

# Population health profile of the Hunter Urban

## Division of General Practice: supplement

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Australian Government

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# Population health profile

## of the Hunter Urban Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Hunter Urban 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 Hunter Urban Division of General Practice, as well as additional indicators and aspects of the Division's socioeconomic status, use of GP services and health. The contents are:

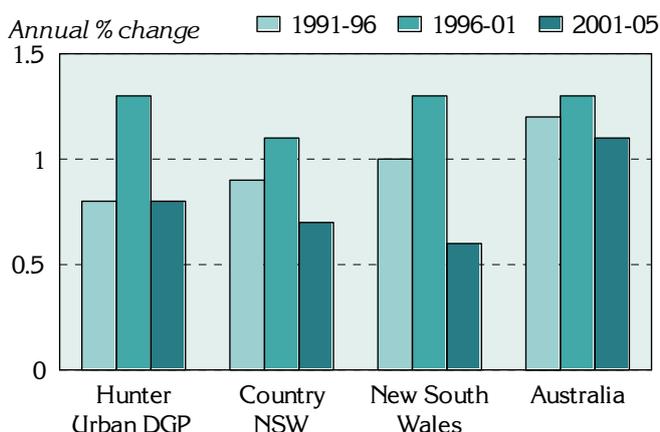
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive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

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

## Population

The Hunter Urban Division had an Estimated Resident Population of 448,515 at 30 June 2005.

**Figure 1: Annual population change, Hunter Urban DGP, country New South Wales, New South Wales and Australia, 1991 to 1996, 1996 to 2001 and 2001 to 2005**



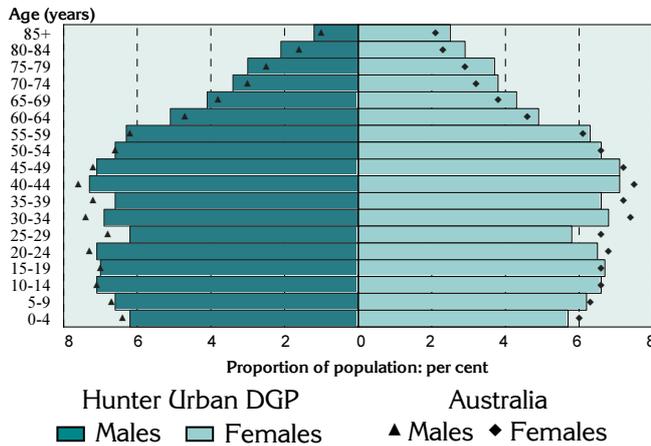
Over the five years from 1991 to 1996, the Division's population increased by 0.8% on average each year, lower than for country New South Wales (0.9%), and New South Wales (1.0%) and Australia as a whole (1.2%). From 1996 to 2001, the annual percentage increase in the Division of 1.3% was higher than for country New South Wales (1.1%) and equal to that in New South Wales and Australia. The lower growth rate (0.8% per year) from 2001 to 2005 was again higher than for country New South Wales (0.7%) and New South Wales (0.6%).

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

Age group (years)	Hunter Urban DGP		Australia	
	No.	%	No.	%
0-14	86,078	19.2	3,978,221	19.6
15-24	61,320	13.7	2,819,834	13.9
25-44	119,742	26.7	5,878,107	28.9
45-64	111,811	24.9	4,984,446	24.5
65-74	34,976	7.8	1,398,831	6.9
75-84	26,189	5.8	954,143	4.7
85+	8,400	1.9	315,027	1.5
<b>Total</b>	<b>448,515</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), Hunter Urban DGP had similar proportions of its population in the two youngest age groups and lower proportions at ages 25 to 44 years (26.7%) compared to Australia (28.9%). Conversely, the 65 years and over age groups had higher proportions compared to Australia as a whole.

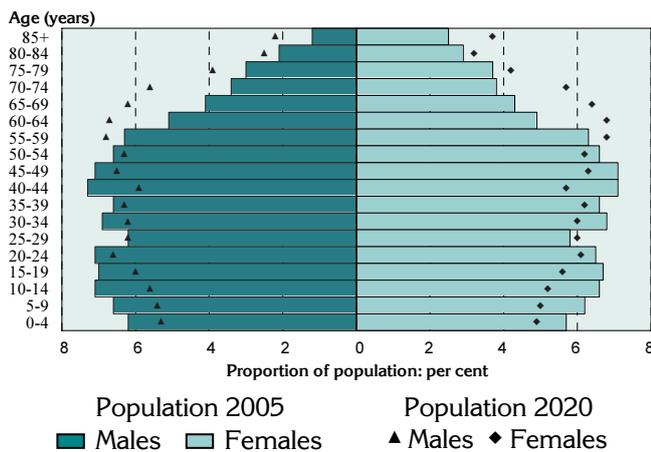
**Figure 2: Population in Hunter Urban DGP and Australia, by age and sex, 2005**



The age distribution of the Division's population is similar to that for Australia overall. The most notable differences are:

- at the youngest ages – a marginally lower proportion of children aged 0 to 4 years;
- from 25 to 44 years – notably lower proportions of both males and females; and
- at older ages – slightly higher proportions of both males aged 60 years and over, and females aged 55 years and over.

