

Population health profile of the Mackay

Division of General Practice: supplement

Population Profile Series: No. 77a

PHIDU

March 2007



PHIDU



Australian Government

Australian Institute of
Health and Welfare



THE UNIVERSITY
OF ADELAIDE
AUSTRALIA

© Commonwealth of Australia 2007

This work may be reproduced and used subject to acknowledgement of the source of any material so reproduced.

National Library of Australia Cataloguing in Publication entry

Population health profile of the Mackay Division of General Practice: supplement.

Bibliography.

ISBN 9 78073089 6753 (web).

1. Public health - Queensland - Mackay - Statistics. 2. Health status indicators - Queensland - Mackay - Statistics. 3. Health service areas - Queensland - Mackay. 4. Mackay (Qld.) - Statistics, Medical. I. Public Health Information Development Unit (Australia). (Series : Population profile series ; no. 77a).

362.1099436

ISSN 1833-0452 Population Profile Series

Public Health Information Development Unit, The University of Adelaide
A Collaborating Unit of the Australian Institute of Health and Welfare

This profile was produced by PHIDU, the Public Health Information Development Unit at The University of Adelaide, South Australia. The work was funded under a grant from the Australian Government Department of Health and Ageing. The views expressed in this profile are solely those of the authors and should not be attributed to the Department of Health and Ageing or the Minister for Health and Ageing.

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.

Suggested citation:

PHIDU. (2007) *Population health profile of the Mackay Division of General Practice: supplement*. Population Profile Series: No. 77a. Public Health Information Development Unit (PHIDU), Adelaide.

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

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

Published by Public Health Information Development Unit, The University of Adelaide

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

Population health profile of the Mackay Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Mackay Division of General Practice*, dated November 2005, available from www.publichealth.gov.au. This supplement includes an update of the population of the Mackay Division of General Practice, as well as additional indicators and aspects of the Division's socioeconomic status, use of GP services and health. The contents are:

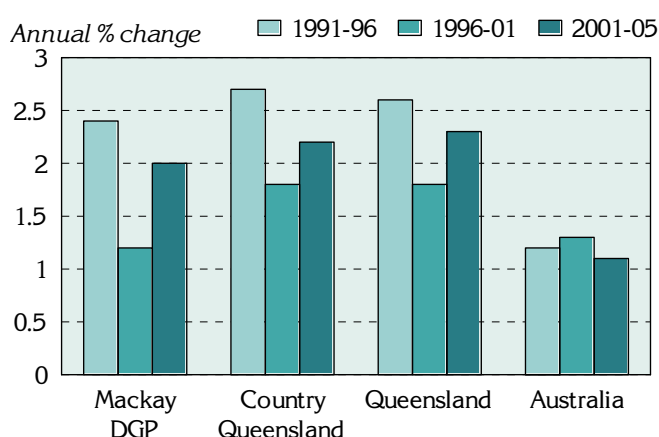
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances – patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive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

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

Population

The Mackay Division had an Estimated Resident Population of 121,496 at 30 June 2005.

Figure 1: Annual population change, Mackay DGP, country Queensland, Queensland and Australia, 1991 to 1996, 1996 to 2001 and 2001 to 2005



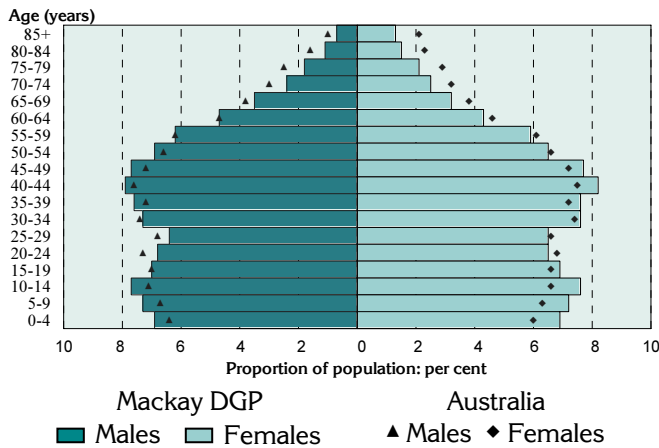
Over the five years from 1991 to 1996, the Division's population increased by 2.4% on average each year, lower than in country Queensland (2.7%) and Queensland (2.6%). From 1996 to 2001, the annual percentage growth rate in the Division fell to 1.2%, again lower than in country Queensland and Queensland (1.8%). The growth rate of 2.0% per year from 2001 to 2005 was just below the annual increases of 2.1% for country Queensland (2.1%) and Queensland (2.3%).

