

# Population health profile of the Mid North Rural

## Division of General Practice: supplement

Population Profile Series: No. 93a

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Australian Government

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1. Public health - South Australia - Mid North Region - Statistics. 2. Health status indicators - South Australia - Mid North Region - Statistics. 3. Health service areas - South Australia - Mid North Region. 4. Mid North Region (S. Aust.) - Statistics, Medical. I. Public Health Information Development Unit (Australia). (Series : Population profile series ; no. 93a).

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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 Mid North Rural Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Mid North Rural 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 Mid North Rural 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:

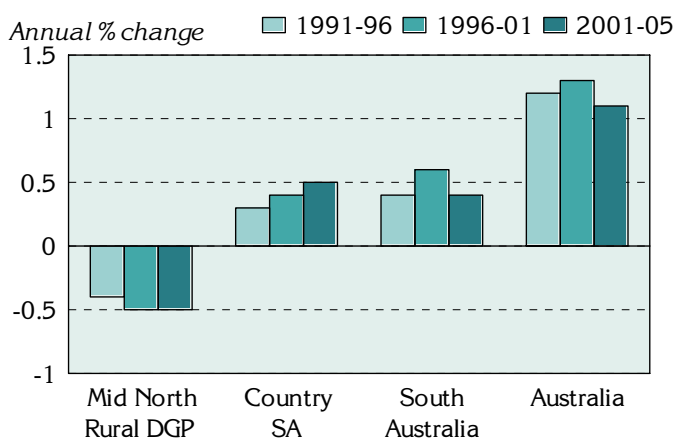
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive 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 Mid North Rural Division had an Estimated Resident Population of 45,777 at 30 June 2005.

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



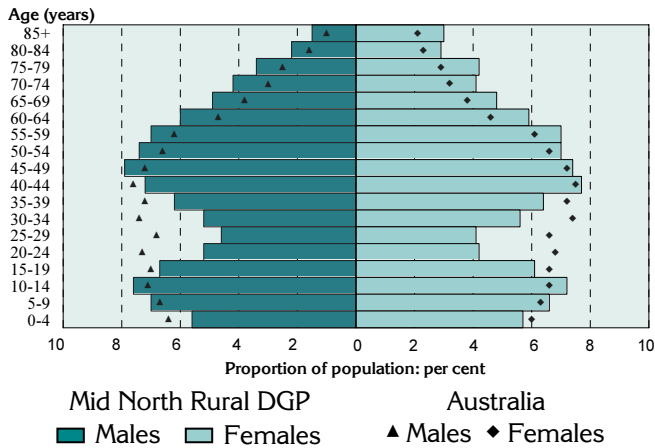
Over the five years from 1991 to 1996, the Division's population decreased by 0.4% on average each year, compared to small increases in country South Australia (0.3%) and South Australia (0.4%). From 1996 to 2001, the Division's population again decreased (0.5%), compared to increases in country South Australia (0.4%), and South Australia (0.6%). There was a further decline (0.5 per year) from 2001 to 2005, compared to annual increases for country South Australia (0.5%) and South Australia (0.4%).

**Table 1: Population by age, Mid North Rural DGP and Australia, 2005**

Age group (years)	Mid North Rural DGP		Australia	
	No.	%	No.	%
0-14	9,092	19.9	3,978,221	19.6
15-24	5,107	11.2	2,819,834	13.9
25-44	10,746	23.5	5,878,107	28.9
45-64	12,769	27.9	4,984,446	24.5
65-74	4,122	9.0	1,398,831	6.9
75-84	2,918	6.4	954,143	4.7
85+	1,022	2.2	315,027	1.5
<b>Total</b>	<b>45,777</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 Mid North Rural DGP had relatively fewer young people aged 15 to 24 years (11.2%) and people aged 25 to 44 years (23.5%) compared to Australia as a whole (with 13.9% and 28.9%) (Table 1). Conversely, the proportions of the Division's population aged 45 years and over were higher than those for Australia.

