Population health profile of the Great Southern Division of General Practice: supplement

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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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This publication, the maps and supporting data, together with other publications on population health, are available from the PHIDU website (www.publichealth.gov.au).

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Population health profile of the Great Southern Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Great Southern Division of General Practice*, dated November 2005, available from www.publichealth.gov.au. This supplement includes an update of the population of the Great Southern 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:

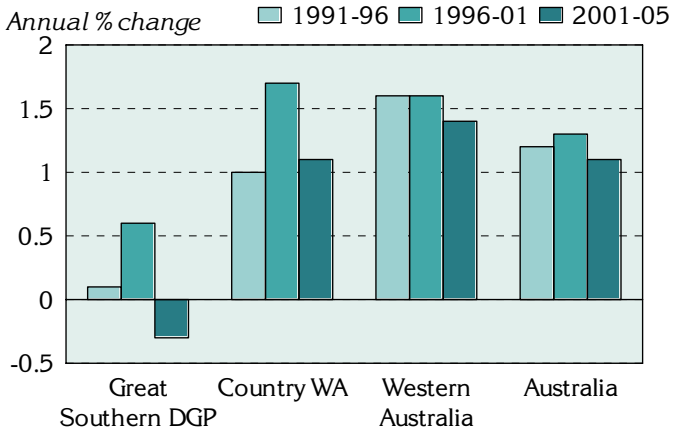
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive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

Population

The Great Southern Division had an Estimated Resident Population of 73,664 at 30 June 2005.

Figure 1: Annual population change, Great Southern DGP, country Western Australia, Western Australia and Australia, 1991 to 1996, 1996 to 2001 and 2001 to 2005



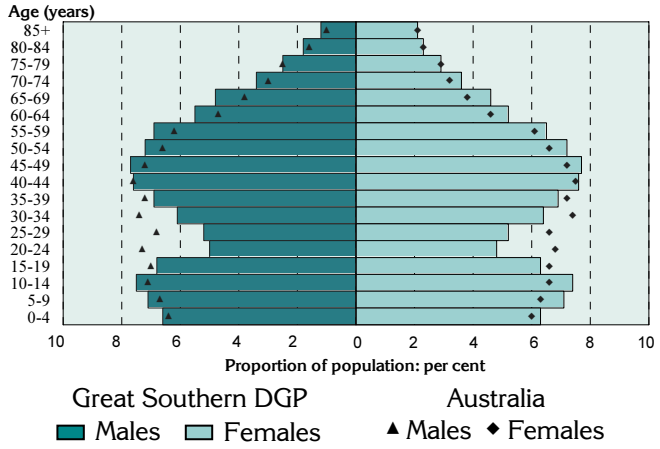
Over the five years from 1991 to 1996, the Division's population increased by 0.1% on average each year, substantially lower than in country Western Australia (1.0%) and Western Australia (1.6%). From 1996 to 2001, the increase was 0.6%, still below the increases for country Western Australia (1.7%) and Western Australia (1.6%). The Division's population decreased by an average of 0.3% each year from 2001 to 2005 compared to increases in country Western Australia (1.1%) and Western Australia (1.4%).

Table 1: Population by age, Great Southern DGP and Australia, 2005

Age group (years)	Great Southern DGP		Australia	
	No.	%	No.	%
0-14	15,483	21.0	3,978,221	19.6
15-24	8,474	11.5	2,819,834	13.9
25-44	19,079	25.9	5,878,107	28.9
45-64	19,922	27.0	4,984,446	24.5
65-74	6,015	8.2	1,398,831	6.9
75-84	3,484	4.7	954,143	4.7
85+	1,207	1.6	315,027	1.5
Total	**73,664**	**100.0**	**20,328,609**	**100.0**

As shown in the accompanying table and the age-sex pyramid below (Figure 2), the Great Southern DGP had relatively more children than Australia as a whole, with 21.0% at ages 0 to 14 years (compared to 19.6% for Australia) (Table 1). Conversely, there were fewer people aged 15 to 24 and 25 to 44 years old (11.5% and 25.9%) compared to Australia (13.9% and 28.9%). The proportions of the Division's population aged 45 to 74 years were higher than those for Australia.

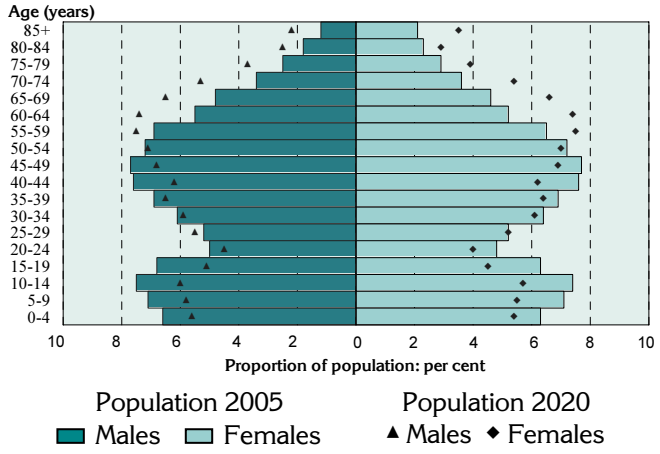
Figure 2: Population in Great Southern DGP and Australia, by age and sex, 2005



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

- at younger ages – relatively more children aged 0 to 14 years (particularly females);
- from 15 to 34 years – relatively fewer males and females; and
- from 45 to 74 years – more males and females.

