

Population health profile of the Greater Bunbury

Division of General Practice: supplement

Population Profile Series: No. 111a

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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 Greater Bunbury Division of General Practice: supplement

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

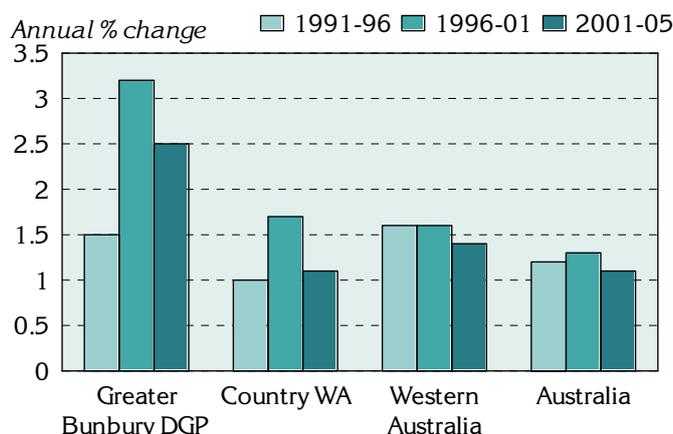
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive 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 Greater Bunbury Division had an Estimated Resident Population of 69,975 at 30 June 2005.

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



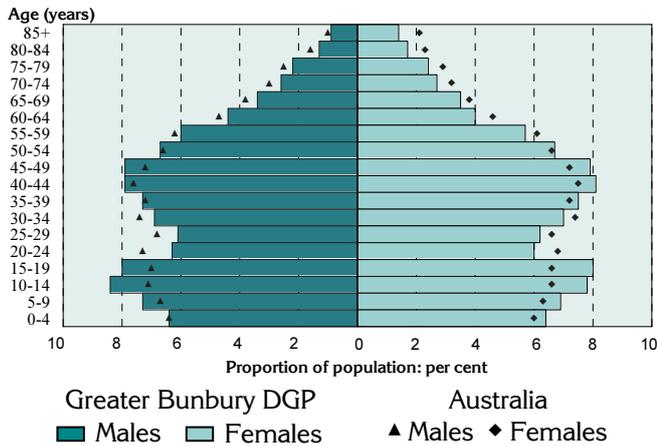
Over the five years from 1991 to 1996, the Division's population increased by 1.5% on average each year, higher than the increases in country Western Australia (1.0%) and Western Australia (1.2%). From 1996 to 2001, the annual percentage increase in the Division was 3.2%, much higher than for country Western Australia (1.7%) and Western Australia (1.6%). The Division's growth rate of 2.5% from 2001 to 2005 was again well above the increases for country Western Australia (1.1%) and Western Australia (1.4%).

Table 1: Population by age, Greater Bunbury DGP and Australia, 2005

Age group (years)	Greater Bunbury DGP		Australia	
	No.	%	No.	%
0-14	15,098	21.6	3,978,221	19.6
15-24	9,893	14.1	2,819,834	13.9
25-44	19,967	28.5	5,878,107	28.9
45-64	17,270	24.7	4,984,446	24.5
65-74	4,243	6.1	1,398,831	6.9
75-84	2,685	3.8	954,143	4.7
85+	819	1.2	315,027	1.5
Total	69,975	100.0	20,328,609	100.0

As shown in the accompanying table and the age-sex pyramid below (Figure 2), the Greater Bunbury DGP had relatively more children than Australia as a whole, with 21.6% at ages 0 to 14 years (compared to 19.6% for Australia). Conversely, the proportions of the Division's population in the age groups from 65 years were below those for Australia.

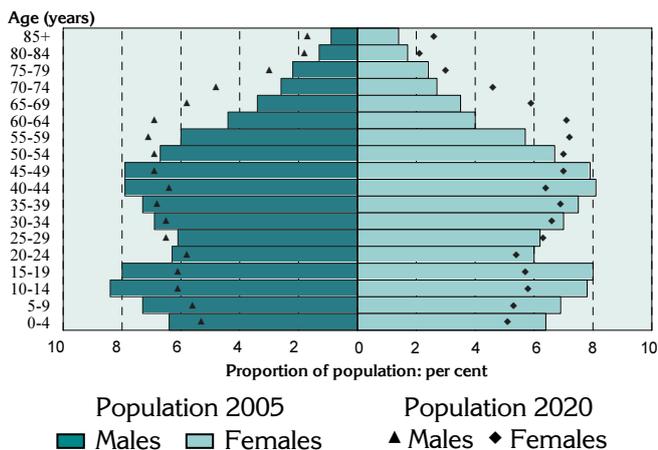
Figure 2: Population in Greater Bunbury DGP and Australia, by age and sex, 2005



