

# Population health profile of the Tweed Valley

## Division of General Practice: supplement

Population Profile Series: No. 24a

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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 Tweed Valley Division of General Practice: supplement

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

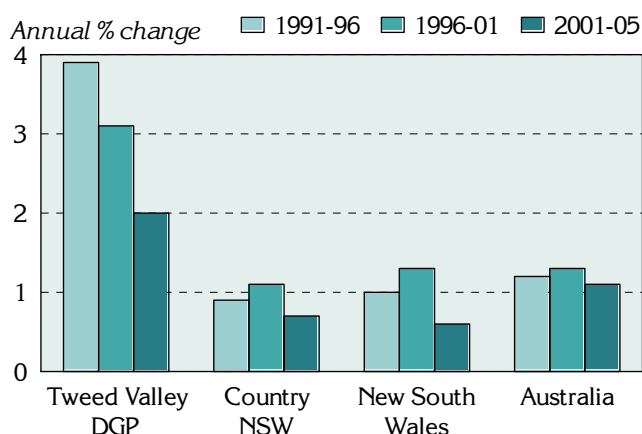
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive 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 Tweed Valley Division had an Estimated Resident Population of 84,400 at 30 June 2005.

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



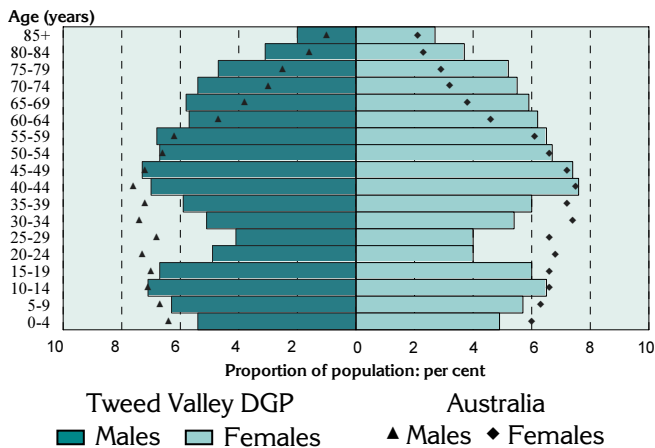
Over the five years from 1991 to 1996, the Division's population increased by 3.9% on average each year, substantially above the level in country New South Wales (0.9%) and New South Wales (1.0%). From 1996 to 2001, the annual percentage increase in the Division was 3.1%, again substantially higher than the comparators. The lower growth rate of 2.0% per year from 2001 to 2005 was also much higher than in country New South Wales and New South Wales (both 0.6%) and Australia (1.1%).

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

Age group (years)	Tweed Valley DGP		Australia	
	No.	%	No.	%
0-14	15,154	18.0	3,978,221	19.6
15-24	9,109	10.8	2,819,834	13.9
25-44	19,055	22.6	5,878,107	28.9
45-64	22,476	26.6	4,984,446	24.5
65-74	9,548	11.3	1,398,831	6.9
75-84	7,053	8.4	954,143	4.7
85+	2,005	2.4	315,027	1.5
<b>Total</b>	<b>84,400</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), Tweed Valley DGP had a lower proportion of the population aged 0 to 14, 15 to 24 and 25 to 44 years (18.0%, 10.8% and 26.7%, respectively) compared to Australia (19.6%, 13.9% and 28.9%, respectively) (Table 1). Conversely, the 65 years and over age groups had substantially higher proportions compared to Australia as a whole.

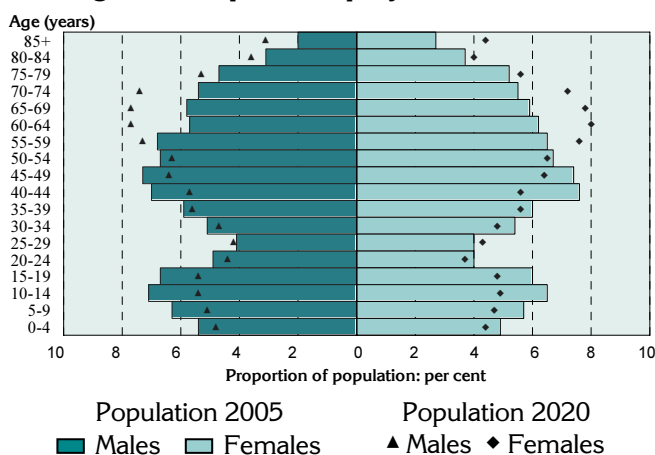
**Figure 2: Population in Tweed Valley DGP and Australia, by age and sex, 2005**