Figure 3: Population projections for Great Southern DGP, by age and sex, 2005 and 2020



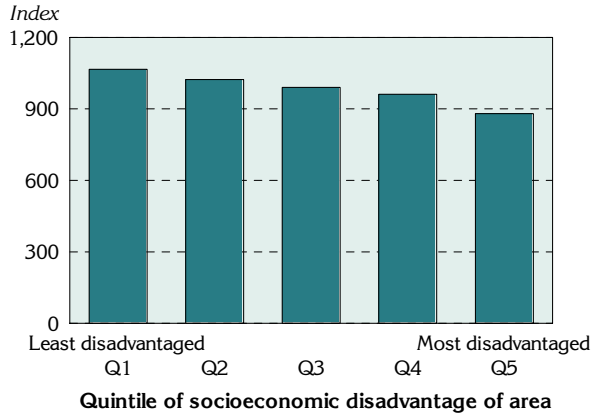
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- 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 – relatively more males and females.

Additional socio-demographic indicators

Please refer to the earlier *Population health profile of the Great Southern Division of General Practice*, dated November 2005, available from www.publichealth.gov.au, for other socio-demographic indicators.

Figure 4: Index of Relative Socio-Economic Disadvantage, Great Southern DGP, 2001



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

The Great Southern DGP has an index score of 984, below the score for Australia of 1000: this score varies across the Division, although over a relatively narrow range, from a low of 880 in the most disadvantaged areas to 1066 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. Great Southern DGP (17.6%) had the same proportion of jobless families as country Western Australia (17.6%) (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 slightly higher proportion of its population with private health insurance (32.9%), compared to country Western Australia (30.3%) (Figure 5, Table 2).

Figure 5: Socio-demographic indicators, Great Southern DGP, country Western Australia, Western Australia and Australia, 2001

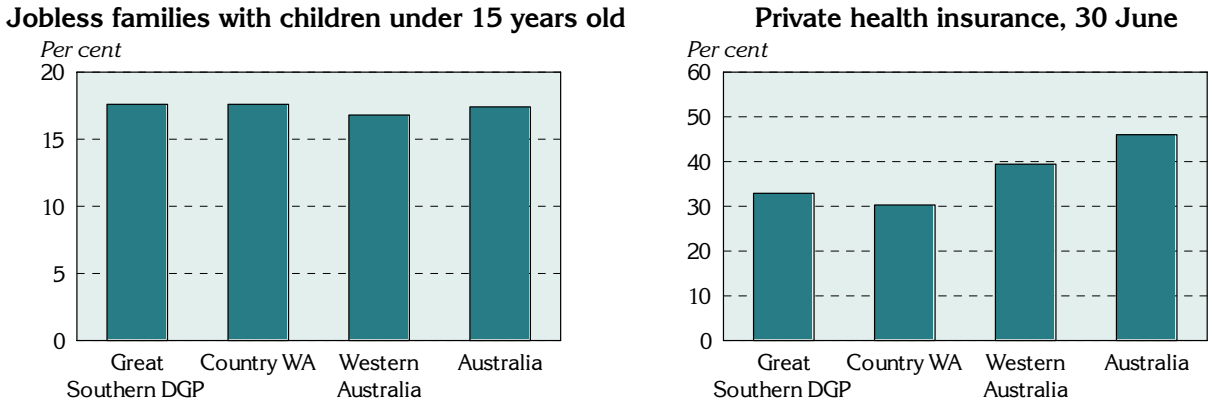
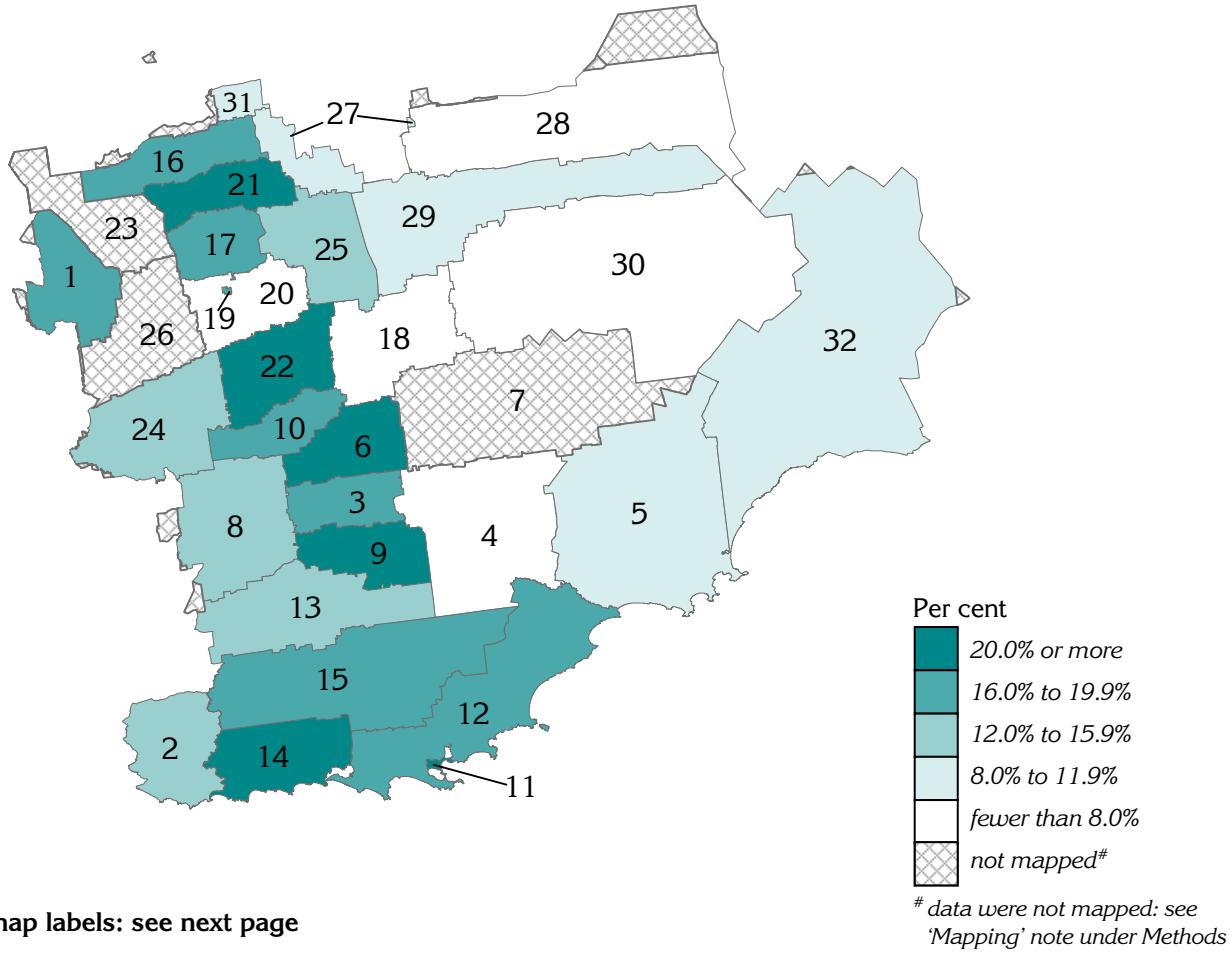