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

- at younger ages – relatively more males aged 5 to 19 years and females aged 0 to 19 years;
- from 20 to 34 years – relatively fewer males and females;
- from 40 to 49 years – relatively more people, in particular females; and
- at older ages – relatively fewer males and females at ages 55 years and over.

Figure 3: Population projections for Greater Bunbury DGP, by age and sex, 2005 and 2020



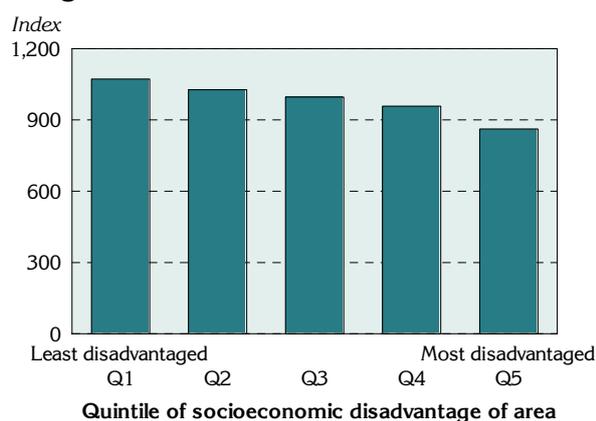
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- at younger ages – relatively fewer children, young people and young adults, aged 0 to 24 years;
- from 30 to 49 years – relatively fewer males and females; and
- from 50 years onwards – relatively more males and females, particularly between the ages of 60 and 74.

Additional socio-demographic indicators

Please refer to the earlier *Population health profile of the Greater Bunbury 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, Greater Bunbury DGP, 2001



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

The Greater Bunbury DGP has an index score of 985, below the score for Australia of 1000: this score varies across the Division, from a low of 861 in the most disadvantaged areas to 1072 in the least disadvantaged areas.

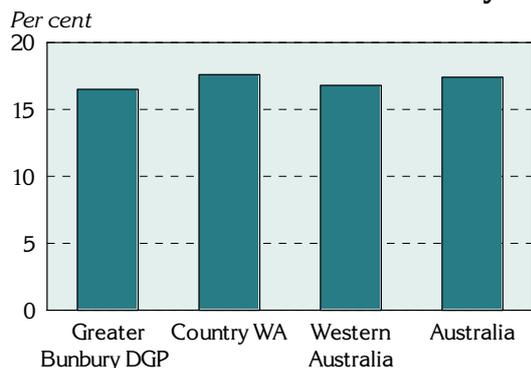
Note: each 'quintile' comprises approximately 20% of the population of the Division.

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 fewer jobless families in the Greater Bunbury DGP (16.5%), compared to country Western Australia as a whole (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 lower proportion of people with private health insurance (27.9%), compared to country Western Australia (30.3%) (Figure 5, Table 2).

Figure 5: Socio-demographic indicators, Greater Bunbury DGP, country Western Australia, Western Australia and Australia, 2001

