

# Population health profile of the Pilbara

## 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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Enquiries about or comments on this publication should be addressed to:

PHIDU, The University of Adelaide, South Australia 5005  
Phone: 08-8303 6236 or e-mail: [PHIDU@publichealth.gov.au](mailto:PHIDU@publichealth.gov.au)

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Contributors: Anthea Page, Sarah Ambrose, Kristin Leahy and John Glover

# Population health profile of the Pilbara Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Pilbara 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 Pilbara 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:

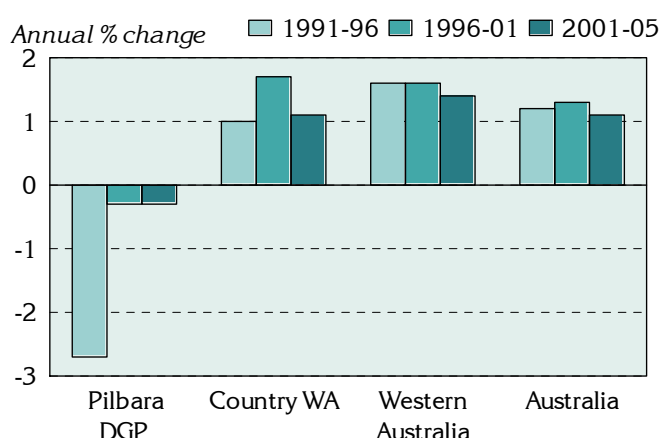
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions
- Avoidable mortality

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 Pilbara Division had an Estimated Resident Population of 38,712 June 2005.

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



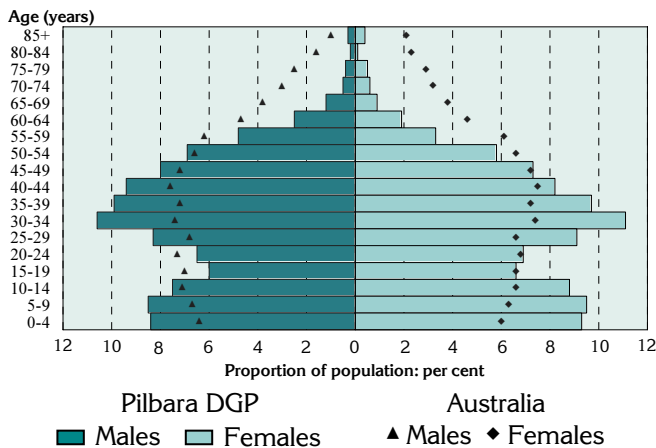
Over the five years from 1991 to 1996, the Division's population decreased by 2.7% on average each year, compared with increases in country Western Australia (1.0%) and Western Australia (1.6%). From 1996 to 2001 and from 2001 to 2005, the decrease was 0.3%, again compared with increases for country Western Australia and Western Australia.

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

Age group (years)	Pilbara DGP		Australia	
	No.	%	No.	%
0-14	10,003	25.8	3,978,221	19.6
15-24	5,010	12.9	2,819,834	13.9
25-44	14,772	38.2	5,878,107	28.9
45-64	7,918	20.5	4,984,446	24.5
65-74	630	1.6	1,398,831	6.9
75-84	255	0.7	954,143	4.7
85+	124	0.3	315,027	1.5
<b>Total</b>	<b>38,712</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 below (Figure 2), the Pilbara DGP had relatively more 0 to 14 year olds (25.8%) and 25 to 44 year olds (38.2%) compared Australia as a whole (19.6% and 28.9%) (Table 1). Conversely, the proportions of the Division's population aged 45 years and older were below than those for Australia.