Table 2: Socio-demographic indicators, Great Southern DGP, country Western Australia, Western Australia and Australia, 2001

Indicator	Great Southern DGP		Country WA		Western Australia		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	1,471	17.6	10,142	17.6	34,396	16.8	357,563	17.4
Private health insurance (30 June)	23,161	32.9	148,821	30.3	708,743	39.4	8,671,106	46.0

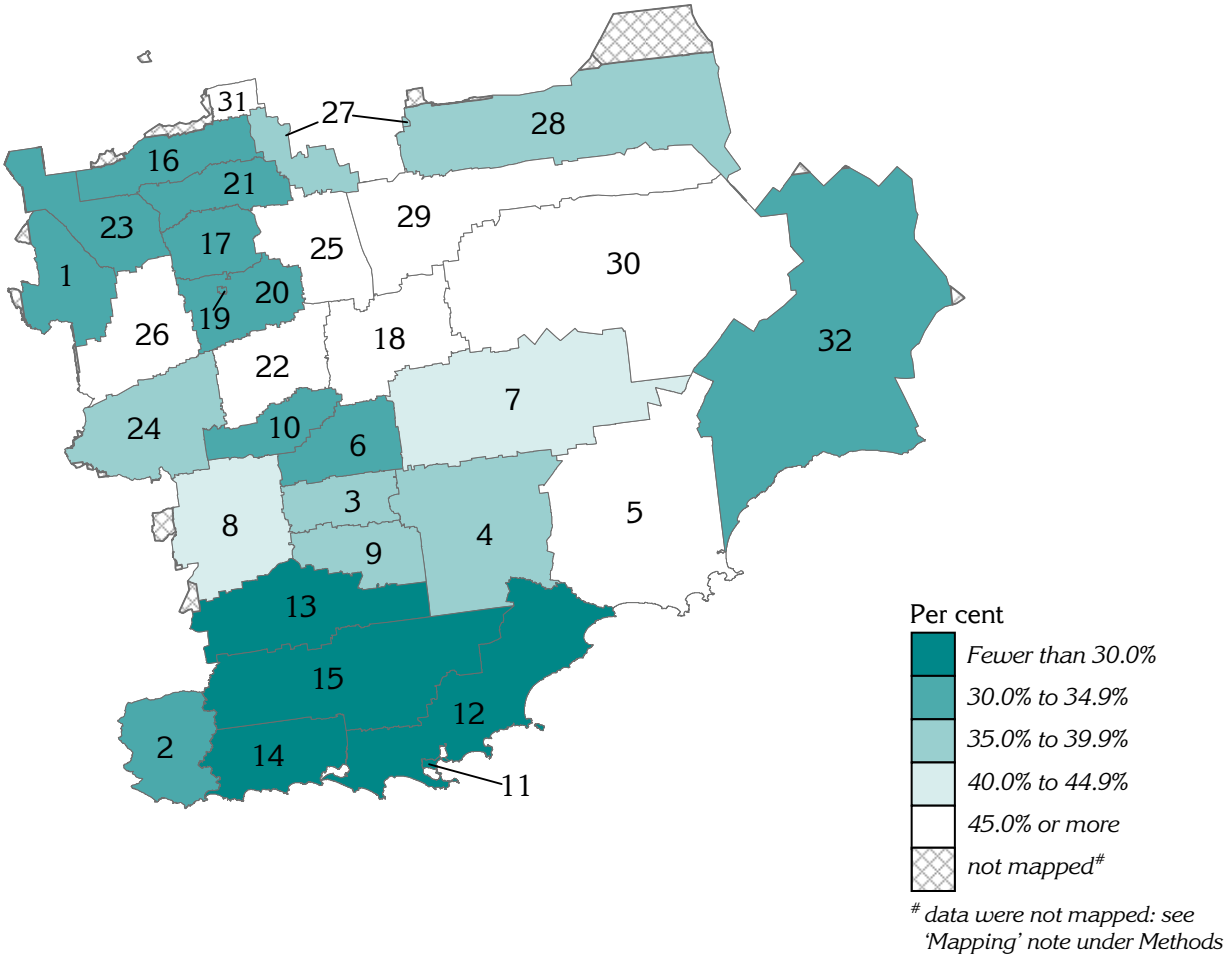
Details of the distribution of jobless families (Map 1) and of the population covered by private health insurance (Map 2) are shown by Statistical Local Area (SLA) in Maps 1 and 2, respectively.