Jobless families with children under 15 years old



Private health insurance, 30 June

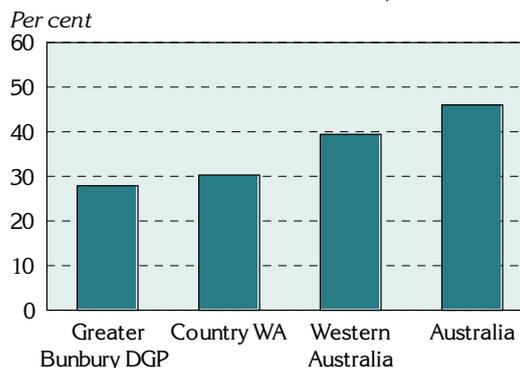
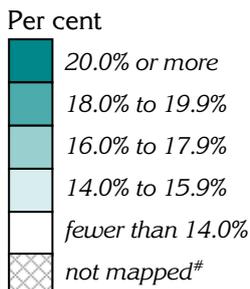
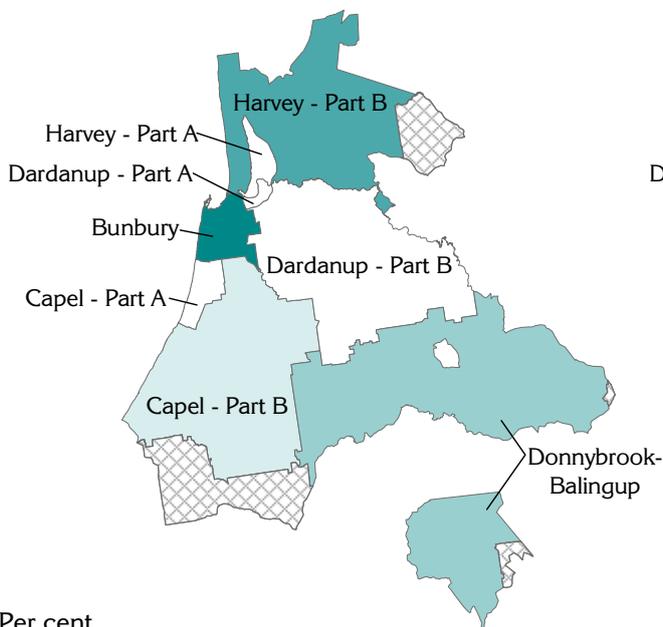


Table 2: Socio-demographic indicators, Greater Bunbury DGP, country Western Australia, Western Australia and Australia, 2001

Indicator	Greater Bunbury DGP		Country WA		Western Australia		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	1,218	16.5	10,142	17.6	34,396	16.8	357,563	17.4
Private health insurance (30 June)	13,486	27.9	148,821	30.3	708,743	39.4	8,671,106	46.0

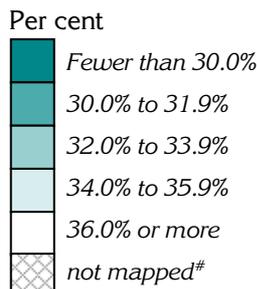
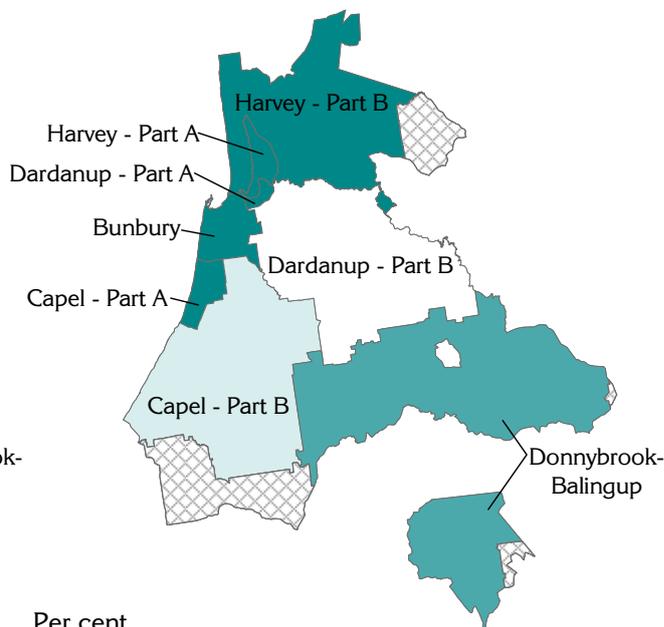
Details of the distribution of jobless families (Map 1) and of the population covered by private health insurance (Map 2) are shown by Statistical Local Area (SLA) in Maps 1 and 2, respectively.

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



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

Map 2: People covered by private health insurance by SLA, Greater Bunbury DGP, 30 June 2001



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

GP services to residents of the Greater Bunbury 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.

A majority (90.3%) of all unreferred attendances to residents of Greater Bunbury DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 220,982 GP unreferred attendances. A further 4.0% of unreferred attendances to residents were provided by GPs with a provider number in GP Down South DGP.