Table 1: Population by age, Mackay DGP and Australia, 2005

Age group (years)	Mackay DGP		Australia	
	No.	%	No.	%
0-14	26,473	21.8	3,978,221	19.6
15-24	16,576	13.6	2,819,834	13.9
25-44	35,936	29.6	5,878,107	28.9
45-64	30,267	24.9	4,984,446	24.5
65-74	7,051	5.8	1,398,831	6.9
75-84	3,981	3.3	954,143	4.7
85+	1,211	1.0	315,027	1.5
Total	121,496	100.0	20,328,609	100.0

As shown in the accompanying and the age-sex pyramid below, Mackay DGP had relatively more 0 to 14 year olds than Australia as a whole, with 21.8% compared to 19.6% (Table 1). Conversely, there were relatively fewer people aged 65 years and over were lower than those for Australia.

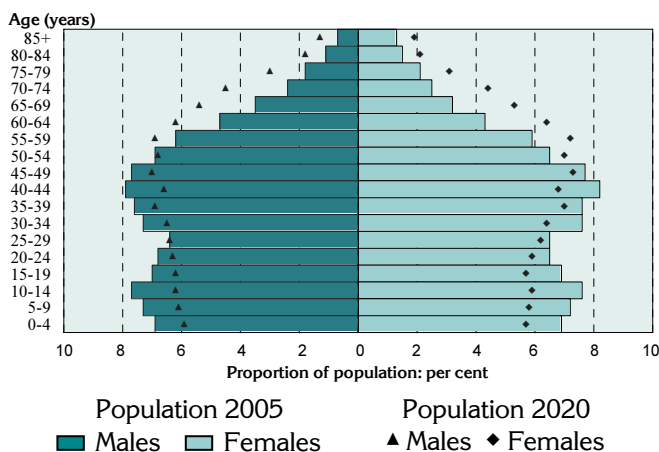
Figure 2: Population in Mackay DGP and Australia, by age and sex, 2005



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

- at younger ages – relatively more children aged 0 to 14 years;
- from 20 to 29 years – relatively fewer males and of females to 24 years;
- from 30 to 54 years – relatively more males (from 35 years) and females (to 49 years); and
- at older ages – relatively fewer males and females aged 60 years and over.

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



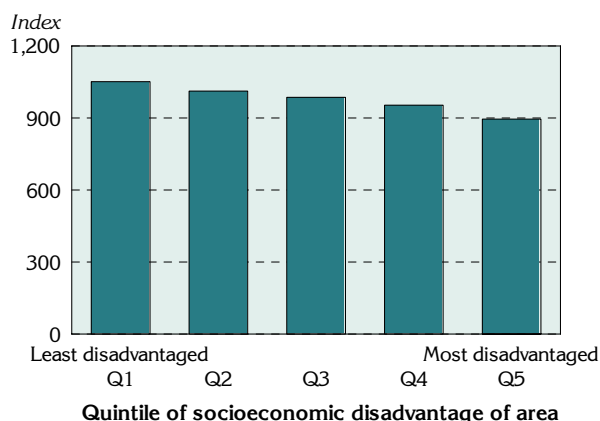
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- under 50 years of age – relatively fewer males and females aged (excluding for males aged 25 to 29 years); and
- over 50 years of age – relatively more males (from 55 years) and females (most pronounced at ages 60 to 74 years).