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

- at the youngest ages – lower proportions of children aged 0 to 9 years;
- from 15 to 39 years – substantially lower proportions of both males and females, suggesting outward migration for employment or education opportunities; and
- at older ages – higher (and sometimes substantially higher) proportions of both males and females aged 55 years and over, giving a profile typical of an area in which people live on retirement.

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



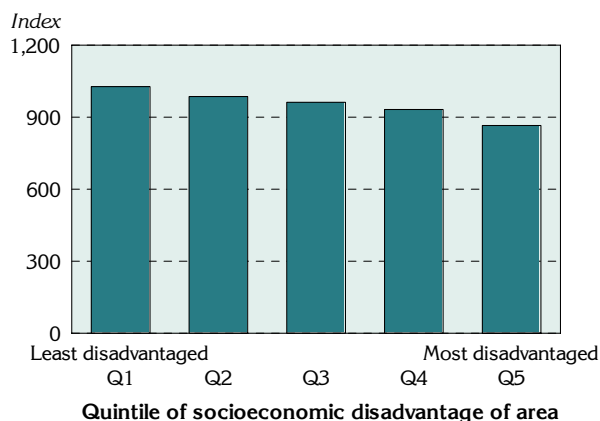
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

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

## Additional socio-demographic indicators

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



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

The Tweed Valley DGP has an index score of 955, below the score for Australia of 1000: this score varies across the Division, from 865 in the most disadvantaged areas to 1027 in the least disadvantaged areas.

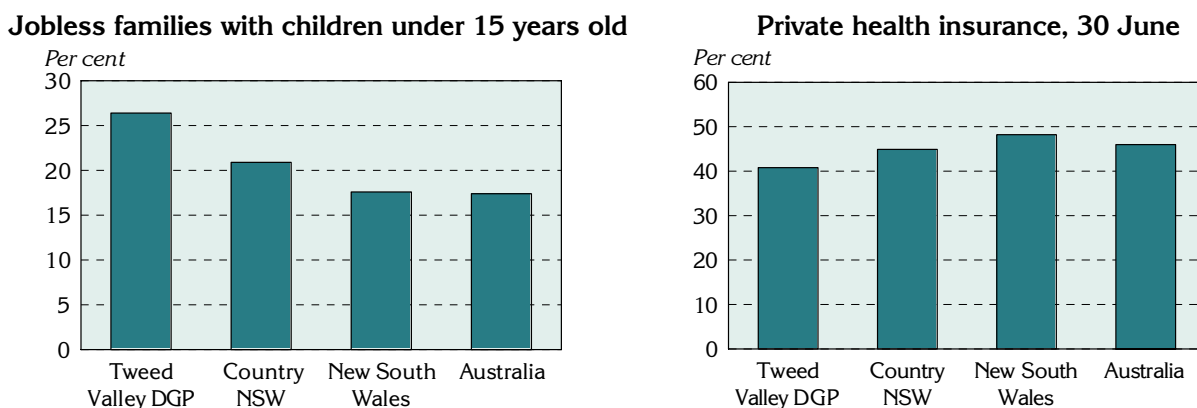
Note: each 'quintile' comprises approximately 20% of the population of the Division.

A new indicator, produced for the first time at the 2001 ABS Census, shows the number of jobless families with children under 15 years of age. There were markedly more jobless families in the Tweed Valley DGP (26.4%), compared with country New South Wales as a whole (20.9%) (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 the population with private health insurance (40.8%), compared to country New South Wales (44.9%) (Figure 5, Table 2).