Table 3: Patient flow – People living¹ in Greater Bunbury DGP by Division where attendance occurred², 2003/04

Division		Unreferred attendances	
Number	Name	No.	% ³
613	Greater Bunbury DGP	220,982	90.3
607	GP Down South DGP	9,909	4.0
601	Perth & Hills DGP	2,009	0.8
604	Canning DGP	1,861	0.8
602	GP Coastal DGP	1,735	0.7
603	Osborne DGP	1,524	0.6
Other	..	6,762	2.7
Total	..	244,782	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 613 by Division in which attendance occurred

A majority (92.5%) of unreferred attendances provided by GPs with a provider number in Greater Bunbury DGP were also to people living in the Division (ie. their Medicare address was in the Division). A further 3.7% of unreferred attendances by GPs in the Division were to residents of GP Down South DGP.

Table 4: GP catchment – Unreferred attendances provided by GPs¹ in Greater Bunbury DGP by Division of patient address², 2003-04

Division		Unreferred attendances	
Number	Name	No.	% ³
613	Greater Bunbury DGP	220,982	92.5
607	GP Down South DGP	8,839	3.7
604	Canning DGP	1,135	0.5
603	Osborne DGP	1,019	0.4
609	Great Southern DGP	973	0.4
Other	..	5,889	2.5
Total	..	238,837	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 613 by Division of patient address

Additional prevalence estimates: chronic diseases and risk factors combined

Please refer to the earlier *Population health profile of the Greater Bunbury 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 Greater Bunbury DGP who had asthma and were smokers, compared to Australia as a whole, and marginally more than in country Western Australia (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher. The rate in Greater Bunbury DGP for the population who had type 2 diabetes and were overweight/ obese was higher compared to country Western Australia, but consistent with the rate for Australia.

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



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

Variable	Greater Bunbury 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	1,488	25.5	11,045	25.2	38,731	21.1	397,734	20.8
Had type 2 diabetes & were overweight/ obese ⁴	771	15.0	5,869	13.2	25,290	15.0	283,176	15.2

¹ No. is a weighted estimate of the number of people in Greater Bunbury 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 2,119 admissions from ambulatory care sensitive (ACS) conditions accounted for 10.7% of all admissions in the Greater Bunbury DGP (Table 6, Figure 7), markedly above the levels in Western Australia (8.8) and Australia (8.7%).

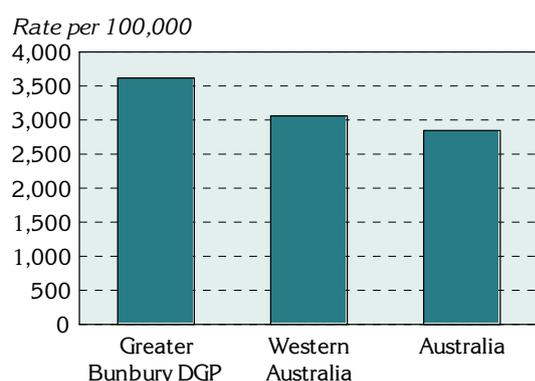
Table 6: Avoidable¹ and unavoidable hospitalisations, Greater Bunbury DGP, Western Australia, and Australia, 2001/02

Category	Greater Bunbury DGP			Western Australia			Australia		
	No.	Rate ²	%	No.	Rate ²	%	No.	Rate ²	%
Avoidable ¹	2,119	3,615.9	10.7	55,102	3,062.4	8.8	552,786	2,847.5	8.7
Unavoidable	17,721	29,709.0	89.3	568,402	31,010.0	91.2	5,818,199	29,970.7	91.3
Total	19,840	33,312.2	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 hospitalisations¹, Greater Bunbury DGP, Western Australia and Australia, 2001/02