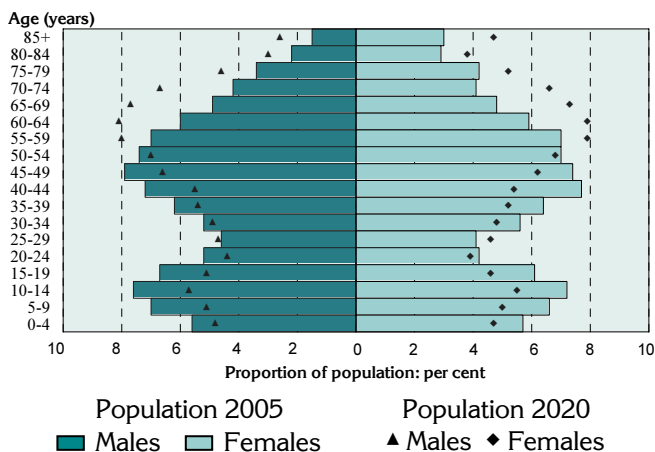
**Figure 2: Population in Mid North Rural DGP and Australia, by age and sex, 2005**



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

- at younger ages – relatively fewer 0 to 4 year olds, and higher proportions of children aged 5 to 14 years;
- from 15 to 44 years (to 39 years for females) – relatively fewer males and females (most notably at ages 20 to 34 years); and
- from 45 years of age – higher proportions of both males and females.

**Figure 3: Population projections for Mid North Rural DGP, by age and sex, 2005 and 2020**



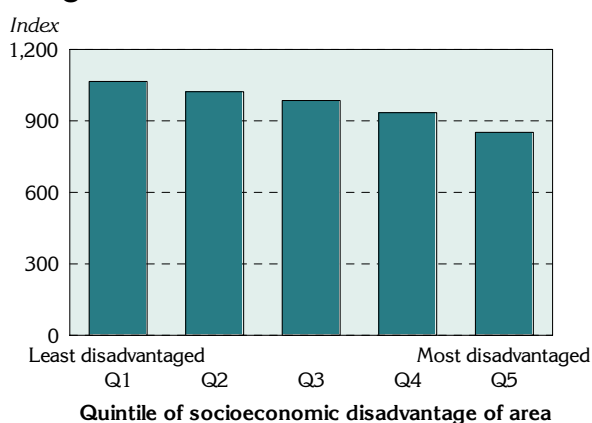
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- at younger ages – relatively fewer children and young people aged 0 to 19 years;
- from 20 to 54 years – relatively fewer males and females, excluding 25 to 29 year olds; and
- from 55 years onwards – noticeably higher more males and females, particularly between 60 and 74 years of age.

## Additional socio-demographic indicators

Please refer to the earlier *Population health profile of the Mid North Rural 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, Mid North Rural DGP, 2001**



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

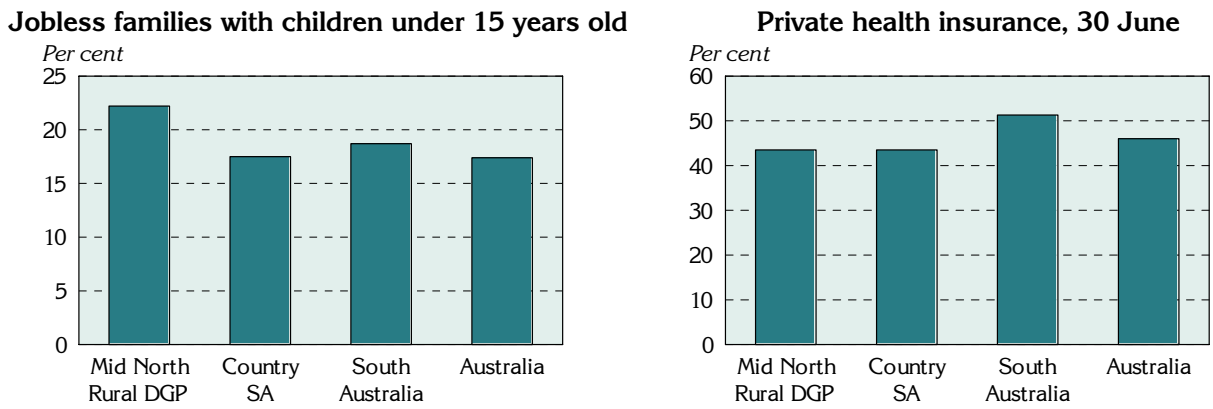
The Mid North Rural DGP has an index score of 971, below the score for Australia of 1000: this score varies across the Division, from a low of 851 in the most disadvantaged areas to 1065 in the least disadvantaged areas.

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 markedly more jobless families in the Mid North Rural DGP (22.2%), 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 the same proportion of people with private health insurance (43.5%) as in country South Australia (43.5%) (Figure 5, Table 2).