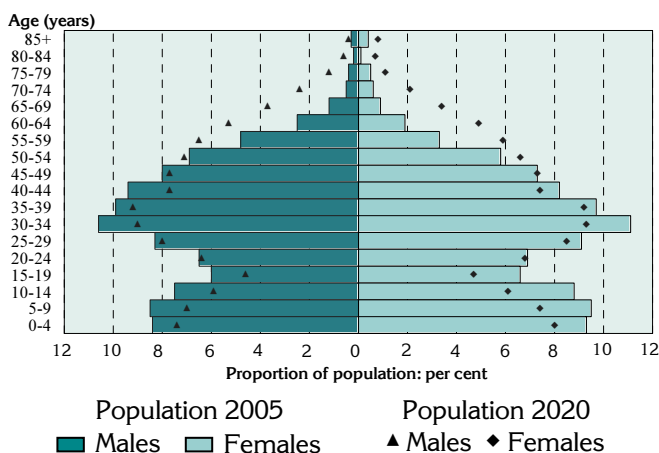
**Figure 2: Population in Pilbara DGP and Australia, by age and sex, 2005**



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

- at younger ages – substantially higher more children aged 0 to 14 years (particularly females);
- from 15 to 24 years – relatively fewer males, but not females;
- from 25 to 49 years – noticeably higher proportions of males and females, particularly 30 to 39 year olds; and
- from 55 years of age – substantially fewer males and females.

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



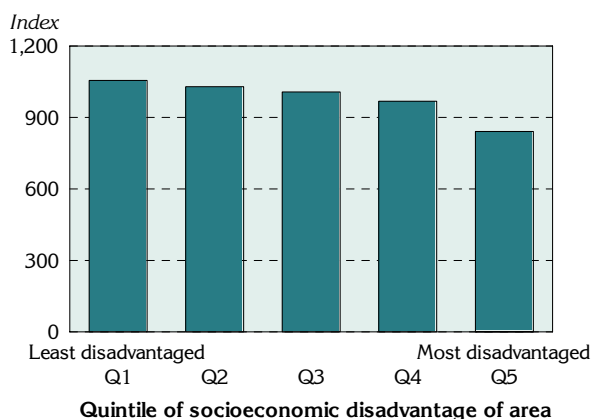
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- at younger ages – relatively more children and young people, aged 0 to 19 years;
- from 25 to 44 years – relatively fewer males and females; and
- from 50 years of age – relatively more males and females, particularly between the ages of 55 and 69 years.

## Additional socio-demographic indicators

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



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

The Pilbara DGP has an index score of 978, below the score for Australia of 1000: this score varies across the Division, from a low of 841 in the most disadvantaged areas to 1055 in the least disadvantaged areas.

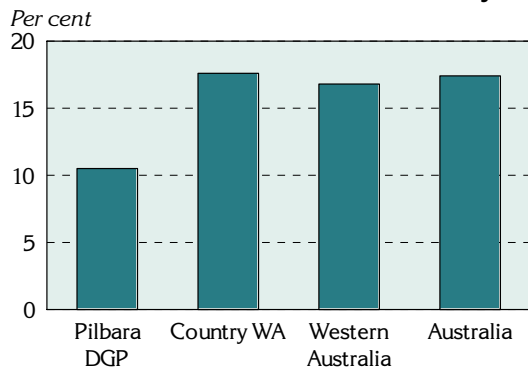
Note: each 'quintile' comprises approximately 20% of the population of the Division.

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 fewer jobless families in the Pilbara DGP (10.5%), compared to country Western Australia as a whole (17.6%) (Figure 5, Table 2).

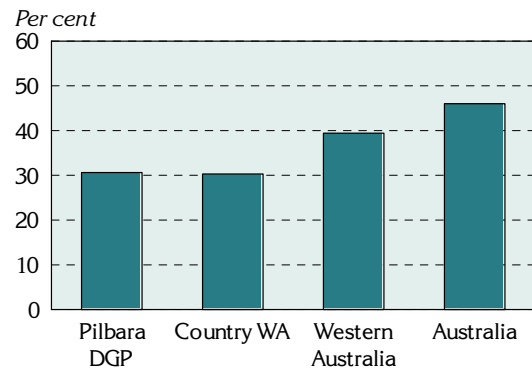
With the introduction of the 30% rebate for private health insurance premiums, there was a once-off registration process, providing information of the postcode and residence of those who had such insurance (these data are not available at this area level for later dates). In 2001, the proportion of the population in the Division with private health insurance (30.6%) was consistent with that in country Western Australia (30.3%) (Figure 5, Table 2).