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



For map labels: see next page

Map 2: People covered by private health insurance by SLA, Great Southern DGP, 30 June 2001



Alphabetical key to Statistical Local Areas, Great Southern DGP, 2001

Albany - Central	11	Kulin	29
Albany Balance	12	Lake Grace	30
Boddington	1	Manjimup	2
Brookton	16	Narrogin (S)	20
Broomehill	3	Narrogin (T)	19
Corrigin	27	Pingelly	21
Cranbrook	13	Plantagenet	15
Cuballing	17	Quairading	31
Denmark	14	Ravensthorpe	32
Dumbleyung	18	Tambellup	9
Gnowangerup	4	Wagin	22
Jerramungup	5	Wandering	23
Katanning	6	West Arthur	24
Kent	7	Wickepin	25
Kojonup	8	Williams	26
Kondinin	28	Woodanilling	10

GP services to residents of the Great Southern 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.

Well over four-fifths (87.4%%) of all unreferred attendances to residents of the Great Southern DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 261,832 GP unreferred attendances (Table 3). A further 1.6% of unreferred attendances to residents were provided by GPs with a provider number in the Canning DGP and Fremantle Regional DGP.

Table 3: Patient flow – People living[1] in Great Southern DGP by Division where attendance occurred[2], 2003/04

Division		Unreferred attendances	
Number	Name	No.	%[3]
609	Great Southern DGP	261,832	87.4
604	Canning DGP	4,938	1.6
605	Fremantle Regional DGP	4,711	1.6
601	Perth & Hills DGP	4,382	1.5
602	GP Coastal DGP	4,097	1.4
607	GP Down South DGP	4,081	1.4
603	Osborne DGP	3,116	1.0
615	Central Wheatbelt DGP	2,906	1.0
Other	..	9,607	3.2
Total	..	**299,670**	**100.0**

[1] Based on address in Medicare records
[2] Division of GP based on provider number
[3] Proportion of all unreferred attendances of patients with an address in Division 609 by Division in which attendance occurred

The majority (93.6%) of unreferred attendances provided by GPs with a provider number in Great Southern DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). A further 0.9% of unreferred attendances by GPs in the Division were to residents of the Kimberley.

Table 4: GP catchment – Unreferred attendances provided by GPs[1] in Great Southern DGP by Division of patient address[2], 2003-04

Division		Unreferred attendances	
Number	Name	No.	%[3]
609	Great Southern DGP	261,832	93.6
610	Kimberley DGP	2,463	0.9
607	GP Down South DGP	2,022	0.7
601	Perth & Hills DGP	1,905	0.7
604	Canning DGP	1,902	0.7
Other	..	9,588	3.4
Total	..	**279,712**	**100.0**

[1] Division of GP based on provider number
[2] Based on address in Medicare records
[3] Proportion of all unreferred attendances to GPs with a provider number in Division 609 by Division of patient address

Additional prevalence estimates: chronic diseases and risk factors combined

Please refer to the earlier *Population health profile of the Great Southern Division of General Practice*, dated November 2005, available from 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 Great Southern 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 than the national rates, although they below those in country Western Australia. In contrast, there were relatively fewer people in Great Southern DGP who had type 2 diabetes and were overweight/ obese, compared to country Western Australia or Australia.

Figure 6: Estimates of selected chronic diseases and risk factors, Great Southern DGP, country Western Australia and Australia, 2001

Table 5: Estimates of selected chronic diseases and risk factors, Great Southern DGP, country Western Australia, Western Australia and Australia, 2001

Variable	Great Southern DGP		Country WA		Western Australia		Australia	
	No.[1]	Rate[2]	No.[1]	Rate[2]	No.[1]	Rate[2]	No.[1]	Rate[1]
Had asthma & smoked[3]	1,553	24.3	11,045	25.2	38,731	21.1	397,734	20.8
Had type 2 diabetes & were overweight/ obese[4]	820	11.7	5,869	13.2	25,290	15.0	283,176	15.2

[1] **No. is a weighted estimate of the number of people in Great Southern DGP reporting these chronic conditions/ with these risk factors and is derived from synthetic predictions from the 2001 NHS**
[2] **Rate is the indirectly age-standardised rate per 1,000 population**
[3] **Population aged 18 years and over**
[4] **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.

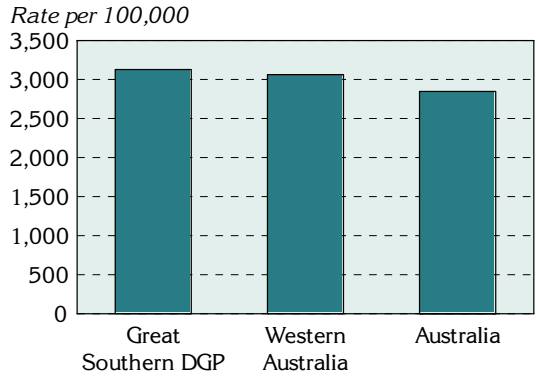
In 2001 to 2002, the 2,378 admissions from ambulatory care sensitive (ACS) conditions accounted for 10.3% of all admissions in Great Southern DGP (Table 6, Figure 7), notably above the levels in Western Australia (8.8) and Australia (8.7%).