**Figure 5: Socio-demographic indicators, Mid North Rural DGP, country South Australia, South Australia and Australia, 2001**

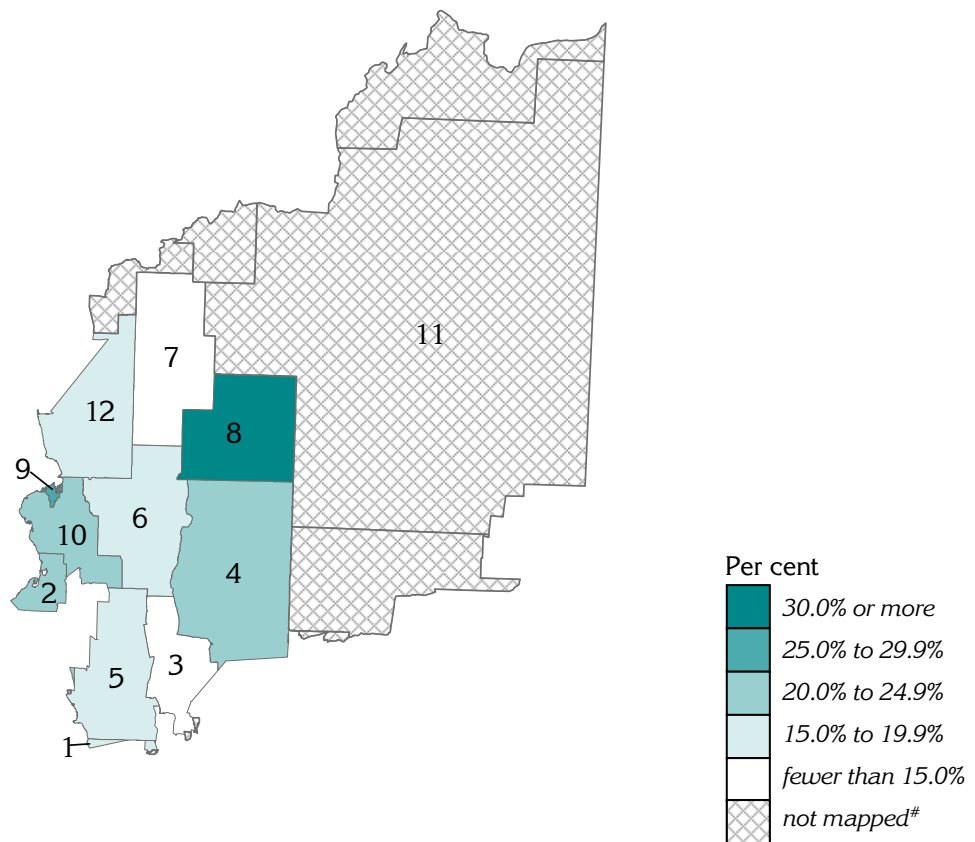


**Table 2: Socio-demographic indicators, Mid North Rural DGP, country South Australia, South Australia and Australia, 2001**

Indicator	Mid North Rural DGP		Country SA		South Australia		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	1,109	22.2	7,725	17.5	29,203	18.7	357,563	17.4
Private health insurance (30 June)	20,058	43.5	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.

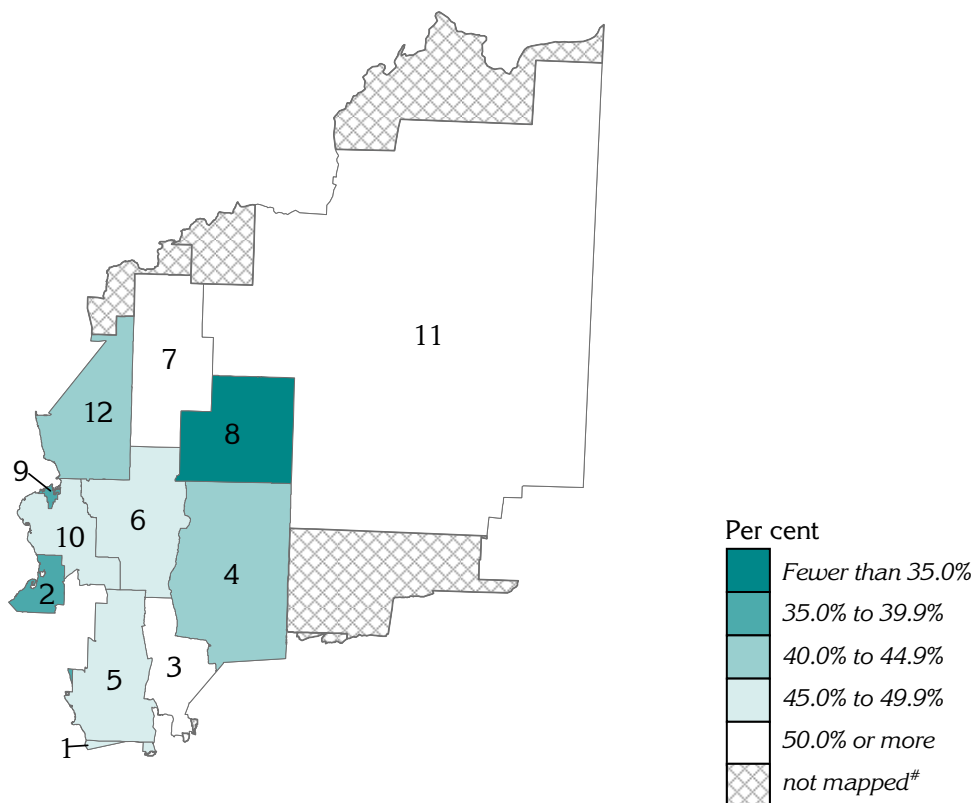
**Map 1: Jobless families with children under 15 years of age by SLA, Mid North Rural DGP, 2001**