**Figure 5: Socio-demographic indicators, Pilbara 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, Pilbara DGP, country Western Australia, Western Australia and Australia, 2001**

Indicator	Pilbara DGP		Country WA		Western Australia		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	517	10.5	10,142	17.6	34,396	16.8	357,563	17.4
Private health insurance (30 June)	12,827	30.6	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, Pilbara DGP, 2001**



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



## GP services to residents of the Pilbara 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.

Over four fifths (84.2%) of all unreferred attendances to residents of Pilbara DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 92,876 GP unreferred attendances (Table 3). GPs with provider numbers in the Perth Hills DGP and Osborne DGP provided residents with 2.6% and 2.1% of unreferred attendances, respectively.

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

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
614	Pilbara DGP	92,876	84.2
601	Perth & Hills DGP	2,915	2.6
603	Osborne DGP	2,309	2.1
604	Canning DGP	2,052	1.9
605	Fremantle Regional DGP	1,756	1.6
612	Mid West DGP	1,059	1.0
602	GP Coastal DGP	1,050	1.0
610	Kimberley DGP	785	0.7
Other	..	5,503	5.0
<b>Total</b>	<b>..</b>	<b>110,305</b>	<b>100.0</b>

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

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

<sup>3</sup> Proportion of all unreferred attendances of patients with an address in Division 614 by Division in which attendance occurred

The majority (88.1%) of unreferred attendances provided by GPs with a provider number in Pilbara DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). A further 1.4% of unreferred attendances by GPs in the Division were to people living in Mid West DGP and 1.3% of unreferred attendances were to residents from Canning DGP.

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

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
614	Pilbara DGP	92,876	88.1
612	Mid West DGP	1,510	1.4
604	Canning DGP	1,393	1.3
601	Perth & Hills DGP	1,280	1.2
603	Osborne DGP	1,250	1.2
605	Fremantle Regional DGP	802	0.8
Other	..	6,269	5.9
<b>Total</b>	<b>..</b>	<b>105,380</b>	<b>100.0</b>

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

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

<sup>3</sup> Proportion of all unreferred attendances to GPs with a provider number in Division 614 by Division of patient address

## 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, 2,273 admissions from ambulatory care sensitive (ACS) conditions accounted for 16.6% of all admissions in the Pilbara DGP (Table 5, Figure 6), almost twice the level in Western Australia (8.8) and Australia (8.7%).

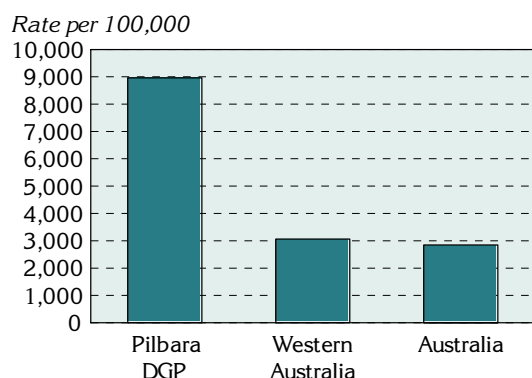
**Table 5: Avoidable<sup>1</sup> and unavoidable hospitalisations, Pilbara DGP, Western Australia, and Australia, 2001/02**

Category	Pilbara DGP			Western Australia			Australia		
	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%
Avoidable <sup>1</sup>	2,273	8,964.0	16.6	55,102	3,062.4	8.8	552,786	2,847.5	8.7
Unavoidable	11,437	39,283.1	83.4	568,402	31,010.0	91.2	5,818,199	29,970.7	91.3
<b>Total</b>	<b>13,710</b>	<b>47,623.4</b>	<b>100.0</b>	<b>623,504</b>	<b>34,070.5</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 6: Avoidable hospitalisations<sup>1</sup>, Pilbara DGP, Western Australia and Australia, 2001/02**



The rate of avoidable hospitalisations in Pilbara DGP is substantially higher (almost three times), a rate of 8,964.0 admissions per 100,000 population, compared to Western Australia (a rate of 3,062.4) and over three times the rate for Australia (2,847.5).