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



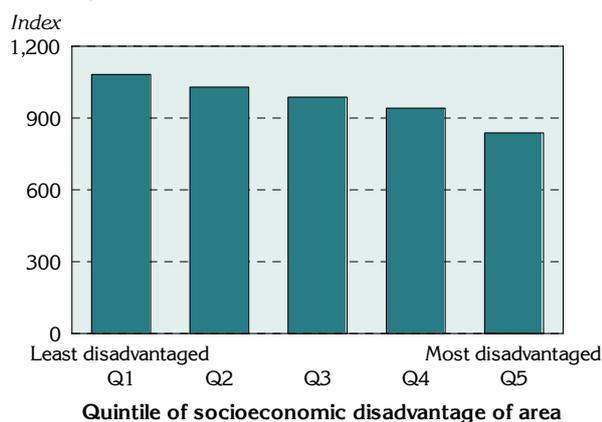
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- at younger ages – generally much lower proportions of males and females aged 0 to 24 years and 30 to 54 years; and
- from 55 years onwards – higher proportions of males and females (most pronounced at ages 60 to 74 years, and for the 85+ age group).

## Additional socio-demographic indicators

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



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

The Hunter Urban DGP has an index score of 975, below the score for Australia of 1000: this score varies widely across the Division, from 838 in the most disadvantaged areas to 1082 in the least disadvantaged areas.

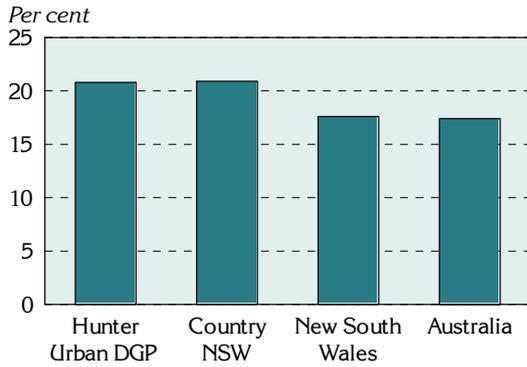
Note: each 'quintile' comprises approximately 20% of the population of the Division.

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. The level of jobless families in the Hunter Urban DGP (20.8%) was consistent with that in country New South Wales as a whole (20.9%), although above the levels in New South Wales and Australia as a whole (Figure 5, Table 2).

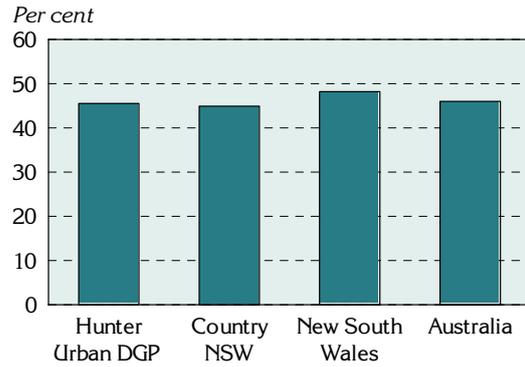
With the introduction of the 30% rebate for private health insurance premiums, there was a once-off registration process, providing information of the postcode and residence of those who had such insurance (these data are not available at this area level for later dates). In 2001, the Division had a marginally higher proportion of the population with private health insurance (45.5%), compared to country New South Wales (44.9%) (Figure 5, Table 2).

**Figure 5: Socio-demographic indicators, Hunter Urban DGP, country New South Wales, New South Wales and Australia, 2001**