Table 6: Avoidable[1] and unavoidable hospitalisations, Great Southern DGP, Western Australia, and Australia, 2001/02

Category	Great Southern DGP			Western Australia			Australia		
	No.	Rate[2]	%	No.	Rate[2]	%	No.	Rate[2]	%
Avoidable[1]	2,378	3,128.2	10.3	55,102	3,062.4	8.8	552,786	2,847.5	8.7
Unavoidable	20,612	27,646.7	89.7	568,402	31,010.0	91.2	5,818,199	29,970.7	91.3
Total	**22,990**	**30,784.0**	**100.0**	**623,504**	**34,070.5**	**100.0**	**6,370,985**	**32,818.2**	**100.0**

[1] **Admissions resulting from ACS conditions**
[2] **Rate is the indirectly age-standardised rate per 100,000 population**

Figure 7: Avoidable hospitalisations[1], Great Southern DGP, Western Australia and Australia, 2001/02



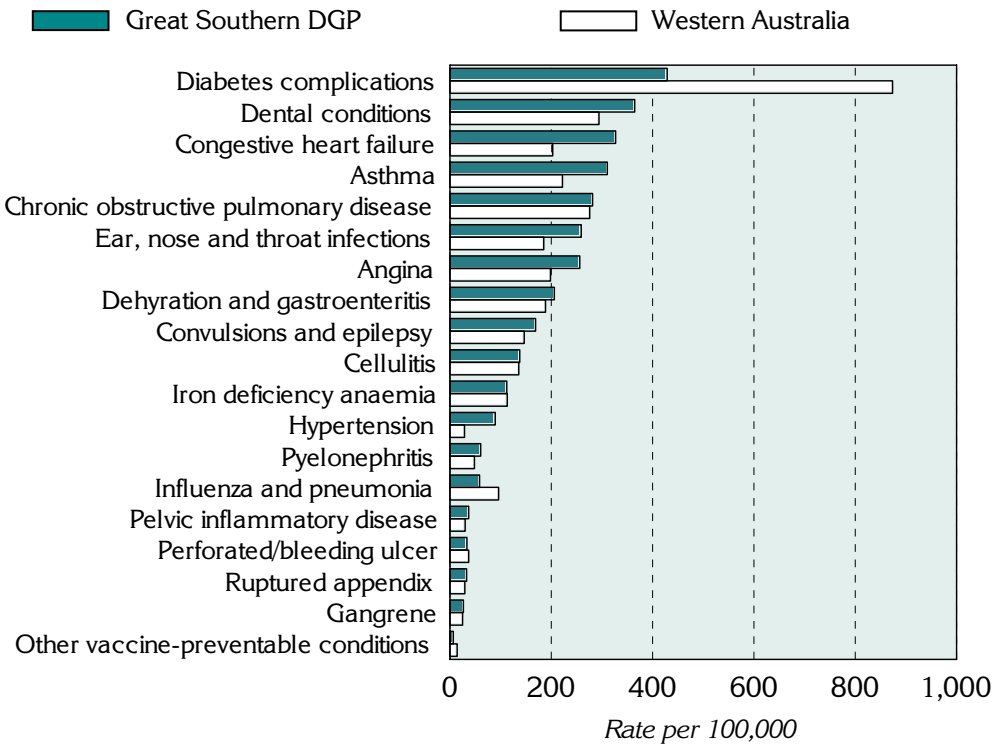
[1] **Admissions resulting from ACS conditions**

The rate of avoidable hospitalisations in Great Southern DGP is higher, a rate of 3,128.2 admissions per 100,000 population, compared to both Western Australia (a rate of 3,062.4) and Australia (2,847.5).

Diabetes complications, dental conditions, congestive heart failure and asthma were the four conditions with the highest rates of avoidable hospitalisations in the Great Southern 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, ear, nose and throat infections, have the highest rates of avoidable hospitalisations for the acute conditions.

Figure 8: Avoidable hospitalisations[1] by condition, Great Southern DGP and Western Australia, 2001/02



[1] **Admissions resulting from ACS conditions: excludes nutritional deficiencies as less than ten admissions**

Table 7: Avoidable hospitalisations[1] by condition, Great Southern DGP, Western Australia and Australia, 2001/02