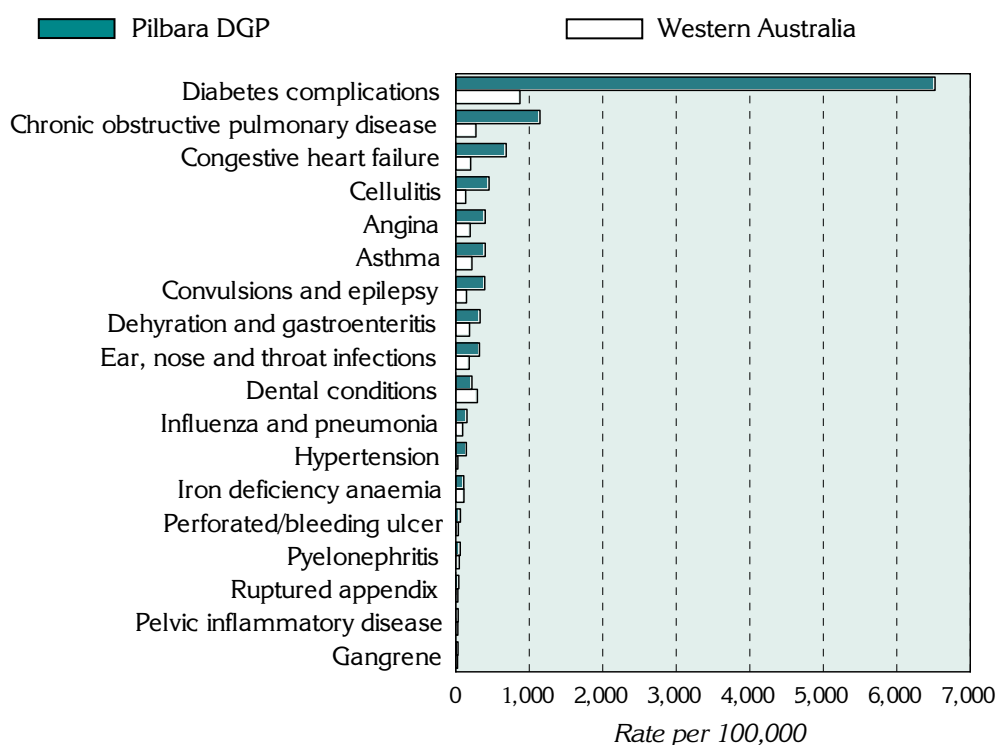
<sup>1</sup> Admissions resulting from ACS conditions

Diabetes complications, chronic obstructive pulmonary disease (COPD), congestive heart failure and cellulitis, were the conditions with the highest rates of avoidable hospitalisations in the Division (Figure 7, Table 6). The rate for diabetes complications is over seven (7.5) times that for Western Australia as a whole: for COPD the differential is 4.2, for congestive heart failure it is 3.1 and for cellulitis it is 3.2.

Table 6 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. Cellulitis and, convulsions and epilepsy, have the highest rates of avoidable hospitalisations for the acute conditions.



Figure 7: Avoidable hospitalisations<sup>1</sup> by condition, Pilbara DGP and Western Australia, 2001/02



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

Table 6: Avoidable hospitalisations<sup>1</sup> by condition, Pilbara DGP, Western Australia and Australia, 2001/02