For map labels: see next page

# data were not mapped: see 'Mapping' note under Methods

Map 2: People covered by private health insurance by SLA, Mid North Rural DGP, 30 June 2001



Per cent

- Fewer than 35.0%
- 35.0% to 39.9%
- 40.0% to 44.9%
- 45.0% to 49.9%
- 50.0% or more
- not mapped#

# data were not mapped: see 'Mapping' note under Methods

Alphabetical key to Statistical Local Areas, Mid North Rural DGP, 2001			
Barunga West	2	Orroroo/Carrieton	7
Clare and Gilbert Valleys	3	Peterborough	8
Goyder	4	Port Pirie City and Districts - City	9
Mallala	1	Port Pirie City and Districts Balance	10
Mount Remarkable	12	Unincorp. Pirie	11
Northern Areas	6	Wakefield	5

## GP services to residents of the Mid North Rural 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 unreferral attendances recorded under Medicare: unreferral 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 (87.9%) of all unreferral attendances to residents of Mid North Rural DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 195,744 GP unreferral attendances (Table 3). A further 3.4% of unreferral attendances to residents were provided by GPs with a provider number in Adelaide Northern DGP.

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

Division		Unreferral attendances	
Number	Name	No.	% <sup>3</sup>
508	Mid North Rural DGP	195,744	87.9
502	Adelaide Northern DGP	7,591	3.4
506	Barossa DGP	3,938	1.8
504	Adelaide Central and Eastern DGP	3,080	1.4
512	Flinders and Far North DGP	2,031	0.9
501	Adelaide Western DGP	1,912	0.9
Other	..	8,437	3.7
<b>Total</b>	<b>..</b>	<b>222,733</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 unreferral attendances of patients with an address in Division 508 by Division in which attendance occurred

The majority (91.7%) of unreferral attendances provided by GPs with a provider number in Mid North Rural DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). A further 2.4% of unreferral attendances by GPs in the Division were to residents of Adelaide Yorke Peninsula DGP.

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

Division		Unreferral attendances	
Number	Name	No.	% <sup>3</sup>
508	Mid North Rural DGP	195,744	91.7
507	Yorke Peninsula DGP	5,174	2.4
506	Barossa DGP	1,791	0.8
502	Adelaide Northern DGP	1,592	0.7
512	Flinders and Far North DGP	1,463	0.7
505	Adelaide Southern DGP	1,223	0.6
Other	..	6,523	3.1
<b>Total</b>	<b>..</b>	<b>213,510</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 unreferral attendances to GPs with a provider number in Division 508 by Division of patient address

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

Please refer to the earlier *Population health profile of the Mid North Rural 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 Mid North Rural DGP who had asthma and were smokers, compared to country South Australia or Australia as a whole (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher. However, there were fewer people in Mid North Rural DGP who had type 2 diabetes and were overweight/ obese, compared to Australia: the rate in the Division was slightly above that in country South Australia.

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



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

Variable	Mid North Rural 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>	1,064	27.1	9,057	25.5	32,487	22.3	397,734	20.8
Had type 2 diabetes & were overweight/ obese <sup>4</sup>	701	13.2	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 Mid North Rural 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 1,869 admissions from ambulatory care sensitive (ACS) conditions accounted for 10.3% of all hospitalisations in the Mid North Rural DGP (Table 6, Figure 7), notably above the levels in South Australia (8.5) and Australia (8.7%).