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



**Private health insurance, 30 June**

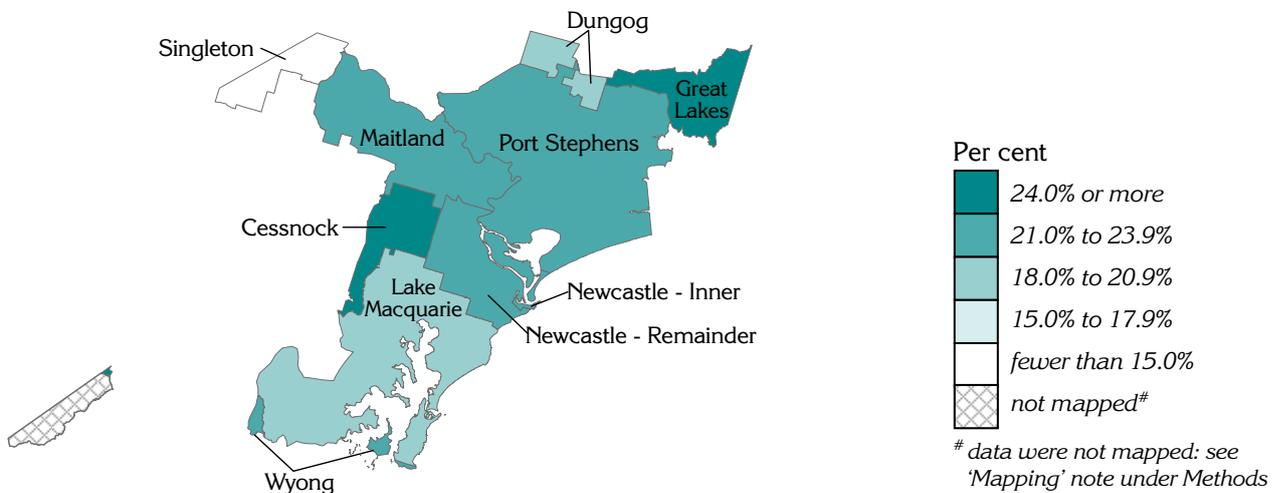


**Table 2: Socio-demographic indicators, Hunter Urban DGP, country New South Wales, New South Wales and Australia, 2001**

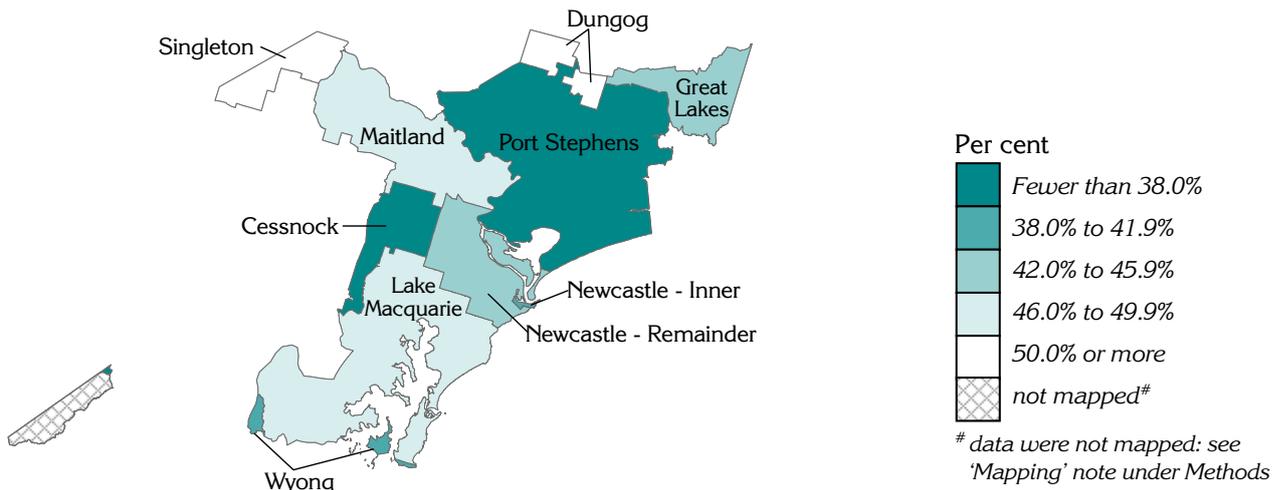
Indicator	Hunter Urban DGP		Country NSW		New South Wales		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	9,539	20.8	54,883	20.9	121,409	17.6	357,563	17.4
Private health insurance (30 June)	186,554	45.5	1,061,580	44.9	3,062,382	48.2	8,671,106	46.0

Details of the distribution of jobless families and of the population covered by private health insurance 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, Hunter Urban DGP, 2001**



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



## GP services to residents of the Hunter Urban DGP

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

The majority (93.6%) of all unreferred attendances to residents of Hunter Urban DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 1,832,814 GP unreferred attendances. A further 1.8% of unreferred attendances to residents were provided by GPs with a provider number in Hunter Rural DGP, with 0.8% provided by GPs in Central Coast DGP.

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

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
217	Hunter Urban DGP	1,832,814	93.6
218	Hunter Rural DGP	36,220	1.8
219	Central Coast DGP	16,416	0.8
206	Western Sydney DGP (now WentWest & part Hawkesbury-Hills)	6,507	0.3
201	Central Sydney DGP	5,837	0.3
Other	..	60,638	3.1
<b>Total</b>	<b>..</b>	<b>1,958,432</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 217 by Division in which attendance occurred

The majority (93.9%) of unreferred attendances provided by GPs with a provider number in Hunter Urban DGP were also to people living in the Division (ie. their Medicare address was in the Division). A further 3.0% of unreferred attendances by GPs in the Division were to people living in Hunter Rural DGP, with 1.1% to residents of Central Coast DGP.