Sub-category/ condition	Great Southern DGP		Western Australia		Australia	
	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]
Vaccine-preventable	**50**	**65.3**	**2,018**	**110.7**	**16,573**	**85.4**
Influenza and pneumonia	45	58.5	1,743	96.2	13,021	67.1
Other vaccine preventable	5	6.8	275	14.5	3,552	18.3
Chronic[3]	**1,376**	**1,805.9**	**33,628**	**1,915.6**	**352,545**	**1,816**
Diabetes complications	328	428.6	15,323	873.6	141,345	728.1
Iron deficiency anaemia	84	112.1	2,009	113.4	16,451	84.7
Hypertension	67	89.7	510	29.0	6,354	32.7
Congestive heart failure	244	327.1	3,400	202.9	42,447	218.6
Angina	196	256.2	3,452	198.5	49,963	257.4
Chronic obstructive pulmonary disease	216	281.6	4,707	275.9	54,853	282.6
Asthma	241	310.6	4,227	222.3	41,009	211.3
Acute	**1,008**	**1,328.4**	**21,021**	**1,121.4**	**200,913**	**1,035**
Dehydration and gastroenteritis	150	206.1	3,443	188.7	37,766	194.5
Convulsions and epilepsy	129	169.2	2,779	146.7	31,137	160.4
Ear, nose and throat infections	203	259.1	3,550	185.3	32,075	165.2
Dental conditions	283	364.9	5,623	294.3	43,667	224.9
Perforated/bleeding ulcer	25	33.5	645	37.1	5,795	29.9
Ruptured appendix	25	32.9	566	29.4	3,866	19.9
Pyelonephritis	43	61.0	914	48.7	7,386	38.0
Pelvic inflammatory disease	26	37.2	577	30.2	6,547	33.7
Cellulitis	104	137.7	2,484	135.9	28,204	145.3
Gangrene	20	26.8	440	25.1	4,470	23.0
Total avoidable hospitalisations[4]	**2,378**	**3,128.2**	**55,102**	**3,062.4**	**552,786**	**2,847.5**

[1] **Admissions resulting from ACS conditions**
[2] **Rate is the indirectly age-standardised rate per 100,000 population**
[3] **Excludes nutritional deficiencies as less than ten admissions**
[4] **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.

Over two thirds (72.5%) of all deaths in Great Southern DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, consistent with the proportion for country Western Australia (72.7%) (Table 8). However, the rate in the Division is notably lower than that in country Western Australia, a differential of 0.88.

Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 28.3% of all deaths at ages 0 to 74 years in Great Southern DGP, compared to 27.6% in country Western Australia.

Table 8: Avoidable and unavoidable mortality (0 to 74 years) by area, Great Southern DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Mortality category	Great Southern DGP		Country WA		Western Australia		Australia	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]
Avoidable	734	206.6	5,122	233.8	16,602	201.0	189,845	211.8
% of total	**72.5**	**..**	**72.7**	**..**	**71.2**	**..**	**71.5**	**..**
(Amenable)	(287)	(80.1)	(1,943)	(89.6)	(6,517)	(79.6)	(76,249)	(85.1)
(% of total)	**(28.3)**	**(..)**	**(27.6)**	**(..)**	**(28.0)**	**(..)**	**(28.7)**	**(..)**
Unavoidable	279	78.1	1,925	88.3	6,708	81.6	75,582	84.3
% of total	**27.5**	**..**	**27.3**	**..**	**28.8**	**..**	**28.5**	**..**
Total mortality	**1,013**	**284.7**	**7,047**	**322.1**	**23,310**	**282.6**	**265,427**	**296.1**
%	**100.0**	..	**100.0**	..	**100.0**	..	**100.0**	..

[1] **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. Great Southern DGP's rate of avoidable mortality for males was 265.3 deaths per 100,000 males, higher than the rate of 147.2 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 84.2, compared to 76.3, for females, a rate ratio of 1.10 (Figure 9, Table 9).

Figure 9: Avoidable and amenable mortality by sex (0 to 74 years), Great Southern DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Note: the different scales

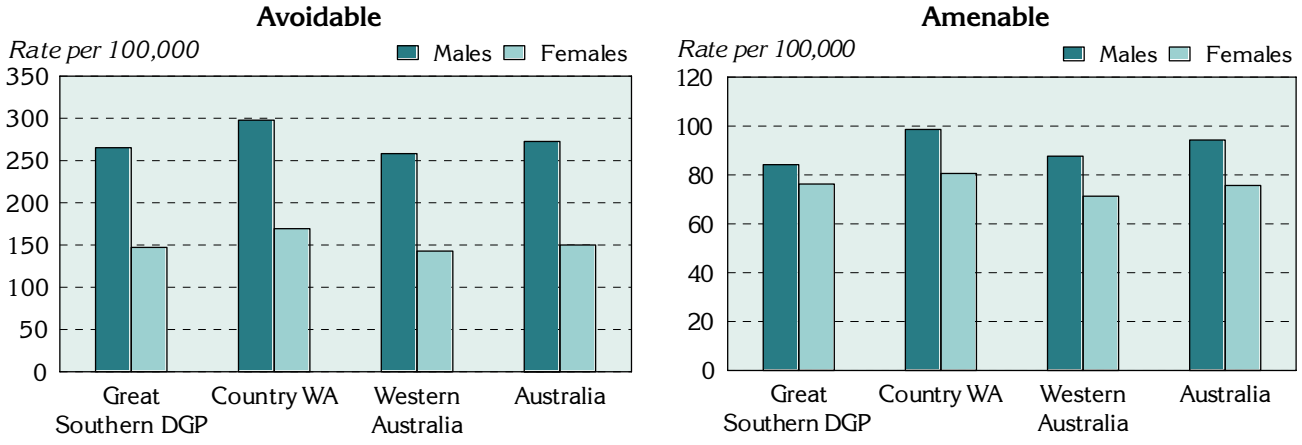


Table 9: Avoidable and amenable mortality (0 to 74 years) by sex, Great Southern DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Mortality category and sex	Great Southern DGP		Country WA		Western Australia		Australia	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]
Avoidable								
Males	486	265.3	3,426	297.9	10,850	258.3	123,026	272.6
Females	248	147.2	1,696	169.3	5,752	142.9	66,819	150.1
Total	**734**	**206.6**	**5,122**	**233.8**	**16,602**	**201.0**	**189,845**	**211.8**
Rate ratio–M:F[2]	**..**	**1.80****	**..**	**1.76****	**..**	**1.81****	**..**	**1.82****
Amenable								
Males	157	84.2	1,130	98.6	3,646	87.7	42,568	94.3
Females	130	76.3	813	80.6	2,871	71.3	33,681	75.7
Total	**287**	**80.1**	**1,943**	**89.6**	**6,517**	**79.6**	**76,249**	**85.1**
Rate ratio–M:F[2]	**..**	**1.10**	**..**	**1.22****	**..**	**1.23****	**..**	**1.25****