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

Category	Mid North Rural DGP			South Australia			Australia		
	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%
Avoidable <sup>1</sup>	1,869	3,516.0	10.3	47,247	2,915.7	8.5	552,786	2,847.5	8.7
Unavoidable	16,201	32,182.8	89.7	507,053	32,039.4	91.5	5,818,199	29,970.7	91.3
<b>Total</b>	<b>18,070</b>	<b>35,721.9</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>, Mid North Rural DGP, South Australia and Australia, 2001/02**



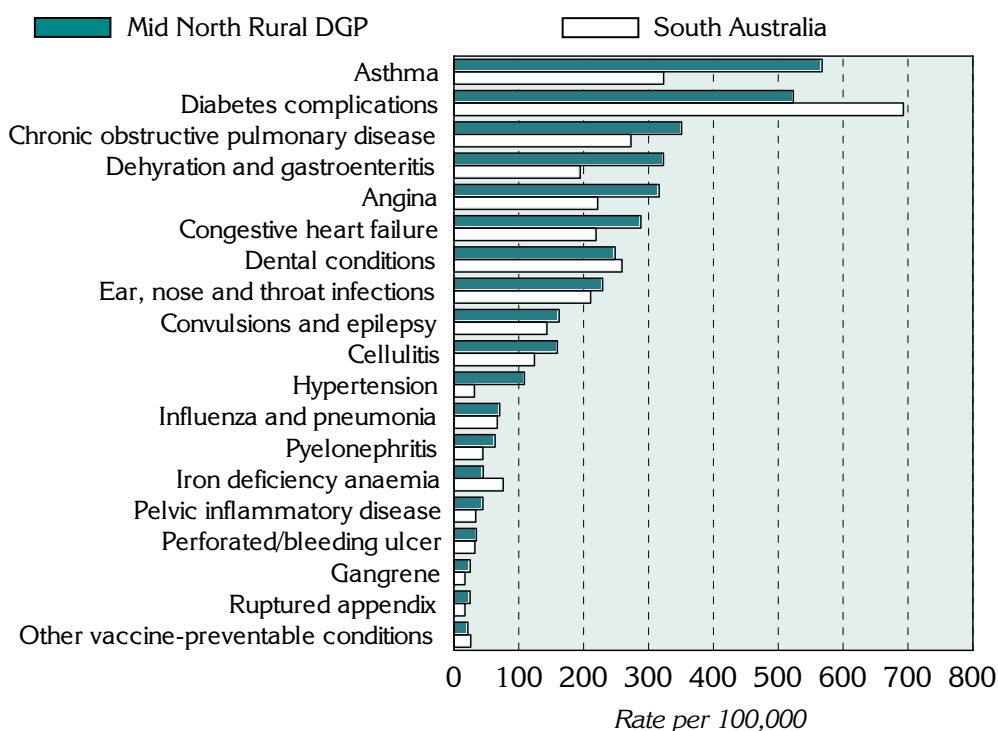
The rate of avoidable hospitalisations in Mid North Rural DGP is markedly higher, a rate of 3,516.0 admissions per 100,000 population, compared to both South Australia (a rate of 2,915.7), and Australia (2,847.5).

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

Asthma; diabetes complications; chronic obstructive pulmonary disease; dehydration and gastroenteritis; and angina were the five conditions with the highest rates of avoidable hospitalisations in the Mid North Rural 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 asthma and diabetes complications. Dehydration and gastroenteritis; and dental conditions, have the highest rates of avoidable hospitalisations for the acute conditions.

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



<sup>1</sup> Admissions resulting from ACS conditions: excludes nutritional deficiencies as less than ten admissions