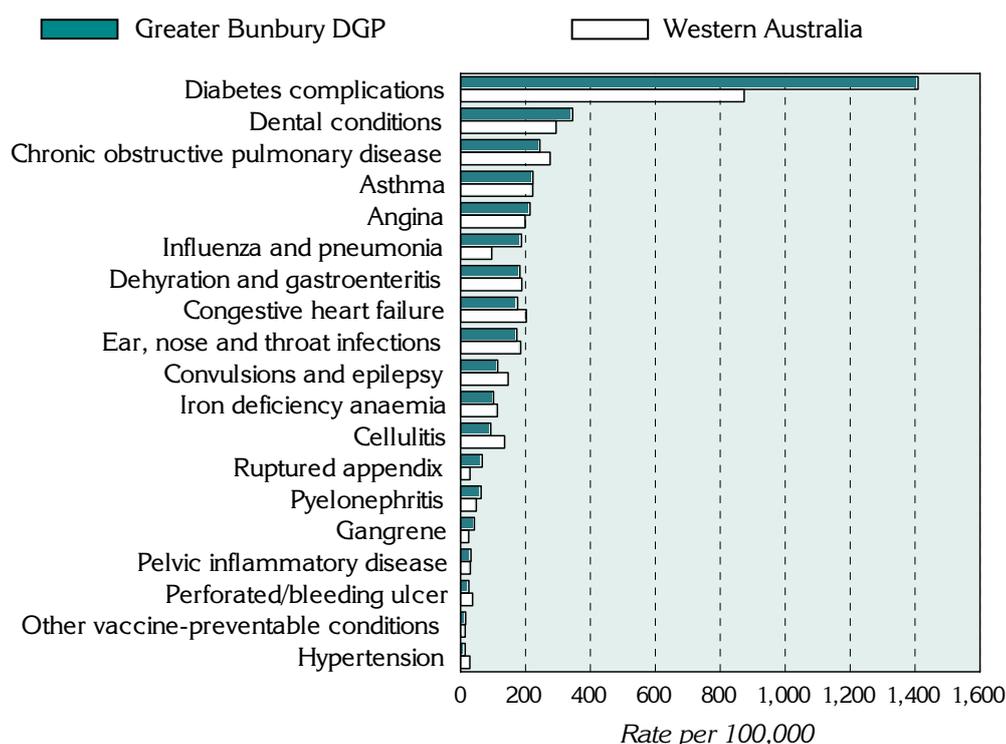
The rate of avoidable hospitalisations in Greater Bunbury DGP is markedly higher, a rate of 3,615.9 admissions per 100,000 population, compared to both Western Australia (a rate of 3,062.4) and Australia (2,847.5).

¹ Admissions resulting from ACS conditions

Diabetes complications, dental conditions and chronic obstructive pulmonary disease were the three conditions with the highest rates of avoidable hospitalisations in the Greater Bunbury DGP (Figure 8, Table 7). The rate for diabetes complications is over one and a half (1.6) times that for Western Australia as a whole.

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 hospitalisations¹ by condition, Greater Bunbury DGP and Western Australia, 2001/02



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

Table 7: Avoidable hospitalisations¹ by condition, Greater Bunbury DGP, Western Australia and Australia, 2001/02

Sub-category/ condition	Greater Bunbury DGP		Western Australia		Australia	
	No.	Rate ²	No.	Rate ²	No.	Rate ²
Vaccine-preventable	121	203.9	2,018	110.7	16,573	85.4
Influenza and pneumonia	111	187.9	1,743	96.2	13,021	67.1
Other vaccine preventable	10	16.0	275	14.5	3,552	18.3
Chronic³	1,349	2,382.7	33,628	1,915.6	352,545	1,816
Diabetes complications	796	1,409.1	15,323	873.6	141,345	728.1
Iron deficiency anaemia	58	101.7	2,009	113.4	16,451	84.7
Hypertension	8	14.5	510	29.0	6,354	32.7
Congestive heart failure	92	175.8	3,400	202.9	42,447	218.6
Angina	119	214.1	3,452	198.5	49,963	257.4
Chronic obstructive pulmonary disease	133	244.4	4,707	275.9	54,853	282.6
Asthma	143	223.1	4,227	222.3	41,009	211.3
Acute	712	1,140.6	21,021	1,121.4	200,913	1,035
Dehydration and gastroenteritis	107	182.6	3,443	188.7	37,766	194.5
Convulsions and epilepsy	72	114.6	2,779	146.7	31,137	160.4
Ear, nose and throat infections	113	173.5	3,550	185.3	32,075	165.2
Dental conditions	223	345.6	5,623	294.3	43,667	224.9
Perforated/bleeding ulcer	14	25.9	645	37.1	5,795	29.9
Ruptured appendix	44	67.0	566	29.4	3,866	19.9
Pyelonephritis	39	63.2	914	48.7	7,386	38.0
Pelvic inflammatory disease	20	32.2	577	30.2	6,547	33.7
Cellulitis	56	93.4	2,484	135.9	28,204	145.3
Gangrene	24	42.6	440	25.1	4,470	23.0
Total avoidable hospitalisations⁴	2,119	3,615.9	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 (70.0%) of all deaths in Greater Bunbury DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, lower than the proportion for country Western Australia (72.7%) (Table 8). However, the rate in the Division is markedly lower than that in country Western Australia, a differential of 0.78.

Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 28.1% of all deaths at ages 0 to 74 years in Greater Bunbury DGP, compared to 27.6% in country Western Australia.

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

Mortality category	Greater Bunbury DGP		Country WA		Western Australia		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Avoidable	476	182.2	5,122	233.8	16,602	201.0	189,845	211.8
% of total	70.0	..	72.7	..	71.2	..	71.5	..
(Amenable)	(191)	(73.4)	(1,943)	(89.6)	(6,517)	(79.6)	(76,249)	(85.1)
(% of total)	(28.1)	(..)	(27.6)	(..)	(28.0)	(..)	(28.7)	(..)
Unavoidable	204	78.4	1,925	88.3	6,708	81.6	75,582	84.3
% of total	30.0	..	27.3	..	28.8	..	28.5	..
Total mortality	680	260.6	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. Greater Bunbury DGP's rate of avoidable mortality for males was 214.8 deaths per 100,000 males, higher than the rate of 149.9 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 79.5, compared to 67.4, for females, a rate ratio of 1.18 (Figure 9, Table 9).

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

Note: the different scales

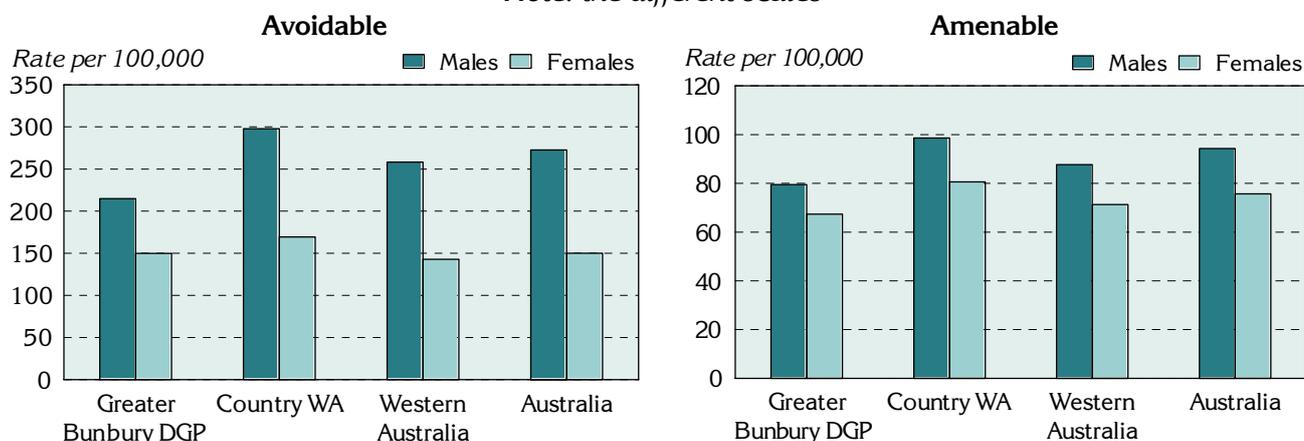


Table 9: Avoidable and amenable mortality (0 to 74 years) by sex, Greater Bunbury DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Mortality category and sex	Greater Bunbury DGP		Country WA		Western Australia		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Avoidable								
Males	286	214.8	3,426	297.9	10,850	258.3	123,026	272.6
Females	189	149.9	1,696	169.3	5,752	142.9	66,819	150.1
Total	476	182.2	5,122	233.8	16,602	201.0	189,845	211.8
Rate ratio-M:F²	..	1.43**	..	1.76**	..	1.81**	..	1.82**
Amenable								
Males	105	79.5	1,130	98.6	3,646	87.7	42,568	94.3
Females	85	67.4	813	80.6	2,871	71.3	33,681	75.7
Total	191	73.4	1,943	89.6	6,517	79.6	76,249	85.1
Rate ratio-M:F²	..	1.18	..	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 Greater Bunbury 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 70.8% of total YLL (0 to 74 years) for Greater Bunbury DGP, lower than the 73.2% for country Western Australia. The proportion of YLL from amenable mortality of 27.5% for Greater Bunbury DGP was higher than the 26.5% for country Western Australia.