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

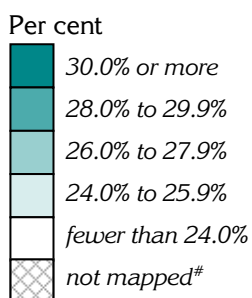
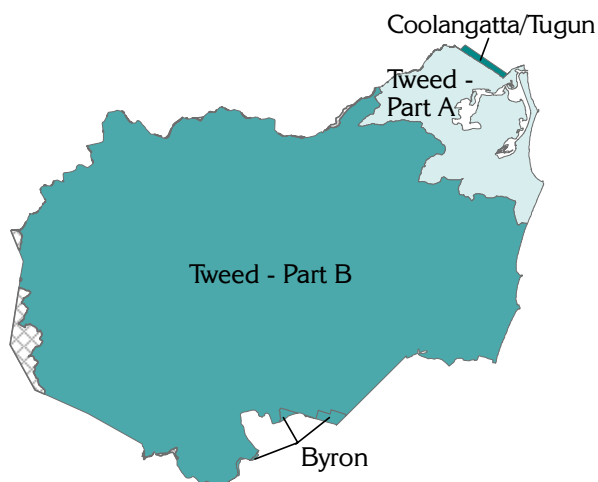


**Table 2: Socio-demographic indicators, Tweed Valley DGP, country New South Wales, New South Wales and Australia, 2001**

Indicator	Tweed Valley DGP		Country NSW		New South Wales		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	2,049	26.4	54,883	20.9	121,409	17.6	357,563	17.4
Private health insurance (30 June)	32,283	40.8	1,061,580	44.9	3,062,382	48.2	8,671,106	46.0

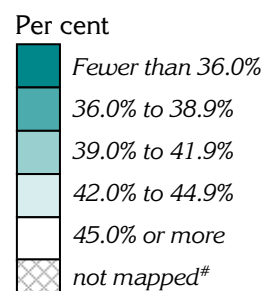
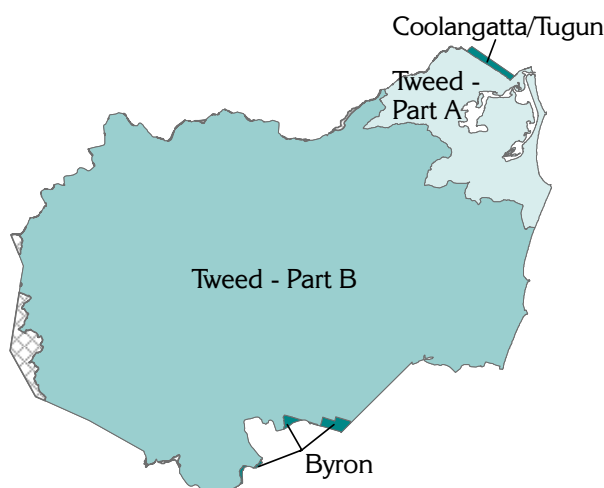
Details of the distribution of jobless families and of the population covered by private health insurance are shown by Statistical Local Area (SLA) in Maps 1 and 2, respectively.

**Map 1: Jobless families with children under 15 years of age by SLA, Tweed Valley DGP, 2001**



<sup>#</sup> data were not mapped: see 'Mapping' note under Methods

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



<sup>#</sup> data were not mapped: see 'Mapping' note under Methods

## GP services to residents of the Tweed Valley 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.

Just over four fifths (81.2%) of all unreferred attendances to residents of Tweed Valley DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 340,140 GP unreferred attendances (Table 3). A further 12.0% of unreferred attendances to residents were provided by GPs with a provider number in Gold Coast DGP, with 1.5% provided by GPs in Northern Rivers DGP.

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

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
226	Tweed Valley DGP	340,140	81.2
406	Gold Coast DGP	50,424	12.0
225	Northern Rivers DGP	6,246	1.5
405	GPpartners DGP	1,824	0.4
404	Logan Area DGP	1,368	0.3
402	Brisbane Southside Central DGP	1,142	0.3
Other	..	17,554	4.2
<b>Total</b>	..	<b>418,698</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 226 by Division in which attendance occurred

Over four fifths (84.5%) of unreferred attendances provided by GPs with a provider number in Tweed Valley DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). A further 7.6% of unreferred attendances by GPs in the Division were to people living in Gold Coast DGP, with 2.2% to residents of Northern Rivers DGP.