Sub-category/ condition	Pilbara DGP		Western Australia		Australia	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
<b>Vaccine-preventable</b>	<b>43</b>	<b>154.2</b>	<b>2,018</b>	<b>110.7</b>	<b>16,573</b>	<b>85.4</b>
Influenza and pneumonia	43	154.2	1,743	96.2	13,021	67.1
Other vaccine preventable	#	..	275	14.5	3,552	18.3
<b>Chronic<sup>3</sup></b>	<b>1,581</b>	<b>9,417.3</b>	<b>33,628</b>	<b>1,915.6</b>	<b>352,545</b>	<b>1,816</b>
Diabetes complications	1,115	6,521.0	15,323	873.6	141,345	728.1
Iron deficiency anaemia	21	109.8	2,009	113.4	16,451	84.7
Hypertension	26	146.2	510	29.0	6,354	32.7
Congestive heart failure	58	688.2	3,400	202.9	42,447	218.6
Angina	60	402.7	3,452	198.5	49,963	257.4
Chronic obstructive pulmonary disease	129	1,147.9	4,707	275.9	54,853	282.6
Asthma	172	401.5	4,227	222.3	41,009	211.3
<b>Acute</b>	<b>706</b>	<b>1,961.8</b>	<b>21,021</b>	<b>1,121.4</b>	<b>200,913</b>	<b>1,035</b>
Dehydration and gastroenteritis	92	332.3	3,443	188.7	37,766	194.5
Convulsions and epilepsy	164	395.5	2,779	146.7	31,137	160.4
Ear, nose and throat infections	153	324.7	3,550	185.3	32,075	165.2
Dental conditions	96	221.0	5,623	294.3	43,667	224.9
Perforated/bleeding ulcer	10	63.9	645	37.1	5,795	29.9
Ruptured appendix	17	41.6	566	29.4	3,866	19.9
Pyelonephritis	21	61.3	914	48.7	7,386	38.0
Pelvic inflammatory disease	14	34.9	577	30.2	6,547	33.7
Cellulitis	133	453.7	2,484	135.9	28,204	145.3
Gangrene	6	32.9	440	25.1	4,470	23.0
<b>Total avoidable hospitalisations<sup>4</sup></b>	<b>2,273</b>	<b>8,964.0</b>	<b>55,102</b>	<b>3,062.4</b>	<b>552,786</b>	<b>2,847.5</b>

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

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

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

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

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



## Avoidable mortality

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

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

Over two thirds (72.9%) of all deaths in Pilbara 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 7). However, the rate in the Division is markedly higher than that in country Western Australia, a differential of 1.27.

Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 28.0% of all deaths at ages 0 to 74 years in Pilbara DGP, compared to 27.6% in country Western Australia.

**Table 7: Avoidable and unavoidable mortality (0 to 74 years) by area, Pilbara DGP, country Western Australia, Western Australia and Australia, 1997 to 2001**

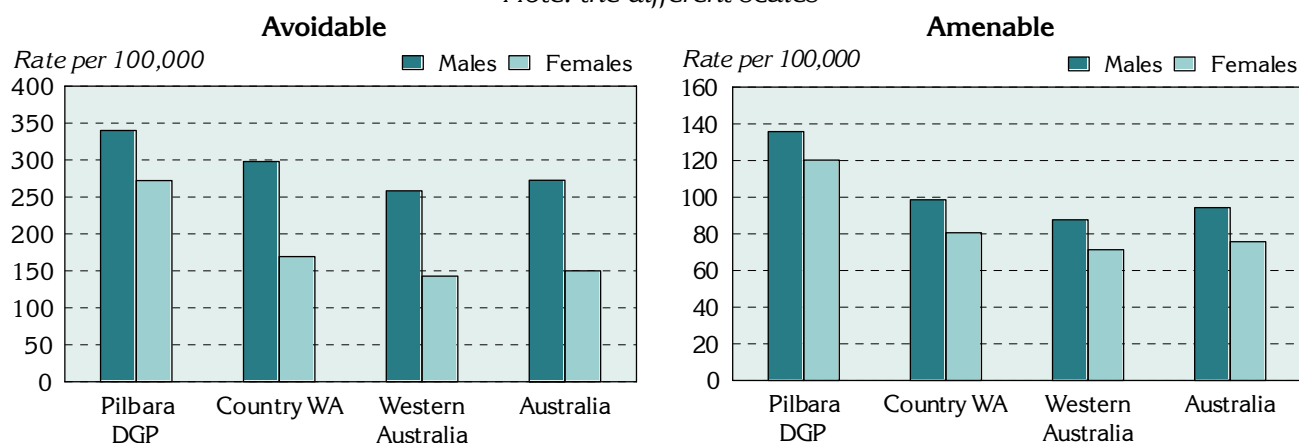
Mortality category	Pilbara DGP		Country WA		Western Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
Avoidable	318	296.1	5,122	233.8	16,602	201.0	189,845	211.8
% of total	72.9	..	72.7	..	71.2	..	71.5	..
(Amenable)	(122)	(127.2)	(1,943)	(89.6)	(6,517)	(79.6)	(76,249)	(85.1)
(% of total)	(28.0)	(..)	(27.6)	(..)	(28.0)	(..)	(28.7)	(..)
Unavoidable	118	117.1	1,925	88.3	6,708	81.6	75,582	84.3
% of total	27.1	..	27.3	..	28.8	..	28.5	..
<b>Total mortality</b>	<b>436</b>	<b>413.2</b>	<b>7,047</b>	<b>322.1</b>	<b>23,310</b>	<b>282.6</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. Pilbara DGP's rate of avoidable mortality for males was 340.0 deaths per 100,000 males, higher than the rate of 272.2 for females. The rate of amenable mortality for males in the Division was also higher, 135.8, compared to 120.2, for females, a rate ratio of 1.13 (Figure 8, Table 8).