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

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
217	Hunter Urban DGP	1,832,814	93.9
218	Hunter Rural DGP	58,326	3.0
219	Central Coast DGP	21,516	1.1
206	Western Sydney DGP (now WentWest & part Hawkesbury-Hills)	2,192	0.1
223	Hastings Macleay DGP	2,048	0.1
Other	..	35,411	1.8
<b>Total</b>	<b>..</b>	<b>1,952,307</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 217 by Division of patient address

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

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

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

It is estimated that there were relatively more people in Hunter Urban DGP who had asthma and were smokers, compared to Australia as a whole, with a similar rate to that in country New South Wales (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher than the national rates. Similarly, there were higher rates in Hunter Urban DGP of people who had type 2 diabetes and were overweight or obese, compared to country New South Wales and Australia.

**Figure 6: Estimates of selected chronic diseases and risk factors, Hunter Urban DGP, country New South Wales and Australia, 2001**



**Table 5: Estimates of selected chronic diseases and risk factors, Hunter Urban DGP, country New South Wales, New South Wales and Australia, 2001**

Variable	Hunter Urban DGP		Country NSW		New South Wales		Australia	
	No. <sup>1</sup>	Rate <sup>2</sup>	No. <sup>1</sup>	Rate <sup>2</sup>	No. <sup>1</sup>	Rate <sup>2</sup>	No. <sup>1</sup>	Rate <sup>1</sup>
Had asthma and smoked <sup>3</sup>	9,990	24.4	54,344	24.7	126,542	19.7	397,734	20.8
Had type 2 diabetes & were overweight/ obese <sup>4</sup>	7,800	17.5	40,784	15.5	100,235	15.7	283,176	15.2

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

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

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

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

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

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

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

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

In 2001 to 2002, the 9,479 admissions for ambulatory care sensitive (ACS) conditions accounted for 7.6% of all admissions in the Hunter Urban DGP (Table 6, Figure 7), notably below the levels for both New South Wales (8.6%) and Australia (8.7%).

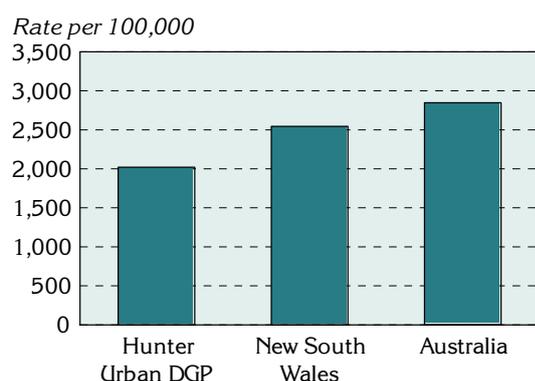
**Table 6: Avoidable<sup>1</sup> and unavoidable hospitalisations, Hunter Urban DGP, New South Wales, and Australia, 2001/02**

Category	Hunter Urban DGP			New South Wales			Australia		
	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%
Avoidable <sup>1</sup>	9,479	2,021.9	7.6	170,066	2,543.8	8.6	552,786	2,847.5	8.7
Unavoidable	115,148	25,356.8	92.4	1,810,901	27,255.3	91.4	5,818,199	29,970.7	91.3
<b>Total</b>	<b>124,627</b>	<b>27,367.3</b>	<b>100.0</b>	<b>1,980,967</b>	<b>29,798.8</b>	<b>100.0</b>	<b>6,370,985</b>	<b>32,818.2</b>	<b>100.0</b>