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

Division		Unreferred attendances	
Number	Name	No.	% <sup>3</sup>
226	Tweed Valley DGP	340,140	84.5
406	Gold Coast DGP	30,566	7.6
225	Northern Rivers DGP	8,761	2.2
405	GPpartners DGP	1,097	0.3
404	Logan Area DGP	1,061	0.3
Other	..	21,075	5.2
<b>Total</b>	..	<b>402,700</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 226 by Division of patient address

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

Please refer to the earlier *Population health profile of the Tweed Valley 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 Tweed Valley DGP who had asthma and were smokers, compared to country New South Wales and Australia as a whole (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher. The rates of people in Tweed Valley DGP who had type 2 diabetes and were overweight or obese, were consistent with those in country New South Wales and Australia.

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



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

Variable	Tweed Valley 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>	1,813	27.5	54,344	24.7	126,542	19.7	397,734	20.8
Had type 2 diabetes & were overweight/ obese <sup>4</sup>	1,746	15.6	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 Tweed Valley 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, 2,901 admissions from ambulatory care sensitive (ACS) conditions accounted for 8.8% of all admissions in the Tweed Valley DGP (Table 6, Figure 7), consistent with the levels in New South Wales (8.6%) and Australia (8.7%).

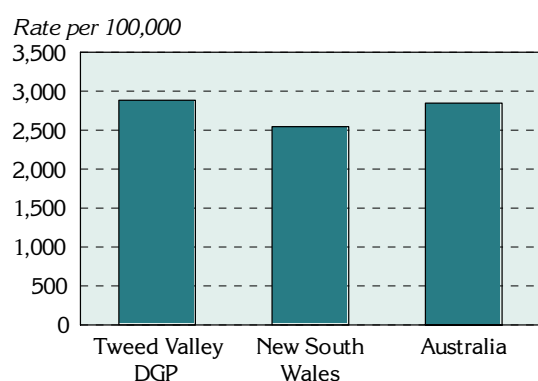
**Table 6: Avoidable<sup>1</sup> and unavoidable hospitalisations, Tweed Valley DGP, New South Wales, and Australia, 2001/02**

Category	Tweed Valley DGP			New South Wales			Australia		
	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%	No.	Rate <sup>2</sup>	%
Avoidable <sup>1</sup>	2,901	2,884.0	8.8	170,066	2,543.8	8.6	552,786	2,847.5	8.7
Unavoidable	30,227	32,752.2	91.2	1,810,901	27,255.3	91.4	5,818,199	29,970.7	91.3
<b>Total</b>	<b>33,128</b>	<b>35,617.7</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>, Tweed Valley DGP, New South Wales and Australia, 2001/02**



The rate of avoidable hospitalisations in Tweed Valley DGP is higher, a rate of 2,884.0 admissions per 100,000 population, compared to both New South Wales (a rate of 2,543.8), and Australia (2,847.5).