**Figure 8: Avoidable and amenable mortality by sex (0 to 74 years), Pilbara DGP, country Western Australia, Western Australia and Australia, 1997 to 2001**

*Note: the different scales*



**Table 8: Avoidable and amenable mortality (0 to 74 years) by sex, Pilbara DGP, country Western Australia, Western Australia and Australia, 1997 to 2001**

Mortality category and sex	Pilbara DGP		Country WA		Western 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	208	340.0	3,426	297.9	10,850	258.3	123,026	272.6
Females	110	272.2	1,696	169.3	5,752	142.9	66,819	150.1
<b>Total</b>	<b>318</b>	<b>296.1</b>	<b>5,122</b>	<b>233.8</b>	<b>16,602</b>	<b>201.0</b>	<b>189,845</b>	<b>211.8</b>
<b>Rate ratio–M:F<sup>2</sup></b>	<b>..</b>	<b>1.25</b>	<b>..</b>	<b>1.76**</b>	<b>..</b>	<b>1.81**</b>	<b>..</b>	<b>1.82**</b>
<b>Amenable</b>								
Males	73	135.8	1,130	98.6	3,646	87.7	42,568	94.3
Females	49	120.2	813	80.6	2,871	71.3	33,681	75.7
<b>Total</b>	<b>122</b>	<b>127.2</b>	<b>1,943</b>	<b>89.6</b>	<b>6,517</b>	<b>79.6</b>	<b>76,249</b>	<b>85.1</b>
<b>Rate ratio–M:F<sup>2</sup></b>	<b>..</b>	<b>1.13</b>	<b>..</b>	<b>1.22**</b>	<b>..</b>	<b>1.23**</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 Pilbara DGP, country Western Australia, Western Australia and Australia over the period of analysis are shown in Table 9 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 73.4% of total YLL (0 to 74 years) for Pilbara DGP, marginally higher than the 73.2% for country Western Australia. The proportion of YLL from amenable mortality of 28.2% for Pilbara DGP was higher than the 26.5% for country Western Australia.

**Table 9: Years of life lost from avoidable mortality (0 to 74 years), Pilbara DGP, country Western Australia, Western Australia and Australia, 1997 to 2001**

Mortality category	Pilbara DGP		Country WA		Western Australia		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	6,919	73.4	95,572	73.2	300,008	71.7	3,327,375	71.9
(Amenable)	(2,664)	(28.2)	(34,657)	(26.5)	(113,010)	(27.0)	(1,298,430)	(28.0)
Unavoidable	2,511	26.6	35,020	26.8	118,618	28.3	1,303,289	28.1
<b>Total</b>	<b>9,430</b>	<b>100.0</b>	<b>130,592</b>	<b>100.0</b>	<b>418,625</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 10), with 2,130.5 deaths per 100,000 population in the Pilbara 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 388.9 in the Pilbara Division.

**Table 10: Avoidable and amenable mortality by age, Pilbara DGP, country Western Australia, Western Australia and Australia, 1997 to 2001**

Mortality category and age (years)	Pilbara DGP		Country WA		Western 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	32	54.0	196	32.5	548	27.9	5,669	28.8
15-24	19	66.8	309	96.4	826	60.7	7,045	52.8
25-44	97	115.5	883	110.1	2,479	85.3	24,356	83.9
45-64	113	388.9	1,718	325.2	5,546	275.2	64,282	304.9
65-74	57	2,130.5	2,016	1360.4	7,203	1282.7	88,493	1,358.1
<b>Total</b>	<b>318</b>	<b>296.1</b>	<b>5,122</b>	<b>233.8</b>	<b>16,602</b>	<b>201.0</b>	<b>189,845</b>	<b>211.8</b>
<b>Amenable</b>								
0-24	24	25.5	153	15.6	454	13.8	5,083	15.4
25-44	32	40.8	223	28.3	594	20.5	5,946	20.5
45-64	40	147.1	706	135.1	2,381	118.5	27,464	130.3
65-74	26	979.1	861	585.9	3,088	550.9	37,756	579.4
<b>Total</b>	<b>122</b>	<b>127.2</b>	<b>1,943</b>	<b>89.6</b>	<b>6,517</b>	<b>79.6</b>	<b>76,249</b>	<b>85.1</b>