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

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

**Figure 7: Avoidable hospitalisations<sup>1</sup>, Hunter Urban DGP, New South Wales and Australia, 2001/02**



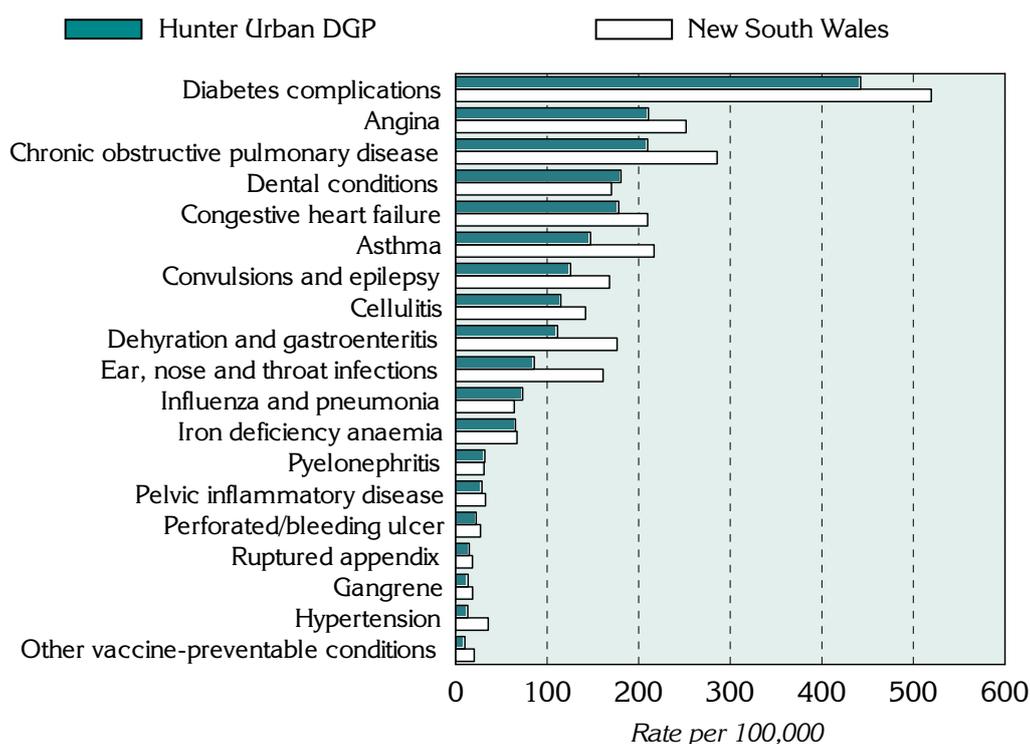
The rate of avoidable hospitalisations in Hunter Urban DGP is markedly lower, a rate of 2,021.9 admissions per 100,000 population, compared to both New South Wales (a rate of 2,543.8), and Australia (2,847.5).

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

Diabetes complications, angina, chronic obstructive pulmonary disease, dental conditions and congestive heart failure had the highest rates of avoidable hospitalisations in the Hunter Urban DGP (Figure 8, Table 7): however, all of these apart from dental conditions had rates below the State rates.

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. Almost two-thirds 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 convulsions and epilepsy have the highest rates of avoidable hospitalisations for the acute conditions.

**Figure 8: Avoidable hospitalisations<sup>1</sup> by condition, Hunter Urban DGP and New South Wales, 2001/02**



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

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

Sub-category/ condition	Hunter Urban DGP		New South Wales		Australia	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
<b>Vaccine-preventable</b>	<b>383</b>	<b>83.4</b>	<b>5,630</b>	<b>84.5</b>	<b>16,573</b>	<b>85.4</b>
Influenza and pneumonia	339	73.2	4,280	64.1	13,021	67.1
Other vaccine preventable	44	10.2	1,350	20.4	3,552	18.3
<b>Chronic<sup>3</sup></b>	<b>6,171</b>	<b>1,266.9</b>	<b>106,803</b>	<b>1,587.0</b>	<b>352,545</b>	<b>1,816</b>
Diabetes complications	2,152	442.4	34,975	519.5	141,345	728.1
Iron deficiency anaemia	313	65.4	4,494	67.0	16,451	84.7
Hypertension	64	13.2	2,398	35.7	6,354	32.7
Congestive heart failure	912	178.2	14,270	209.7	42,447	218.6
Angina	1,036	210.7	16,987	251.8	49,963	257.4
Chronic obstructive pulmonary disease	1,056	209.7	19,359	285.6	54,853	282.6
Asthma	638	147.3	14,289	216.8	41,009	211.3
<b>Acute</b>	<b>3,219</b>	<b>730.0</b>	<b>62,543</b>	<b>946.0</b>	<b>200,913</b>	<b>1,035</b>
Dehydration and gastroenteritis	507	111.3	11,725	176.4	37,766	194.5
Convulsions and epilepsy	545	125.6	11,093	168.1	31,137	160.4
Ear, nose and throat infections	367	85.9	10,615	161.1	32,075	165.2
Dental conditions	775	180.6	11,196	170.3	43,667	224.9
Perforated/bleeding ulcer	110	22.5	1,830	27.1	5,795	29.9
Ruptured appendix	64	14.9	1,212	18.5	3,866	19.9
Pyelonephritis	140	31.9	2,038	31.0	7,386	38.0
Pelvic inflammatory disease	119	28.8	2,134	32.7	6,547	33.7
Cellulitis	526	114.9	9,451	142.0	28,204	145.3
Gangrene	66	13.6	1,249	18.6	4,470	23.0
<b>Total avoidable hospitalisations<sup>4</sup></b>	<b>9,479</b>	<b>2,021.9</b>	<b>170,066</b>	<b>2,543.8</b>	<b>552,786</b>	<b>2,847.5</b>

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

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

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

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

## Avoidable mortality

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

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

Almost three quarters (71.3%) of all deaths in Hunter Urban DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, marginally lower than the proportion for country New South Wales (71.6%) (Table 8). Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 29.0% of all deaths at ages 0 to 74 years in Hunter Urban DGP, compared to 28.3% in country New South Wales.