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

Sub-category/ condition	Mid North Rural DGP		South Australia		Australia	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
<b>Vaccine-preventable</b>	<b>47</b>	<b>92.3</b>	<b>1,466</b>	<b>92.9</b>	<b>16,573</b>	<b>85.4</b>
Influenza and pneumonia	37	70.7	1,075	67.0	13,021	67.1
Other vaccine preventable	10	21.6	391	25.9	3,552	18.3
<b>Chronic<sup>3</sup></b>	<b>1,212</b>	<b>2,200.4</b>	<b>30,607</b>	<b>1,837.6</b>	<b>352,545</b>	<b>1,816</b>
Diabetes complications	297	523.1	11,640	692.9	141,345	728.1
Iron deficiency anaemia	25	45.3	1,271	76.1	16,451	84.7
Hypertension	60	108.7	532	31.6	6,354	32.7
Congestive heart failure	172	288.3	3,900	219.1	42,447	218.6
Angina	183	316.4	3,778	221.6	49,963	257.4
Chronic obstructive pulmonary disease	207	351.0	4,710	272.9	54,853	282.6
Asthma	268	567.6	4,776	323.4	41,009	211.3
<b>Acute</b>	<b>635</b>	<b>1,316.1</b>	<b>16,405</b>	<b>1,077.6</b>	<b>200,913</b>	<b>1,035</b>
Dehydration and gastroenteritis	161	323.1	3,111	194.8	37,766	194.5
Convulsions and epilepsy	76	162.2	2,153	143.6	31,137	160.4
Ear, nose and throat infections	106	229.4	3,046	210.9	32,075	165.2
Dental conditions	117	248.6	3,831	259.2	43,667	224.9
Perforated/bleeding ulcer	20	34.7	555	32.5	5,795	29.9
Ruptured appendix	12	25.1	255	17.0	3,866	19.9
Pyelonephritis	29	63.5	681	44.7	7,386	38.0
Pelvic inflammatory disease	18	44.7	497	33.7	6,547	33.7
Cellulitis	82	159.6	1,987	124.1	28,204	145.3
Gangrene	14	25.2	289	17.1	4,470	23.0
<b>Total avoidable hospitalisations<sup>4</sup></b>	<b>1,869</b>	<b>3,516.0</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

## 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).

Over two thirds (71.7%) of all deaths in Mid North Rural DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, marginally lower than the proportion for country South Australia (72.5%) (Table 8). Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 29.9% of all deaths at ages 0 to 74 years in Mid North Rural DGP, consistent with 29.8% in country South Australia.

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

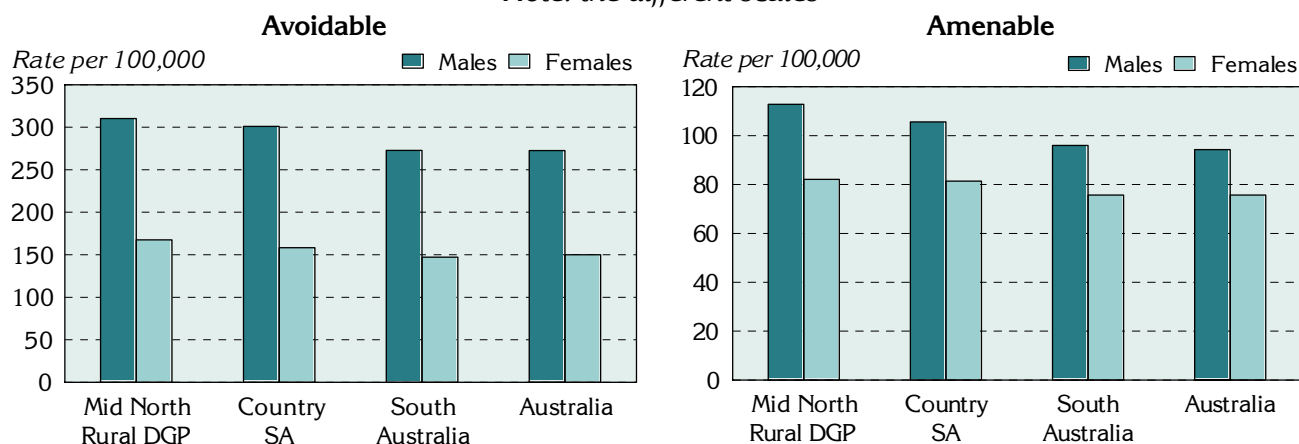
Mortality category	Mid North Rural DGP		Country SA		South Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
Avoidable	622	239.5	4,852	230.3	15,938	210.4	189,845	211.8
% of total	71.7	..	72.5	..	71.4	..	71.5	..
(Amenable)	(259)	(97.7)	(1,993)	(93.6)	(6,556)	(85.9)	(76,249)	(85.1)
(% of total)	(29.9)	(..)	(29.8)	(..)	(29.4)	(..)	(28.7)	(..)
Unavoidable	244	92.7	1,837	86.5	6,369	83.7	75,582	84.3
% of total	28.1	..	27.5	..	28.6	..	28.5	..
<b>Total mortality</b>	<b>867</b>	<b>332.1</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. Mid North Rural DGP's rate of avoidable mortality for males was 310.3 deaths per 100,000 males, higher than the rate of 167.6 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 112.8, compared to 82.1 for females, a rate ratio of 1.37 (Figure 9, Table 9).