[1] **Rate is the indirectly age-standardised rate per 100,000 population**

[2] **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)[1], 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 Great Southern DGP, country Western Australia, Western 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 73.5% of total YLL (0 to 74 years) for Great Southern DGP, consistent with the 73.2% for country Western Australia. The proportion of YLL from amenable mortality of 27.2% for Great Southern DGP was marginally higher than the 26.5% for country Western Australia.

Table 10: Years of life lost from avoidable mortality (0 to 74 years), Great Southern DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Mortality category	Great Southern DGP		Country WA		Western Australia		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	13,152	73.5	95,572	73.2	300,008	71.7	3,327,375	71.9
(Amenable)	(4,864)	(27.2)	(34,657)	(26.5)	(113,010)	(27.0)	(1,298,430)	(28.0)
Unavoidable	4,734	26.5	35,020	26.8	118,618	28.3	1,303,289	28.1
Total	**17,886**	**100.0**	**130,592**	**100.0**	**418,625**	**100.0**	**4,630,664**	**100.0**

[1] 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 1,303.4 deaths per 100,000 population in the Great Southern 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 268.4 in the Great Southern Division.

Table 11: Avoidable and amenable mortality by age, Great Southern DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Mortality category and age (years)	Great Southern DGP		Country WA		Western Australia		Australia	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]
Avoidable								
0-14	24	28.2	196	32.5	548	27.9	5,669	28.8
15-24	46	107.1	309	96.4	826	60.7	7,045	52.8
25-44	97	88.2	883	110.1	2,479	85.3	24,356	83.9
45-64	233	268.4	1,718	325.2	5,546	275.2	64,282	304.9
65-74	335	1,303.4	2,016	1360.4	7,203	1282.7	88,493	1,358.1
Total	**734**	**206.6**	**5,122**	**233.8**	**16,602**	**201.0**	**189,845**	**211.8**
Amenable								
0-24	18	12.9	153	15.6	454	13.8	5,083	15.4
25-44	21	18.6	223	28.3	594	20.5	5,946	20.5
45-64	104	120.3	706	135.1	2,381	118.5	27,464	130.3
65-74	144	564.9	861	585.9	3,088	550.9	37,756	579.4
Total	**287**	**80.1**	**1,943**	**89.6**	**6,517**	**79.6**	**76,249**	**85.1**

[1] **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 Great Southern DGP were for cardiovascular diseases, with a rate of 66.4 deaths per 100,000 population, and cancer, 56.8 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 49.7 per 100,000 population and 21.0 per 100,000, respectively.