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

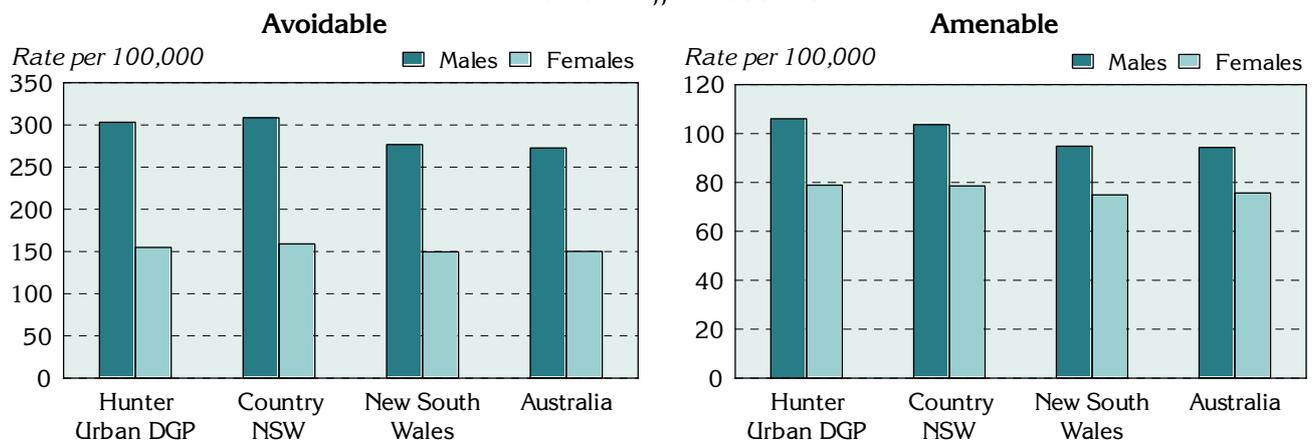
Mortality category	Hunter Urban DGP		Country NSW		New South Wales		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
Avoidable	4,958	229.4	29,442	234.3	66,151	213.6	189,845	211.8
% of total	71.3	..	71.6	..	71.4	..	71.5	..
(Amenable)	(2,021)	(92.5)	(11,638)	(91.2)	(26,374)	(85.0)	(76,249)	(85.1)
(% of total)	(29.0)	(..)	(28.3)	(..)	(28.5)	(..)	(28.7)	(..)
Unavoidable	2,000	91.8	11,700	92.1	26,468	85.3	75,582	84.3
% of total	28.7	..	28.4	..	28.6	..	28.5	..
<b>Total mortality</b>	<b>6,958</b>	<b>321.2</b>	<b>41,142</b>	<b>326.4</b>	<b>92,619</b>	<b>299.0</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. Hunter Urban DGP's rate of avoidable mortality for males was 303.1 deaths per 100,000 males, almost twice the rate of 154.9 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 106.0, compared to 78.9 for females, a rate ratio of 1.34 (Figure 9, Table 9).

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

*Note: the different scales*



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

Mortality category and sex	Hunter Urban DGP		Country NSW		New South Wales		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	3,262	303.1	19,569	308.5	43,074	276.8	123,026	272.6
Females	1,697	154.9	9,873	159.1	23,077	149.6	66,819	150.1
<b>Total</b>	<b>4,958</b>	<b>229.4</b>	<b>29,442</b>	<b>234.3</b>	<b>66,151</b>	<b>213.6</b>	<b>189,845</b>	<b>211.8</b>
<b>Rate ratio-M:F<sup>2</sup></b>	..	<b>1.96**</b>	..	<b>1.94**</b>	..	<b>1.85**</b>	..	<b>1.82**</b>
<b>Amenable</b>								
Males	1,157	106.0	6,743	103.6	14,811	94.8	42,568	94.3
Females	864	78.9	4,895	78.6	11,562	74.9	33,681	75.7
<b>Total</b>	<b>2,021</b>	<b>92.5</b>	<b>11,638</b>	<b>91.2</b>	<b>26,374</b>	<b>85.0</b>	<b>76,249</b>	<b>85.1</b>
<b>Rate ratio-M:F<sup>2</sup></b>	..	<b>1.34**</b>	..	<b>1.32**</b>	..	<b>1.27**</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 Hunter Urban DGP, country New South Wales, New South Wales and Australia over the period of analysis are shown in Table 10 by mortality category. However, given the substantial variation in the populations of these areas, a comparison of the proportion of YLL for each area is also shown.

YLL from avoidable mortality accounted for 71.6% of total YLL (0 to 74 years) for Hunter Urban DGP, marginally lower than the 71.8% for country New South Wales. At the same time, the proportion of YLL from amenable mortality for Hunter Urban DGP (28.4%) was higher than that for country New South Wales (27.6%).