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

Table 11 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 Pilbara DGP were for cardiovascular diseases, with a rate of 106.8 deaths per 100,000 population, and cancer, 61.4 deaths per 100,000 population (Table 11, Figure 9). For the selected causes within the condition groups, the two major causes of avoidable mortality were ischaemic heart disease and cerebrovascular diseases, with rates of 72.7 per 100,000 population and 30.9 per 100,000, respectively.

**Table 11: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Pilbara DGP, country Western Australia, Western Australia and Australia, 1997 to 2001**

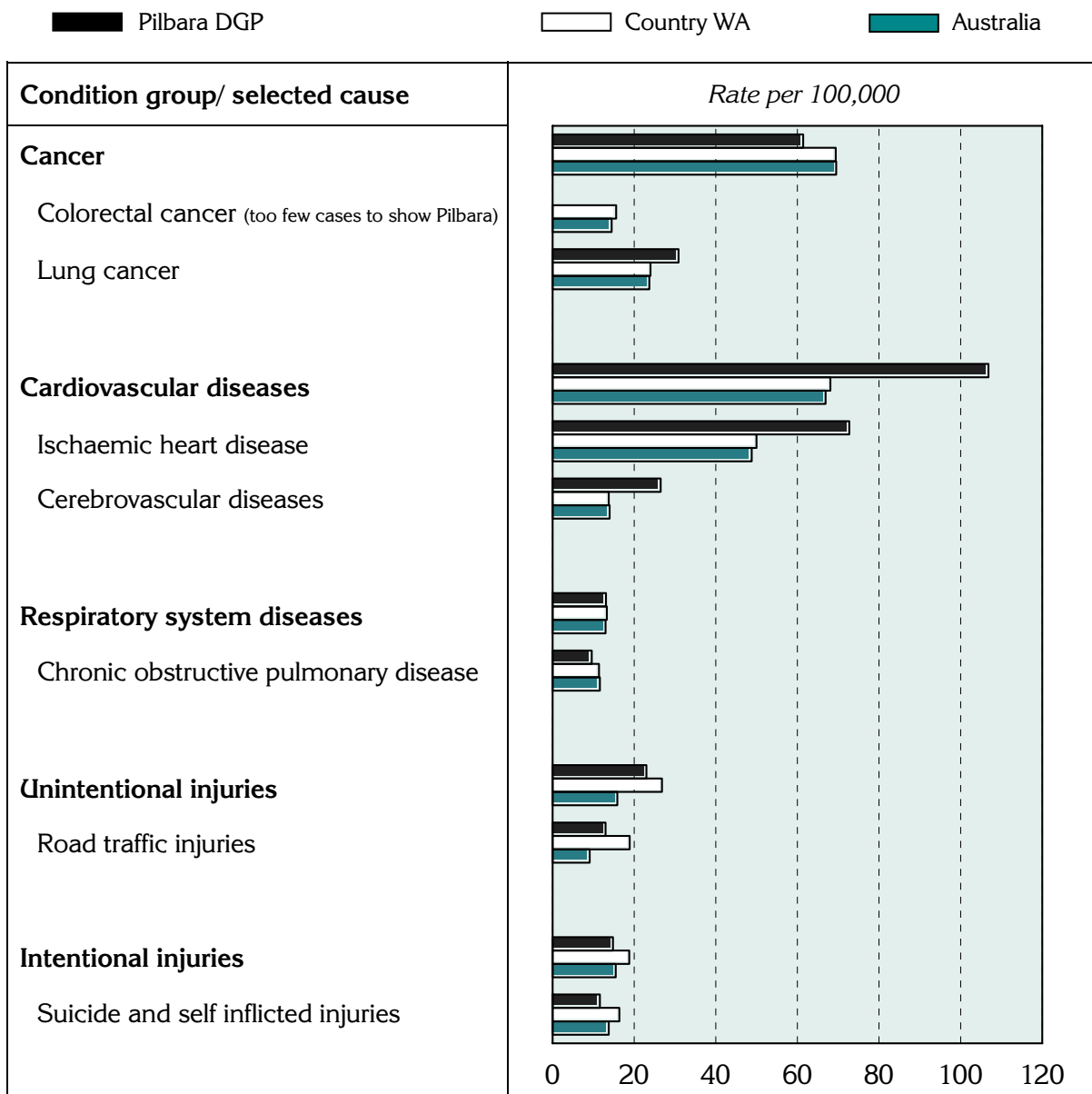
Condition group/ selected cause	Pilbara DGP		Country WA		Western Australia		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
<b>Cancer</b>	<b>51</b>	<b>61.4</b>	<b>1,488</b>	<b>69.4</b>	<b>5,531</b>	<b>67.8</b>	<b>62,338</b>	<b>69.5</b>
Colorectal cancer	#	..	335	15.6	1,189	14.6	13,008	14.5
Lung cancer	23	30.9	515	24.0	1,842	22.8	21,208	23.7
<b>Cardiovascular diseases</b>	<b>82</b>	<b>106.8</b>	<b>1,456</b>	<b>68.1</b>	<b>4,750</b>	<b>58.9</b>	<b>59,945</b>	<b>66.9</b>
Ischaemic heart disease	57	72.7	1,075	50.0	3,469	42.9	43,712	48.8
Cerebrovascular diseases	19	26.5	289	13.8	1,000	12.5	12,558	14.0
<b>Respiratory system diseases</b>	<b>8</b>	<b>13.1</b>	<b>278</b>	<b>13.3</b>	<b>871</b>	<b>11.0</b>	<b>11,612</b>	<b>13.0</b>
Chronic obstructive pulmonary disease	5	9.6	238	11.4	748	9.5	10,395	11.6
<b>Unintentional injuries</b>	<b>47</b>	<b>23.0</b>	<b>626</b>	<b>26.8</b>	<b>1,549</b>	<b>17.5</b>	<b>14,224</b>	<b>15.9</b>
Road traffic injuries	26	13.0	439	18.9	918	10.3	8,138	9.1
<b>Intentional injuries</b>	<b>31</b>	<b>14.8</b>	<b>444</b>	<b>18.8</b>	<b>1,412</b>	<b>15.9</b>	<b>13,891</b>	<b>15.5</b>
Suicide and self inflicted injuries	25	11.6	386	16.4	1,270	14.3	12,393	13.8