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

Mortality category	Greater Bunbury DGP		Country WA		Western Australia		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	8,469	70.8	95,572	73.2	300,008	71.7	3,327,375	71.9
(Amenable)	(3,291)	(27.5)	(34,657)	(26.5)	(113,010)	(27.0)	(1,298,430)	(28.0)
Unavoidable	3,490	29.2	35,020	26.8	118,618	28.3	1,303,289	28.1
Total	11,959	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 1,170.4 deaths per 100,000 population in the Greater Bunbury 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 271.1 in the Greater Bunbury Division.

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

Mortality category and age (years)	Greater Bunbury DGP		Country WA		Western Australia		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Avoidable								
0-14	10	15.4	196	32.5	548	27.9	5,669	28.8
15-24	19	44.1	309	96.4	826	60.7	7,045	52.8
25-44	68	73.1	883	110.1	2,479	85.3	24,356	83.9
45-64	172	271.1	1,718	325.2	5,546	275.2	64,282	304.9
65-74	207	1,170.4	2,016	1360.4	7,203	1282.7	88,493	1,358.1
Total	476	182.2	5,122	233.8	16,602	201.0	189,845	211.8
Amenable								
0-24	9	8.3	153	15.6	454	13.8	5,083	15.4
25-44	18	18.8	223	28.3	594	20.5	5,946	20.5
45-64	77	122.0	706	135.1	2,381	118.5	27,464	130.3
65-74	87	490.8	861	585.9	3,088	550.9	37,756	579.4
Total	191	73.4	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 Greater Bunbury DGP were for cancer, with a rate of 65.9 deaths per 100,000 population, and cardiovascular diseases, 58.2 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 42.0 per 100,000 population and 24.3 per 100,000, respectively.

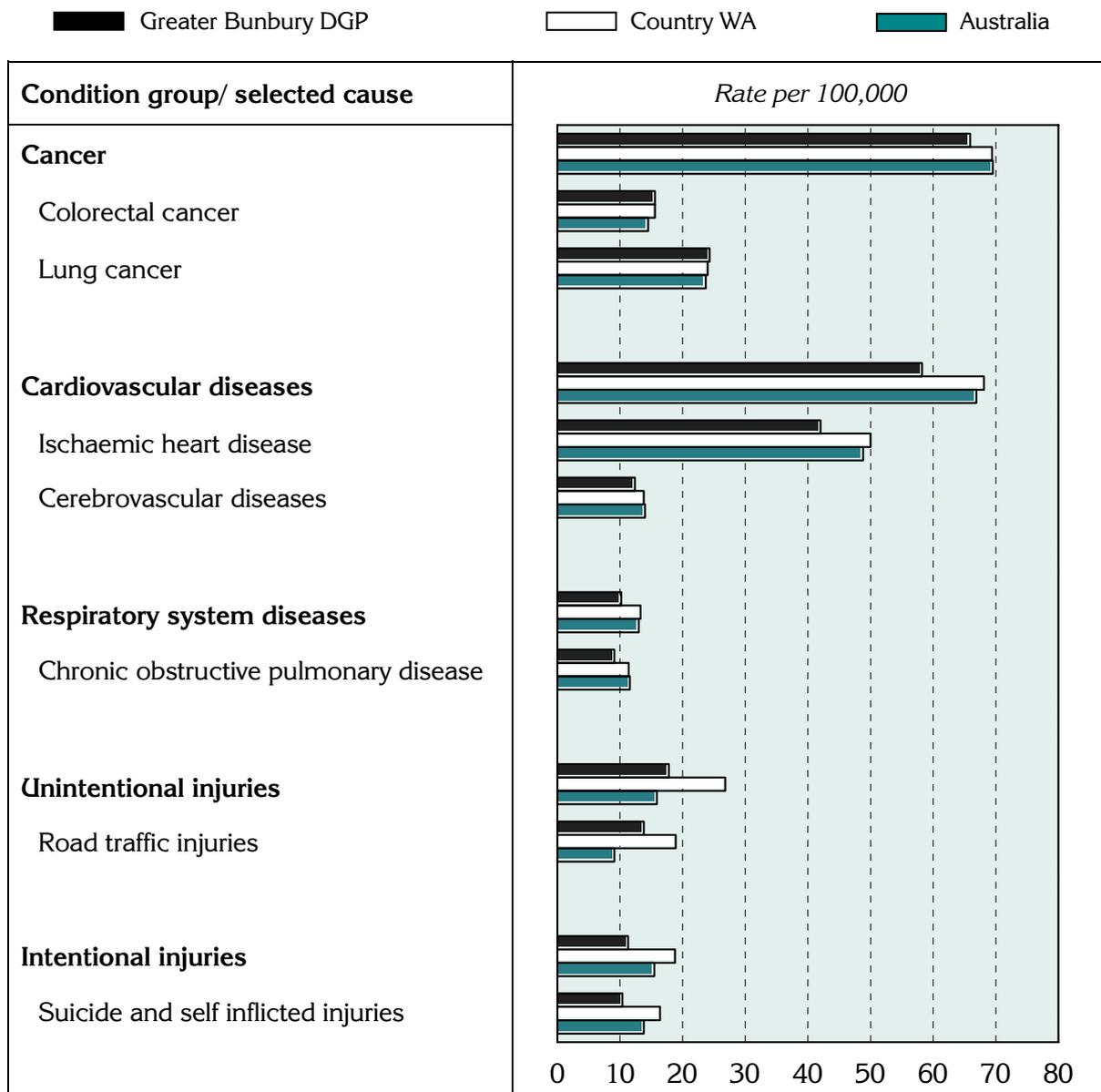
Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Greater Bunbury DGP, country Western Australia, Western Australia and Australia, 1997 to 2001