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

Mortality category	Hunter Urban DGP		Country NSW		New South Wales		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	84,178	71.6	502,860	71.8	1,147,183	71.8	3,327,375	71.9
(Amenable)	(33,450)	(28.4)	(192,960)	(27.6)	(444,143)	(27.8)	(1,298,430)	(28.0)
Unavoidable	33,400	28.4	197,182	28.2	451,496	28.2	1,303,289	28.1
<b>Total</b>	<b>117,578</b>	<b>100.0</b>	<b>700,042</b>	<b>100.0</b>	<b>1,598,679</b>	<b>100.0</b>	<b>4,630,664</b>	<b>100.0</b>

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

In each of the areas in Table 11, the majority of avoidable mortality at ages 0 to 74 years occurred in the 65 to 74 year age group (Table 11), with 1,492.7 deaths per 100,000 population in Hunter Urban 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 324.2 in Hunter Urban Division.

**Table 11: Avoidable and amenable mortality by age, Hunter Urban DGP, country New South Wales, New South Wales and Australia, 1997 to 2001**

Mortality category and age (years)	Hunter Urban DGP		Country NSW		New South Wales		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	123	28.7	738	29.0	1,836	27.5	5,669	28.8
15-24	159	54.2	938	62.6	2,241	50.9	7,045	52.8
25-44	563	92.8	3,317	99.6	8,119	82.9	24,356	83.9
45-64	1,545	324.2	9,755	343.5	22,358	311.1	64,282	304.9
65-74	2,569	1,492.7	14,694	1464.0	31,597	1,375.8	88,493	1,358.1
<b>Total</b>	<b>4,958</b>	<b>229.4</b>	<b>29,442</b>	<b>234.3</b>	<b>66,151</b>	<b>213.6</b>	<b>189,845</b>	<b>211.8</b>
<b>Amenable</b>								
0-24	117	16.3	645	15.5	1,658	14.8	5,083	15.4
25-44	149	24.4	784	23.0	1,878	19.2	5,946	20.5
45-64	643	134.5	4,060	142.9	9,444	131.4	27,464	130.3
65-74	1,112	644.6	6,148	613.7	13,394	582.9	37,756	579.4
<b>Total</b>	<b>2,021</b>	<b>92.5</b>	<b>11,638</b>	<b>91.2</b>	<b>26,374</b>	<b>85.0</b>	<b>76,249</b>	<b>85.1</b>

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

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

The highest rates of avoidable mortality for the selected major condition groups in the Hunter Urban DGP were for cancer, with a rate of 74.8 deaths per 100,000 population, and cardiovascular diseases, 74.7 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 55.4 per 100,000 population and 26.0 per 100,000, respectively.

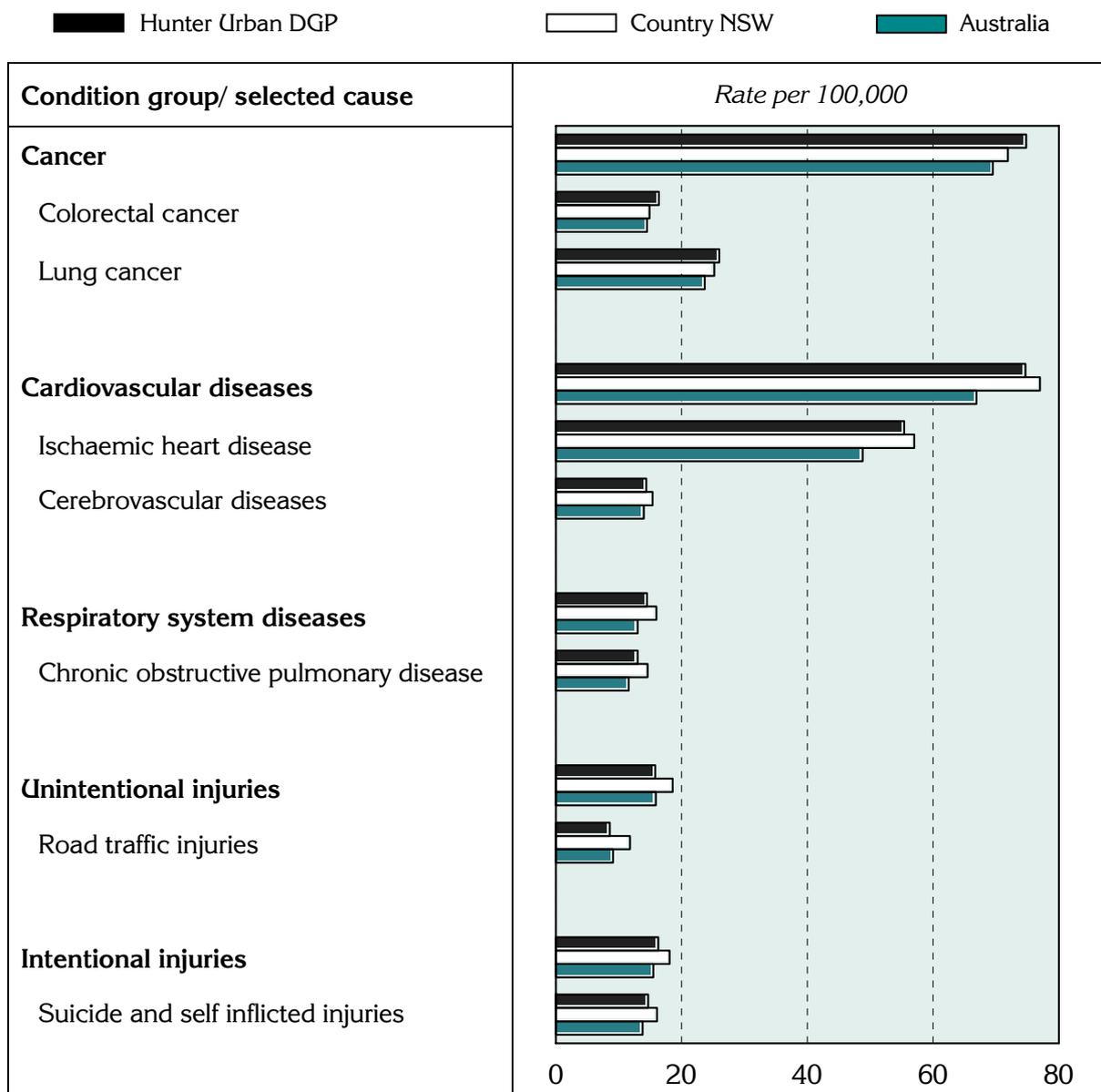
**Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Hunter Urban DGP, country New South Wales, New South Wales and Australia, 1997 to 2001**