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

# nil, or less than half the final digit shown

Rates in the Division for the condition groups and selected causes were generally above, or consistent with, the rates for country Western Australia and Australia (Figure 10). The exceptions were, for Australia, cancer (total), COPD and suicide and self inflicted injuries; and for country Western Australia, cancer (total), COPD and all of the unintentional and intentional injury groups and selected causes.

**Figure 9: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Pilbara 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 12 details the data sources for the material presented in this profile.

**Table 12: 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>Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions</b>	
Tables 5 and 6; Figures 6 and 7	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 7, 8, 9, 10 and 11; Figures 8 and 9	ABS Deaths 1997-2001; data produced in HealthWIZ by Prometheus Information (not available in public release dataset)

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

## Methods

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

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

## Mapping

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

## Statistical geography of the Pilbara 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 the Pilbara, SLAs are of the same size or, generally, smaller than local government areas (LGAs). The SLAs comprising the Division are listed in Table 13.

**Table 13: SLAs and population in Pilbara 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
50250	Ashburton	90.5	5,445
53220	East Pilbara	100.0	5,814
57280	Port Hedland	100.0	12,133
57560	Roebourne	100.0	15,320

\* 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

For general comments, data issues or enquiries re information on the web site, please contact PHIDU:

Phone: 08-8303 6236 or e-mail: [PHIDU@publichealth.gov.au](mailto:PHIDU@publichealth.gov.au)