females	75	86.9	824	81.4	2,884	75.7	33,681	75.7
<b>Total</b>	<b>180</b>	<b>99.4</b>	<b>1,993</b>	<b>93.6</b>	<b>6,556</b>	<b>85.9</b>	<b>76,249</b>	<b>85.1</b>
<b>Rate ratio-M:F<sup>2</sup></b>	<b>..</b>	<b>1.28</b>	<b>..</b>	<b>1.30**</b>	<b>..</b>	<b>1.27**</b>	<b>..</b>	<b>1.25**</b>

<sup>1</sup> Rate is the indirectly age-standardised rate per 100,000 population

<sup>2</sup> Rate ratio (M:F) is the ratio of male to female rates; rate ratios differing significantly from 1.0 are shown with \* p < 0.05; \*\* p < 0.01

Another way of measuring premature mortality is to calculate the number of years of life lost (YLL)<sup>1</sup>, which takes into account the years a person could have expected to live at each age of death based on the average life expectancy at that age.

The numbers of YLL for Riverland DGP, country South Australia, South Australia and Australia over the period of analysis are shown in Table 10 by mortality category. However, given the substantial variation in the populations of these areas, a comparison of the proportion of YLL for each area is also shown.

YLL from avoidable mortality accounted for 73.8% of total YLL (0 to 74 years) for Riverland DGP, higher than the 72.9% for country South Australia. The proportion of YLL from amenable mortality of 27.6% for Riverland DGP was lower than the 28.9% for country South Australia.

**Table 10: Years of life lost from avoidable mortality (0 to 74 years), Riverland DGP, country South Australia, South Australia and Australia, 1997 to 2001**

Mortality category	Riverland DGP		Country SA		South Australia		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	8,093	73.8	83,705	72.9	273,135	71.8	3,327,375	71.9
(Amenable)	(3,025)	(27.6)	(33,165)	(28.9)	(108,777)	(28.6)	(1,298,430)	(28.0)
Unavoidable	2,876	26.2	31,059	27.1	107,223	28.2	1,303,289	28.1
<b>Total</b>	<b>10,969</b>	<b>100.0</b>	<b>114,764</b>	<b>100.0</b>	<b>380,358</b>	<b>100.0</b>	<b>4,630,664</b>	<b>100.0</b>

<sup>1</sup> Years of life lost were calculated using the remaining life expectancy method (this provides an estimate of the average time a person would have lived had he or she not died prematurely). The reference life table was the Coale and Demeny Model Life Table West level 26 female (for both males and females), with the YLL discounted to net present value at a rate of 3 per cent per year.

In each of the areas in Table 11, the majority of avoidable mortality at ages 0 to 74 years occurred in the 65 to 74 year age group (Table 11), with 1,554.4 deaths per 100,000 population in the Riverland Division. The 45 to 64 year age group accounted for the next highest rate of avoidable death in all of the comparators, with a rate of 402.1 in the Riverland Division.

**Table 11: Avoidable and amenable mortality by age, Riverland DGP, country South Australia, South Australia and Australia, 1997 to 2001**

Mortality category and age (years)	Riverland DGP		Country SA		South Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
<b>Avoidable</b>								
0-14	12	31.8	118	26.8	352	24.2	5,669	28.8
15-24	17	81.8	159	67.5	523	52.4	7,045	52.8
25-44	56	108.7	596	99.3	1,979	88.8	24,356	83.9
45-64	167	402.1	1,640	333.3	5,130	297.8	64,282	304.9
65-74	216	1,554.4	2,338	1439.0	7,954	1354.8	88,493	1,358.1
<b>Total</b>	<b>468</b>	<b>260.5</b>	<b>4,852</b>	<b>230.3</b>	<b>15,938</b>	<b>210.4</b>	<b>189,845</b>	<b>211.8</b>
<b>Amenable</b>								
0-24	10	15.7	101	14.1	324	13.3	5,083	15.4
25-44	16	31.8	146	23.8	507	22.6	5,946	20.5
45-64	63	153.1	710	144.8	2,248	130.1	27,464	130.3
65-74	91	655.5	1,036	641.3	3,477	591.6	37,756	579.4
<b>Total</b>	<b>180</b>	<b>99.4</b>	<b>1,993</b>	<b>93.6</b>	<b>6,556</b>	<b>85.9</b>	<b>76,249</b>	<b>85.1</b>