Condition group/ selected cause	Hunter Urban DGP		Country NSW		New South Wales		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>1,637</b>	<b>74.8</b>	<b>9,239</b>	<b>71.9</b>	<b>21,158</b>	<b>68.1</b>	<b>62,338</b>	<b>69.5</b>
Colorectal cancer	360	16.4	1,936	14.9	4,318	13.9	13,008	14.5
Lung cancer	577	26.0	3,314	25.2	7,297	23.4	21,208	23.7
<b>Cardiovascular diseases</b>	<b>1,668</b>	<b>74.7</b>	<b>10,101</b>	<b>77.0</b>	<b>21,925</b>	<b>70.3</b>	<b>59,945</b>	<b>66.9</b>
Ischaemic heart disease	1,234	55.4	7,474	57.0	15,935	51.1	43,712	48.8
Cerebrovascular diseases	326	14.4	2,015	15.4	4,656	14.9	12,558	14.0
<b>Respiratory system diseases</b>	<b>330</b>	<b>14.5</b>	<b>2,136</b>	<b>16.0</b>	<b>4,313</b>	<b>13.8</b>	<b>11,612</b>	<b>13.0</b>
Chronic obstructive pulmonary disease	299	13.0	1,966	14.6	3,882	12.4	10,395	11.6
<b>Unintentional injuries</b>	<b>310</b>	<b>15.8</b>	<b>2,027</b>	<b>18.6</b>	<b>4,540</b>	<b>15.0</b>	<b>14,224</b>	<b>15.9</b>
Road traffic injuries	169	8.6	1,279	11.8	2,528	8.4	8,138	9.1
<b>Intentional injuries</b>	<b>318</b>	<b>16.3</b>	<b>1,939</b>	<b>18.1</b>	<b>4,497</b>	<b>14.9</b>	<b>13,891</b>	<b>15.5</b>
Suicide and self inflicted injuries	286	14.7	1,730	16.1	3,941	13.0	12,393	13.8

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

Rates in the Division were generally above those for Australia for the condition groups and selected causes studied, but more variable in relation to rates in country New South Wales (Figure 10).

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



# Notes on the data

## Data sources and limitations

### General

References to 'country New South Wales' relate to New South Wales excluding the Sydney Statistical Division.

### Data sources

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

**Table 13: Data sources**

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

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

## Methods

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

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

## Mapping

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

## Statistical geography of the Hunter Urban 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 country New South Wales, SLAs are of the same size or, generally, smaller than Local Government Areas (LGAs). In this Division, one Local Government Area (LGA), Newcastle, has been split into two SLAs, Inner and Remainder. All of these SLAs, and all or parts of the other SLAs listed in Table 14 comprise the Division.

**Table 14: SLAs and population in Hunter Urban 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
11720	Cessnock	13.7	6,625
12700	Dungog	18.2	1,533
13400	Great Lakes	10.3	3,577
14650	Lake Macquarie	98.6	187,600
15050	Maitland	98.6	60,656
15901	Newcastle - Inner	100.0	6,667
15902	Newcastle - Remainder	100.0	140,300
16400	Port Stephens	59.7	37,945
17000	Singleton	6.1	1,356
18550	Wyong	1.6	2,256

\* 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:

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