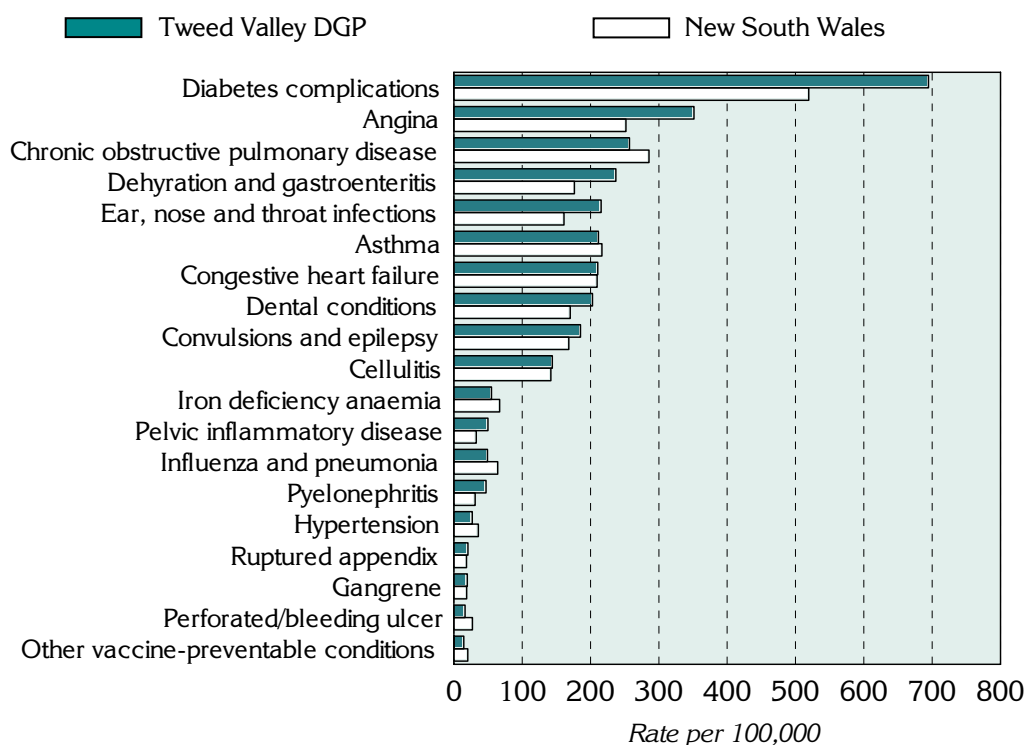
<sup>1</sup> Admissions resulting from ACS conditions

Diabetes complications, angina, chronic obstructive pulmonary disease, and dehydration and gastroenteritis were the four conditions with the highest rates of avoidable hospitalisations in the Tweed Valley DGP (Figure 8, Table 7).

Table 7 shows the number, rate and proportion of avoidable hospitalisations, for the individual ACS conditions, as well as the vaccine-preventable; acute; and chronic sub-categories. 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. Dehydration and gastroenteritis; and ear, nose and throat infections have the highest rates of avoidable hospitalisations for the acute conditions.



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

Sub-category/ condition	Tweed Valley 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>59</b>	<b>63.6</b>	<b>5,630</b>	<b>84.5</b>	<b>16,573</b>	<b>85.4</b>
Influenza and pneumonia	48	49.1	4,280	64.1	13,021	67.1
Other vaccine preventable	11	14.5	1,350	20.4	3,552	18.3
<b>Chronic<sup>3</sup></b>	<b>2,030</b>	<b>1,806.9</b>	<b>106,803</b>	<b>1,587.0</b>	<b>352,545</b>	<b>1,816</b>
Diabetes complications	792	694.6	34,975	519.5	141,345	728.1
Iron deficiency anaemia	59	55.0	4,494	67.0	16,451	84.7
Hypertension	29	26.8	2,398	35.7	6,354	32.7
Congestive heart failure	261	210.6	14,270	209.7	42,447	218.6
Angina	406	351.3	16,987	251.8	49,963	257.4
Chronic obstructive pulmonary disease	322	257.1	19,359	285.6	54,853	282.6
Asthma	161	211.5	14,289	216.8	41,009	211.3
<b>Acute</b>	<b>928</b>	<b>1,138.3</b>	<b>62,543</b>	<b>946.0</b>	<b>200,913</b>	<b>1,035</b>
Dehydration and gastroenteritis	217	237.1	11,725	176.4	37,766	194.5
Convulsions and epilepsy	143	185.3	11,093	168.1	31,137	160.4
Ear, nose and throat infections	154	215.5	10,615	161.1	32,075	165.2
Dental conditions	152	202.8	11,196	170.3	43,667	224.9
Perforated/bleeding ulcer	19	16.3	1,830	27.1	5,795	29.9
Ruptured appendix	16	20.7	1,212	18.5	3,866	19.9
Pyelonephritis	37	47.0	2,038	31.0	7,386	38.0
Pelvic inflammatory disease	34	49.8	2,134	32.7	6,547	33.7
Cellulitis	134	144.1	9,451	142.0	28,204	145.3
Gangrene	22	19.7	1,249	18.6	4,470	23.0
<b>Total avoidable hospitalisations<sup>4</sup></b>	<b>2,901</b>	<b>2,884.0</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 (72.7%) of all deaths in Tweed Valley DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, just above 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 28.0% of all deaths at ages 0 to 74 years in Tweed Valley DGP, consistent with the 28.3% in country New South Wales.