<sup>1</sup> Rate is the indirectly age-standardised rate per 100,000 population

Table 12 shows the number and age-standardised death rate by selected major condition group and selected causes included in the avoidable mortality classification.

The highest rates of avoidable mortality for the selected major condition groups in the Riverland DGP were for cardiovascular diseases, a rate of 89.1 deaths per 100,000 population, and cancer, with a rate of 66.3 deaths per 100,000 population (Table 12, Figure 10). For the selected causes within the condition groups, the two major causes of avoidable mortality were ischaemic heart disease and lung cancer, with rates of 61.6 per 100,000 population and 23.6 per 100,000, respectively.

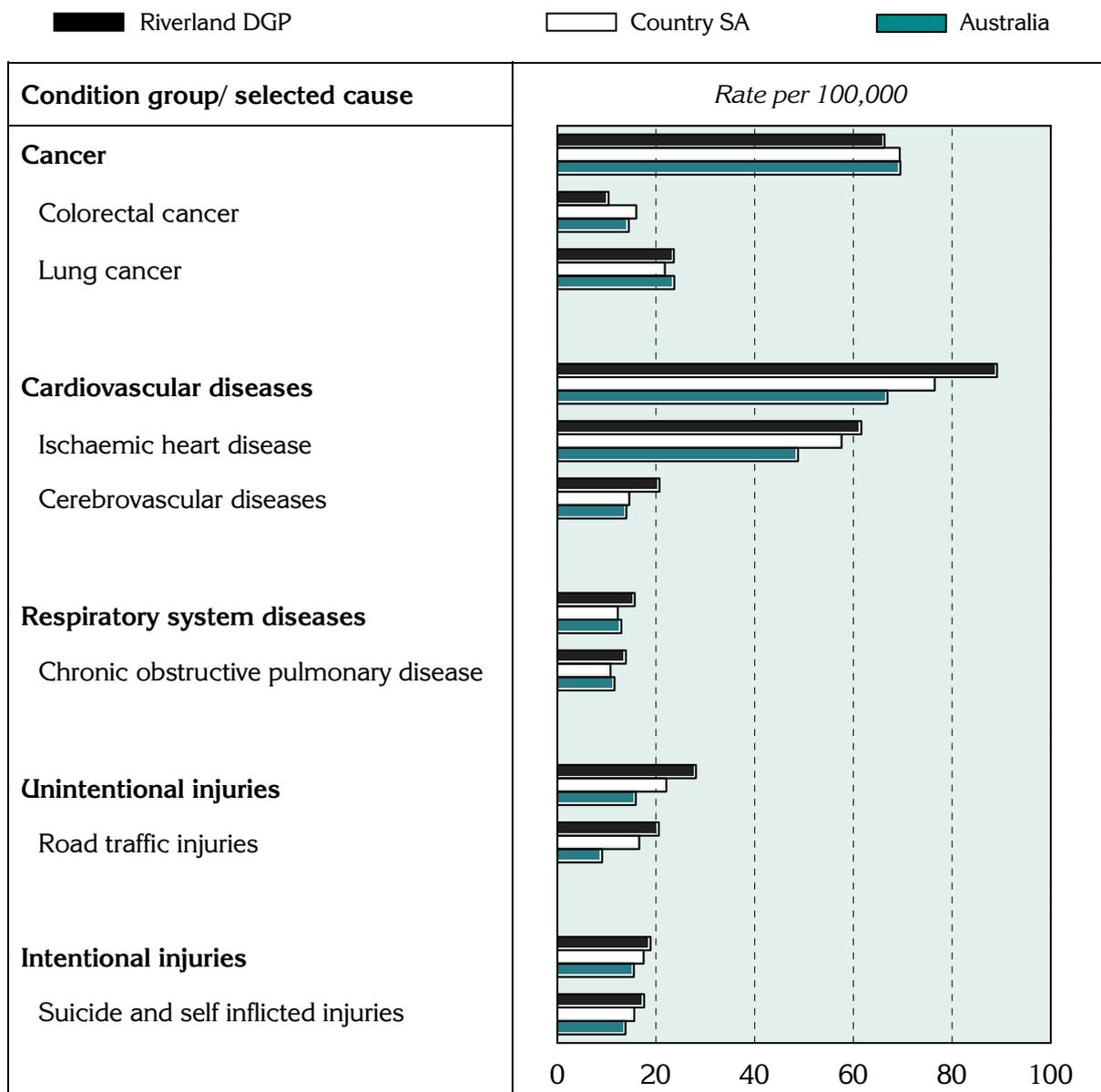
**Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Riverland DGP, country South Australia, South Australia and Australia, 1997 to 2001**