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

Mortality category and sex	Mid North Rural 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	411	310.3	3,259	300.9	10,326	272.8	123,026	272.6
Females	211	167.6	1,593	158.3	5,612	147.2	66,819	150.1
<b>Total</b>	<b>622</b>	<b>239.5</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>1.85**</b>	<b>..</b>	<b>1.90**</b>	<b>..</b>	<b>1.85**</b>	<b>..</b>	<b>1.82**</b>
<b>Amenable</b>								
Males	155	112.8	1,169	105.6	3,671	96.0	42,568	94.3
Females	104	82.1	824	81.4	2,884	75.7	33,681	75.7
<b>Total</b>	<b>259</b>	<b>97.7</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>1.37*</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 Mid North Rural 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 71.8% of total YLL (0 to 74 years) for Mid North Rural DGP, lower than the 72.9% for country South Australia. The proportion of YLL from amenable mortality of 28.9% for Mid North Rural DGP was the same as the 28.9% for country South Australia.

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

Mortality category	Mid North Rural DGP		Country SA		South Australia		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	10,218	71.8	83,705	72.9	273,135	71.8	3,327,375	71.9
(Amenable)	(4,113)	(28.9)	(33,165)	(28.9)	(108,777)	(28.6)	(1,298,430)	(28.0)
Unavoidable	4,004	28.2	31,059	27.1	107,223	28.2	1,303,289	28.1
<b>Total</b>	<b>14,222</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 1,635.2 deaths per 100,000 population in the Mid North Rural 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 334.5 in the Mid North Rural Division.

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

Mortality category and age (years)	Mid North Rural 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	11	21.6	118	26.8	352	24.2	5,669	28.8
15-24	17	67.8	159	67.5	523	52.4	7,045	52.8
25-44	51	77.9	596	99.3	1,979	88.8	24,356	83.9
45-64	201	334.5	1,640	333.3	5,130	297.8	64,282	304.9
65-74	343	1,635.2	2,338	1439.0	7,954	1354.8	88,493	1,358.1
<b>Total</b>	<b>622</b>	<b>239.5</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	11.9	101	14.1	324	13.3	5,083	15.4
25-44	12	17.6	146	23.8	507	22.6	5,946	20.5
45-64	81	134.7	710	144.8	2,248	130.1	27,464	130.3
65-74	157	749.9	1,036	641.3	3,477	591.6	37,756	579.4
<b>Total</b>	<b>259</b>	<b>97.7</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 Mid North Rural DGP were for cardiovascular diseases, a rate of 76.7 deaths per 100,000 population, and cancer, with a rate of 75.8 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 60.7 per 100,000 population and 24.7 per 100,000, respectively.