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

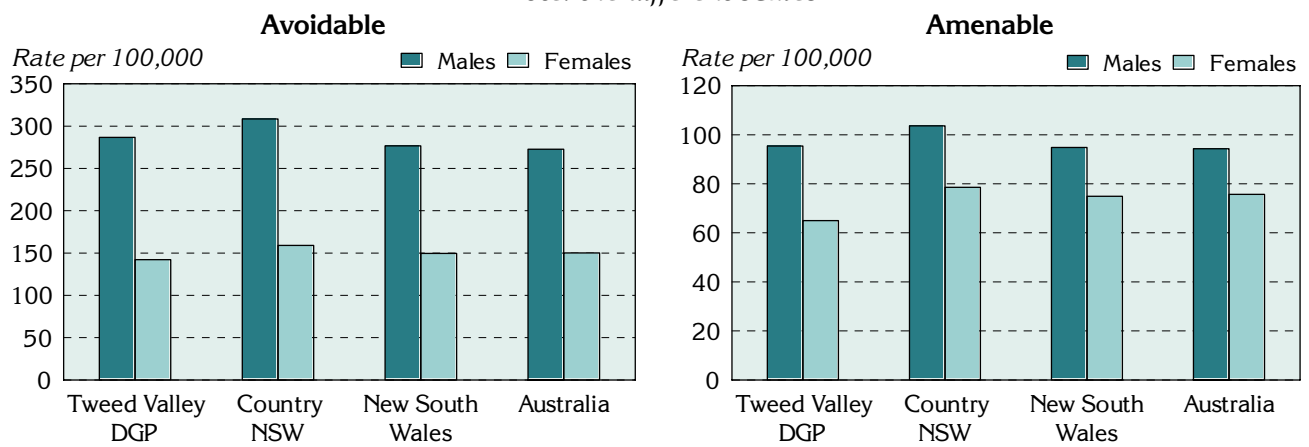
Mortality category	Tweed Valley DGP		Country NSW		New South Wales		Australia	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
Avoidable	1,009	214.8	29,442	234.3	66,151	213.6	189,845	211.8
% of total	72.7	..	71.6	..	71.4	..	71.5	..
(Amenable)	(389)	(80.4)	(11,638)	(91.2)	(26,374)	(85.0)	(76,249)	(85.1)
(% of total)	(28.0)	(..)	(28.3)	(..)	(28.5)	(..)	(28.7)	(..)
Unavoidable	379	78.9	11,700	92.1	26,468	85.3	75,582	84.3
% of total	27.3	..	28.4	..	28.6	..	28.5	..
<b>Total mortality</b>	<b>1,387</b>	<b>293.6</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. Tweed Valley DGP's rate of avoidable mortality for males was 286.8 deaths per 100,000 males, over twice the rate of 142.1 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 95.4, compared to 65.0 for females, a rate ratio of 1.47 (Figure 9, Table 9).

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

Mortality category and sex	Tweed Valley 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	673	286.8	19,569	308.5	43,074	276.8	123,026	272.6
Females	336	142.1	9,873	159.1	23,077	149.6	66,819	150.1
<b>Total</b>	<b>1,009</b>	<b>214.8</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>2.02**</b>	..	<b>1.94**</b>	..	<b>1.85**</b>	..	<b>1.82**</b>
<b>Amenable</b>								
Males	236	95.4	6,743	103.6	14,811	94.8	42,568	94.3
Females	154	65.0	4,895	78.6	11,562	74.9	33,681	75.7
<b>Total</b>	<b>389</b>	<b>80.4</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>1.47**</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 Tweed Valley 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 74.0% of total YLL (0 to 74 years) for Tweed Valley DGP, higher than the 71.8% for country New South Wales. The proportion of YLL from amenable mortality for Tweed Valley DGP (27.8%) was consistent with that for country New South Wales (27.6%).