Condition group/ selected cause	Riverland DGP		Country SA		South Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
<b>Cancer</b>	<b>121</b>	<b>66.3</b>	<b>1,489</b>	<b>69.4</b>	<b>5,209</b>	<b>67.8</b>	<b>62,338</b>	<b>69.5</b>
Colorectal cancer	19	10.4	346	16.0	1,142	14.8	13,008	14.5
Lung cancer	44	23.6	477	21.8	1,728	22.3	21,208	23.7
<b>Cardiovascular diseases</b>	<b>166</b>	<b>89.1</b>	<b>1,669</b>	<b>76.5</b>	<b>5,324</b>	<b>68.5</b>	<b>59,945</b>	<b>66.9</b>
Ischaemic heart disease	115	61.6	1,260	57.6	3,918	50.5	43,712	48.8
Cerebrovascular diseases	38	20.7	316	14.6	1,086	13.9	12,558	14.0
<b>Respiratory system diseases</b>	<b>29</b>	<b>15.7</b>	<b>270</b>	<b>12.3</b>	<b>897</b>	<b>11.4</b>	<b>11,612</b>	<b>13.0</b>
Chronic obstructive pulmonary disease	26	13.9	239	10.8	783	9.9	10,395	11.6
<b>Unintentional injuries</b>	<b>45</b>	<b>28.1</b>	<b>412</b>	<b>22.1</b>	<b>1,085</b>	<b>15.5</b>	<b>14,224</b>	<b>15.9</b>
Road traffic injuries	33	20.6	307	16.6	687	9.9	8,138	9.1
<b>Intentional injuries</b>	<b>31</b>	<b>18.9</b>	<b>329</b>	<b>17.5</b>	<b>1,138</b>	<b>16.3</b>	<b>13,891</b>	<b>15.5</b>
Suicide and self inflicted injuries	29	17.6	293	15.6	1,018	14.5	12,393	13.8

<sup>1</sup> Rate is the indirectly age-standardised rate per 100,000 population

Rates in the Division were above, or consistent with, those for country South Australia and Australia for all condition groups and selected causes other than for cancer (all cancers and colorectal cancer) (Figure 10).

**Figure 10: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Riverland DGP, country South Australia and Australia, 1997 to 2001**



# Notes on the data

## Data sources and limitations

### General

References to 'country South Australia' relate to South Australia excluding the Adelaide Statistical Division.

### Data sources

Table 13 details the data sources for the material presented in this profile.