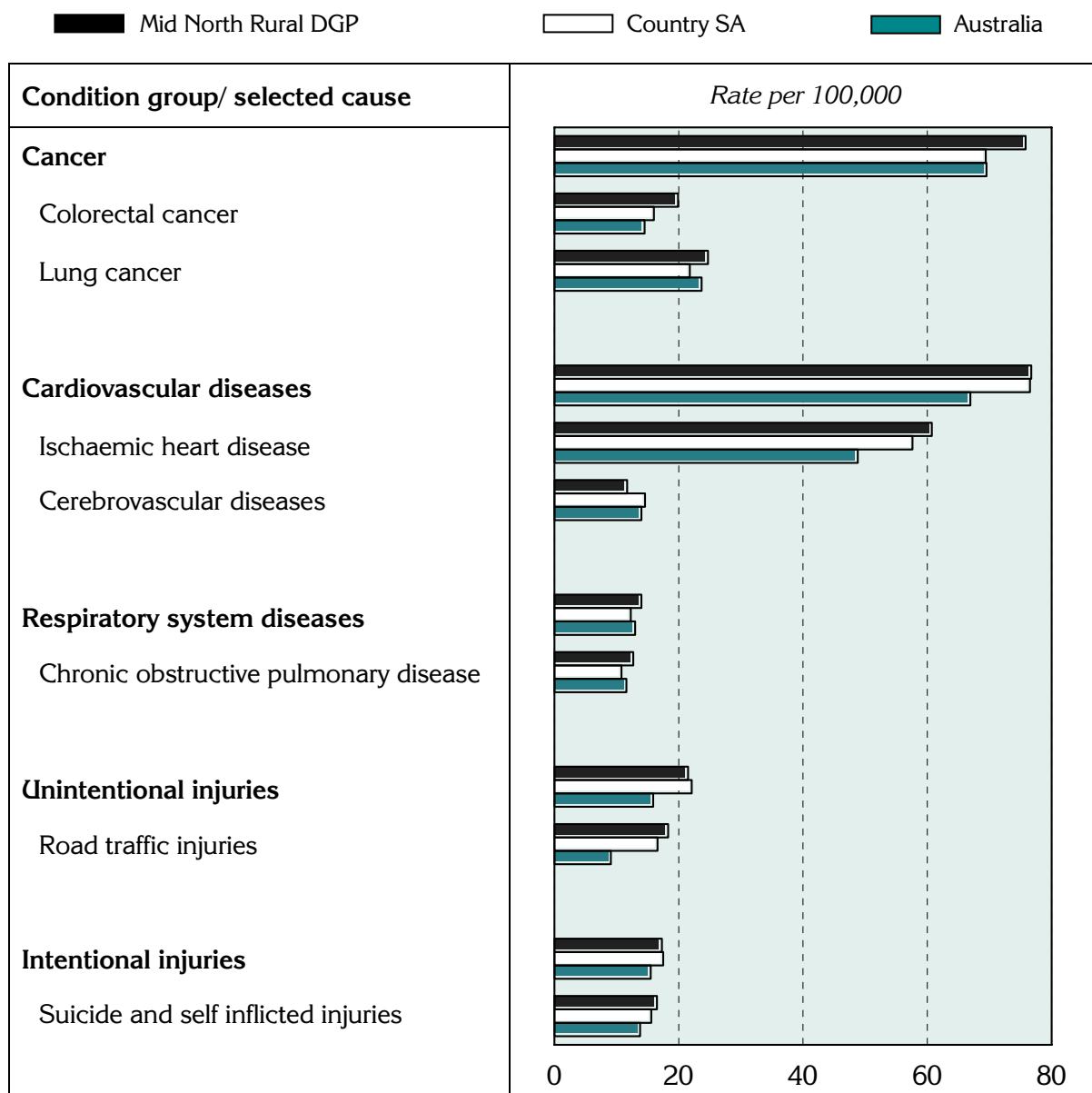
**Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Mid North Rural DGP, country South Australia, South Australia and Australia, 1997 to 2001**

Condition group/ selected cause	Mid North Rural 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>204</b>	<b>75.8</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	54	19.9	346	16.0	1,142	14.8	13,008	14.5
Lung cancer	68	24.7	477	21.8	1,728	22.3	21,208	23.7
<b>Cardiovascular diseases</b>	<b>211</b>	<b>76.7</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	167	60.7	1,260	57.6	3,918	50.5	43,712	48.8
Cerebrovascular diseases	32	11.7	316	14.6	1,086	13.9	12,558	14.0
<b>Respiratory system diseases</b>	<b>39</b>	<b>14.0</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	36	12.7	239	10.8	783	9.9	10,395	11.6
<b>Unintentional injuries</b>	<b>45</b>	<b>21.5</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	38	18.3	307	16.6	687	9.9	8,138	9.1
<b>Intentional injuries</b>	<b>36</b>	<b>17.3</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	35	16.5	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 cerebrovascular diseases (Figure 10).

**Figure 10: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Mid North Rural 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 (ie. jobless families, people with health insurance): these areas are mapped with a pattern.

## Statistical geography of the Mid North Rural 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, the Municipality of Port Pirie City and Districts has been split into two SLAs, City (all of which is in the Division), and Balance (the majority of which is in the Division); and parts of the State not incorporated into local government areas have been allocated SLA codes – three of these unincorporated SLAs are (wholly or partly) in this Division. These SLAs and all or parts of the SLAs listed in Table 14 comprise the Division.

**Table 14: SLAs and population in Mid North Rural 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
40430	Barunga West	58.4	1,507
41140	Clare and Gilbert Valleys	87.5	7,243
42110	Goyder	62.2	2,568
43920	Mallala	20.4	1,614
44830	Mount Remarkable	89.3	2,534
45120	Northern Areas	100.0	4,628
45400	Orroroo/Carrieton	100.0	950
45540	Peterborough	100.0	1,843
46451	Port Pirie City and Districts - City	100.0	13,981
46454	Port Pirie City and Districts Balance	100.0	3,499
48130	Wakefield	78.7	5,166
49459	Unincorp. Pirie	100.0	245

\* 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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