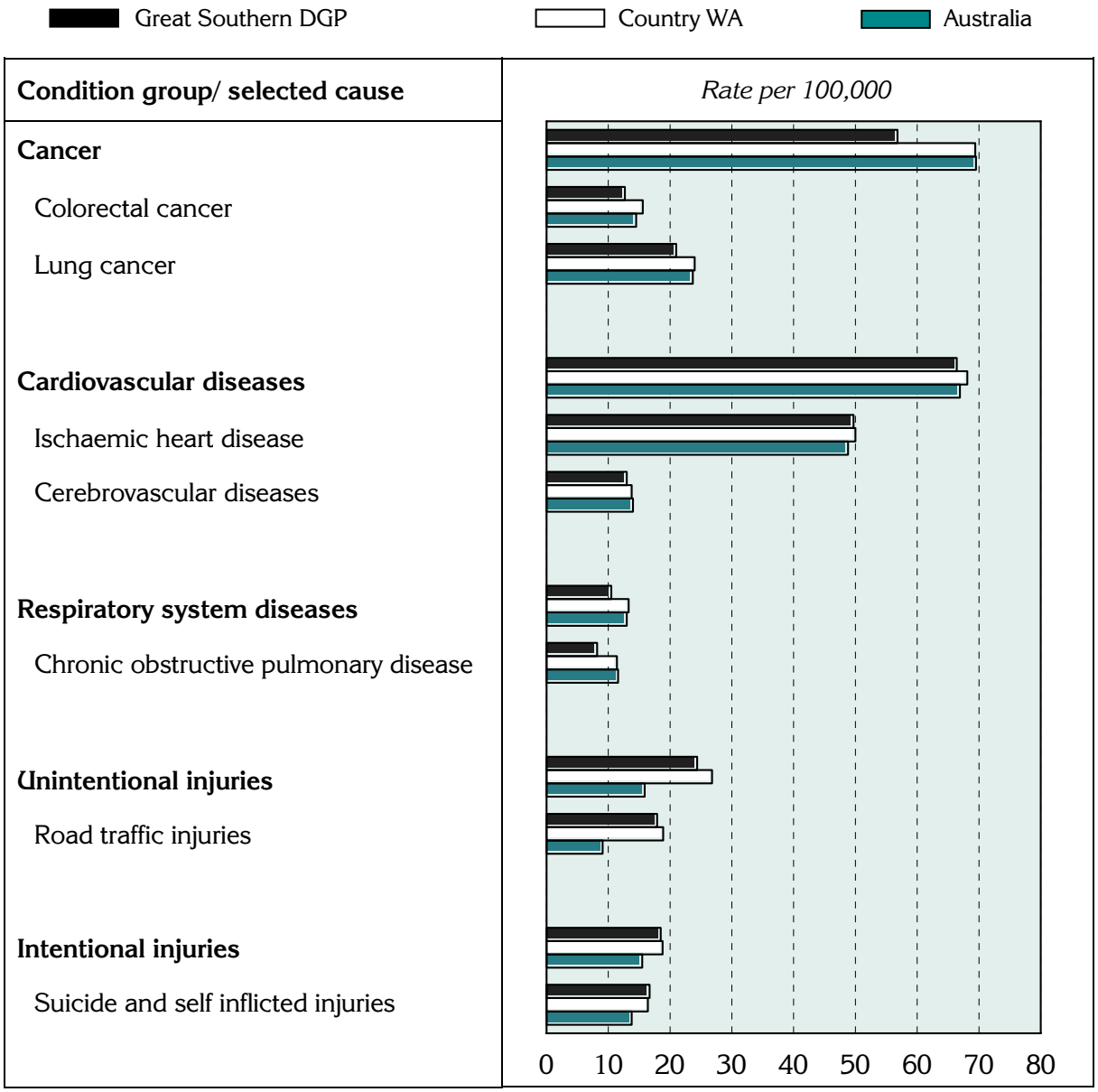
Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Great Southern DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Condition group/ selected cause	Great Southern DGP		Country WA		Western Australia		Australia	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]
Cancer	**204**	**56.8**	**1,488**	**69.4**	**5,531**	**67.8**	**62,338**	**69.5**
Colorectal cancer	46	12.7	335	15.6	1,189	14.6	13,008	14.5
Lung cancer	76	21.0	515	24.0	1,842	22.8	21,208	23.7
Cardiovascular diseases	**239**	**66.4**	**1,456**	**68.1**	**4,750**	**58.9**	**59,945**	**66.9**
Ischaemic heart disease	179	49.7	1,075	50.0	3,469	42.9	43,712	48.8
Cerebrovascular diseases	46	13.0	289	13.8	1,000	12.5	12,558	14.0
Respiratory system diseases	**38**	**10.5**	**278**	**13.3**	**871**	**11.0**	**11,612**	**13.0**
Chronic obstructive pulmonary disease	29	8.2	238	11.4	748	9.5	10,395	11.6
Unintentional injuries	**82**	**24.4**	**626**	**26.8**	**1,549**	**17.5**	**14,224**	**15.9**
Road traffic injuries	60	17.9	439	18.9	918	10.3	8,138	9.1
Intentional injuries	**62**	**18.5**	**444**	**18.8**	**1,412**	**15.9**	**13,891**	**15.5**
Suicide and self inflicted injuries	56	16.7	386	16.4	1,270	14.3	12,393	13.8

[1] **Rate is the indirectly age-standardised rate per 100,000 population**

Rates in the Division were below those for country Western Australia and Australia for cancer and respiratory system diseases, above those for the injury conditions and selected causes, and consistent with those for cardiovascular diseases (Figure 10).

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



Notes on the data

Data sources and limitations

General

References to 'country Western Australia' relate to Western Australia excluding the Perth Statistical Division.

Data sources

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

Table 13: Data sources

Section	Source
Population	
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)[1]
Additional socio-demographic indicators	
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
GP services – patient flow/ GP catchment	
Tables 3 and 4	Medicare Australia, 2003/04
Additional prevalence estimates: chronic diseases and risk factors combined	
Figure 6; Table 5	Estimated from 2001 National Health Survey (NHS), ABS (unpublished)
Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions	
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)
Avoidable mortality	
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)

[1] **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).

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 Great Southern 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).

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 majority of SLAs are the same as local government areas (LGAs). The exception is the LGA of Albany, which has been split into two SLAs, Central and Balance. All of these two SLAs, and all or parts of the SLAs listed in Table 14 comprise the Division.

Table 14: SLAs and population in Great Southern 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
50081	Albany - Central	100.0	16,376
50084	Albany Balance	100.0	15,605
50630	Boddington	100.0	1,408
50910	Brookton	100.0	1,047
51050	Broomehill	100.0	507
52100	Corrigin	8.9	104
52240	Cranbrook	100.0	1,036
52310	Cuballing	100.0	760
52730	Denmark	100.0	5,229
53010	Dumbleyung	100.0	684
53640	Gnowangerup	100.0	1,391
54130	Jerramungup	100.0	1,172
54340	Katanning	100.0	4,075
54480	Kent	100.0	540
54550	Kojonup	100.0	2,119
54620	Kondinin4	100.0	994
54760	Kulin	100.0	876
54900	Lake Grace	100.0	1,495
55180	Manjimup	4.9	476
56440	Narrogin (S)	100.0	4,368
56510	Narrogin (T)	100.0	734
57140	Pingelly	100.0	1,132
57210	Plantagenet	100.0	4,634
57350	Quairading	11.7	119
57420	Ravensthorpe	91.3	1,224
58120	Tambellup	100.0	672
58610	Wagin	100.0	1,761
58680	Wandering	100.0	336
58890	West Arthur	100.0	875
59100	Wickepin	100.0	679
59170	Williams	100.0	854
59380	Woodanilling	100.0	382

* **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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