**Table 13: Data sources**

Section	Source
<b>Population</b>	
Figures 1 and 2; Table 1	Estimated Resident Population, ABS, 30 June for the periods shown
Figure 3	Estimated Resident Population, ABS, 30 June 2005; Population Projections, ABS, 30 June 2020 (unpublished) <sup>1</sup>
<b>Additional socio-demographic indicators</b>	
Figure 4	ABS SEIFA package, Census 2001
Table 2; Figure 5; Map 1	Jobless families, ABS, 2001 (unpublished)
Table 2; Figure 5; Map 2	Private health insurance, from Hansard
<b>GP services – patient flow/ GP catchment</b>	
Tables 3 and 4	Medicare Australia, 2003/04
<b>Additional prevalence estimates: chronic diseases and risk factors combined</b>	
Figure 6; Table 5	Estimated from 2001 National Health Survey (NHS), ABS (unpublished)
<b>Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions</b>	
Tables 6 and 7; Figures 7 and 8	National Hospital Morbidity Database at Australian Institute of Health & Welfare, 2001/02; data produced in HealthWIZ by Prometheus Information (not available in public release dataset)
<b>Avoidable mortality</b>	
Tables 8, 9, 10, 11 and 12; Figures 9 and 10	ABS Deaths 1997-2001; data produced in HealthWIZ by Prometheus Information (not available in public release dataset)

<sup>1</sup> The projected population at June 2020 is based on the 2002 ERP. As such, it is somewhat dated, and does not take into account more recent demographic trends: it is however the only projection series available at the SLA level for the whole of Australia.

## Methods

For background information on the additional prevalence estimates presented in this profile, please refer to the 'Notes on the data' section of the *Population health profile*, November 2005 ([www.publichealth.gov.au](http://www.publichealth.gov.au)).

Please also refer to the November 2005 profile for information on the data converters.

## Mapping

In some Divisions the maps may include a very small part of an SLA which has not been allocated any population; or has a population of less than 100 or has less than 1% of the SLAs total population; or there were less than five cases (i.e. jobless families, people with health insurance): these areas are mapped with a pattern.

## Statistical geography of the Riverland DGP

For information on the postcodes in the Division, please refer the Department of Health and Ageing website <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-divisions-divspc.htm>; also included in table format in the 'Notes on the data' section of the *Population health profile*, November 2005 ([www.publichealth.gov.au](http://www.publichealth.gov.au)).

Statistical Local Areas (SLAs) are defined by the Australian Bureau of Statistics to produce areas for the presentation and analysis of data. In this Division, some Local Government Areas (LGAs) have been split into SLAs. For example, the Berri and Barmera LGA is comprised of two SLAs – Barmera and Berri. Parts of the State not incorporated into local government areas have been allocated SLA codes – one of these unincorporated SLAs (Unincorporated Riverland) is partly in this Division. All of these SLAs and all or parts of the other SLAs listed in Table 14 comprise the Division.

**Table 14: SLAs and population in Riverland DGP, 2005 on 2001 boundaries**

SLA code	SLA name	Per cent of the SLA's population in the Division*	Estimate of the SLA's 2005 population in the Division
40521	Berri & Barmera - Barmera	100.0	4,188
40524	Berri & Barmera - Berri	100.0	7,025
43791	Loxton Waikerie - East	100.0	7,433
43794	Loxton Waikerie - West	100.0	4,739
44210	Mid Murray	20.5	1,721
46671	Renmark Paringa - Paringa	100.0	1,816
46674	Renmark Paringa - Renmark	100.0	7,939
49039	Unincorporated Riverland	100.0	131

\* 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

## Acknowledgements

Funding for these profiles was provided by the Population Health Division of the Department of Health and Ageing (DoHA).

## Further developments and updates

When the re-aligned boundaries are released and DoHA have made known their geographic composition, PHIDU will examine the need to revise and re-publish these profiles (*Population health profile*, dated November 2005, and the *Population health profile: supplement*, dated March 2007).

## PHIDU contact details

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