Condition group/ selected cause	Greater Bunbury DGP		Country WA		Western Australia		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Cancer	170	65.9	1,488	69.4	5,531	67.8	62,338	69.5
Colorectal cancer	40	15.6	335	15.6	1,189	14.6	13,008	14.5
Lung cancer	62	24.3	515	24.0	1,842	22.8	21,208	23.7
Cardiovascular diseases	148	58.2	1,456	68.1	4,750	58.9	59,945	66.9
Ischaemic heart disease	107	42.0	1,075	50.0	3,469	42.9	43,712	48.8
Cerebrovascular diseases	31	12.4	289	13.8	1,000	12.5	12,558	14.0
Respiratory system diseases	25	10.2	278	13.3	871	11.0	11,612	13.0
Chronic obstructive pulmonary disease	23	9.1	238	11.4	748	9.5	10,395	11.6
Unintentional injuries	50	17.8	626	26.8	1,549	17.5	14,224	15.9
Road traffic injuries	39	13.8	439	18.9	918	10.3	8,138	9.1
Intentional injuries	31	11.3	444	18.8	1,412	15.9	13,891	15.5
Suicide and self inflicted injuries	29	10.4	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 for the condition groups and selected causes were generally below, or consistent with, the rates for country Western Australia and Australia (Figure 10). The exceptions were unintentional injuries and road traffic accidents, for which rates in the Division were above those for Australia, although markedly lower than for country Western Australia as a whole.

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

Statistical geography of the Greater Bunbury 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, a number of Local Government Areas (LGAs) have been split into SLAs. For example, the LGA of Harvey comprises two SLAs – Part A (all of which is in the Division), and Part B (less than half of which is in the Division). Bunbury SLA and Donnybrook-Balingup SLA are equivalent to the LGAs of the same name.

These SLAs, and parts or all of the other SLAs listed in Table 14 comprise the Division.

Table 14: SLAs and population in Greater Bunbury 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
51190	Bunbury	100.0	31,865
51401	Capel - Part A	100.0	5,268
51404	Capel - Part B	100.0	4,300
52661	Dardanup - Part A	100.0	7,678
52664	Dardanup - Part B	100.0	2,746
52870	Donnybrook-Balingup	84.2	4,027
53991	Harvey - Part A	100.0	11,369
53994	Harvey - Part B	32.8	2,722

* 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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