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

Mortality category	Tweed Valley DGP		Country NSW		New South Wales		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	16,873	74.0	502,860	71.8	1,147,183	71.8	3,327,375	71.9
(Amenable)	(6,343)	(27.8)	(192,960)	(27.6)	(444,143)	(27.8)	(1,298,430)	(28.0)
Unavoidable	5,912	25.9	197,182	28.2	451,496	28.2	1,303,289	28.1
<b>Total</b>	<b>22,786</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 1,255.0 deaths per 100,000 population in Tweed Valley 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 322.5 in Tweed Valley Division.

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

Mortality category and age (years)	Tweed Valley 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	24	34.6	738	29.0	1,836	27.5	5,669	28.8
15-24	25	66.0	938	62.6	2,241	50.9	7,045	52.8
25-44	114	119.8	3,317	99.6	8,119	82.9	24,356	83.9
45-64	297	322.5	9,755	343.5	22,358	311.1	64,282	304.9
65-74	548	1,255.0	14,694	1464.0	31,597	1,375.8	88,493	1,358.1
<b>Total</b>	<b>1,009</b>	<b>214.8</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	16	14.4	645	15.5	1,658	14.8	5,083	15.4
25-44	28	27.4	784	23.0	1,878	19.2	5,946	20.5
45-64	122	131.2	4,060	142.9	9,444	131.4	27,464	130.3
65-74	223	511.8	6,148	613.7	13,394	582.9	37,756	579.4
<b>Total</b>	<b>389</b>	<b>80.4</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 Tweed Valley DGP were for cancer, with a rate of 72.1 deaths per 100,000 population, and cardiovascular diseases, 67.5 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 52.8 per 100,000 population and 27.0 per 100,000, respectively.

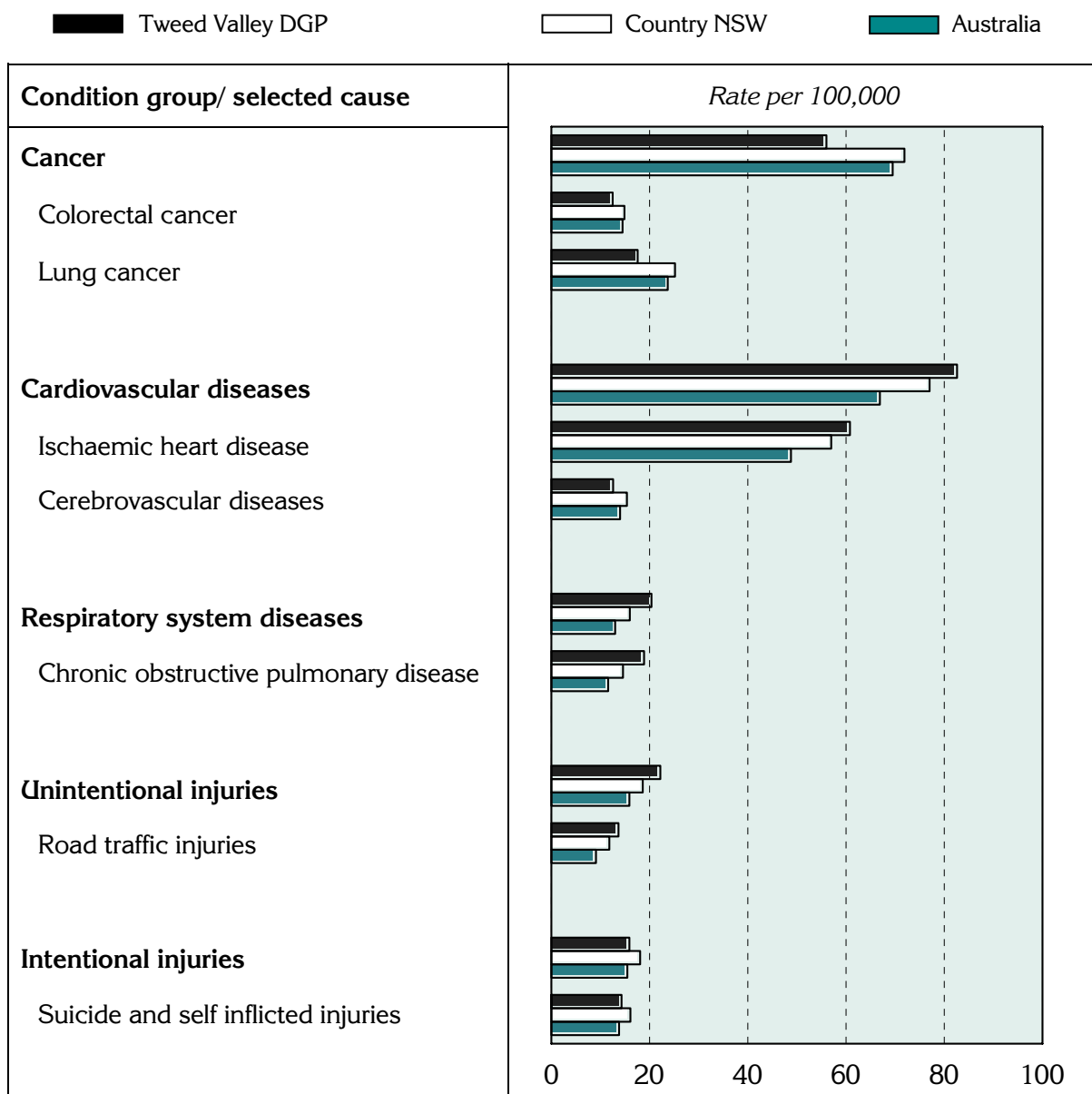
**Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Tweed Valley DGP, country New South Wales, New South Wales and Australia, 1997 to 2001**

Condition group/ selected cause	Tweed Valley 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>355</b>	<b>72.1</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	62	12.4	1,936	14.9	4,318	13.9	13,008	14.5
Lung cancer	139	27.0	3,314	25.2	7,297	23.4	21,208	23.7
<b>Cardiovascular diseases</b>	<b>351</b>	<b>67.5</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	273	52.8	7,474	57.0	15,935	51.1	43,712	48.8
Cerebrovascular diseases	56	10.6	2,015	15.4	4,656	14.9	12,558	14.0
<b>Respiratory system diseases</b>	<b>59</b>	<b>10.8</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	49	8.8	1,966	14.6	3,882	12.4	10,395	11.6
<b>Unintentional injuries</b>	<b>61</b>	<b>18.9</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	35	11.0	1,279	11.8	2,528	8.4	8,138	9.1
<b>Intentional injuries</b>	<b>66</b>	<b>20.9</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	60	18.8	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

With the exception of the lower rates for cancer (total, colorectal and lung) and cerebrovascular diseases, rates in the Division were generally above those in Australia: a similar situation applies to a comparison with rates in country New South Wales, although rates in the Division for intentional injuries and suicide and self inflicted injuries were also below those for country New South Wales (Figure 10).

**Figure 10: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Tweed Valley 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 Tweed Valley DGP

For information on the postcodes in the Division, please refer the Department of Health and Ageing website <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-divisions-divspc.htm>; also included in table format in the 'Notes on the data' section of the *Population health profile*, November 2005 ([www.publichealth.gov.au](http://www.publichealth.gov.au)).

Statistical Local Areas (SLAs) are defined by the Australian Bureau of Statistics to produce areas for the presentation and analysis of data. In this Division, the Tweed Local Government Area (LGA) has been split into two SLAs, Tweed [Part A] and Tweed [Part B], the majority of which lie within the Division; Byron is an LGA and the combined Coolangatta/Tugun SLAs are based on the suburbs of Coolangatta and Tugun. These SLAs and part SLAs comprise the Division (Table 14).

**Table 14: SLAs and population in Tweed Valley 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
11350	Byron	5.5	1,698
17551	Tweed - Part A	100.0	51,691
17552	Tweed - Part B	95.1	27,811
33512, 33527, 33591	Coolangatta/Tugun	28.0	3,186

\* 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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