Additional socio-demographic indicators

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

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



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

The Mackay DGP has an index score of 980, below the score for Australia of 1000: this score varies across the Division, from a low of 895 in the most disadvantaged areas to 1051 in the least disadvantaged areas.

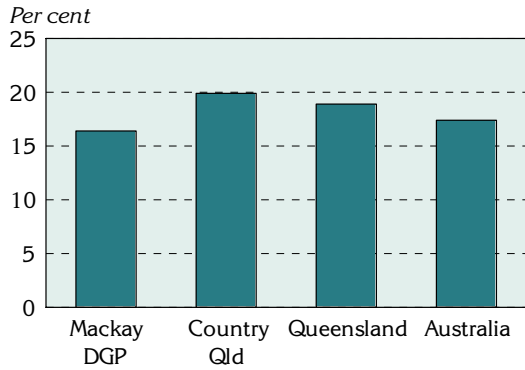
Note: each 'quintile' comprises approximately 20% of the population of the Division.

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 notably fewer jobless families in the Mackay DGP (16.4%), than for country Queensland as a whole (19.9%) (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). The Division had a notably higher proportion of the population with private health insurance (44.0%), compared to country Queensland (40.3%) (Figure 5, Table 2).

Figure 5: Socio-demographic indicators, Mackay DGP, country Queensland, Queensland and Australia, 2001

Jobless families with children under 15 years old



Private health insurance, 30 June

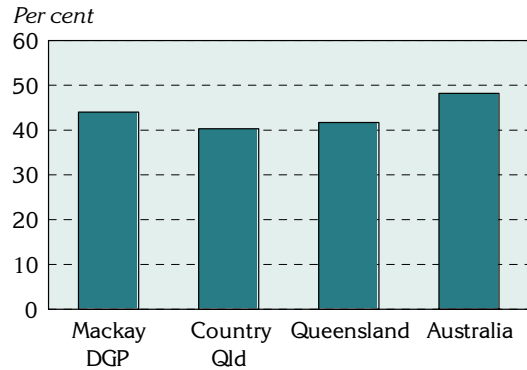
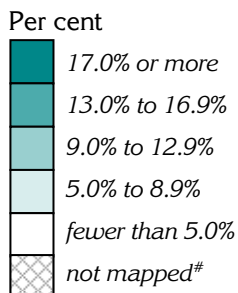
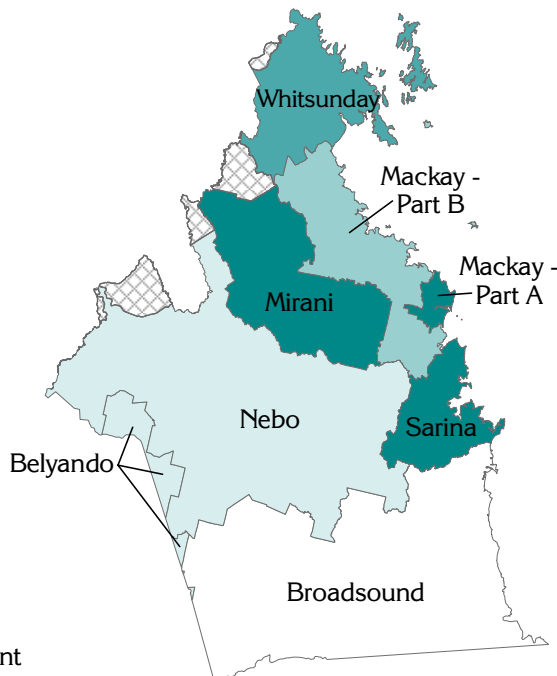


Table 2: Socio-demographic indicators, Mackay DGP, country Queensland, Queensland and Australia, 2001

Indicator	Mackay DGP		Country Queensland		Queensland		Australia	
	No.	%	No.	%	No.	%	No.	%
Jobless families with children under 15 years old	2,133	16.4	42,801	19.9	74,942	18.9	357,563	17.4
Private health insurance (30 June)	47,317	44.0	812,860	40.3	1,511,613	41.7	8,671,106	46.0

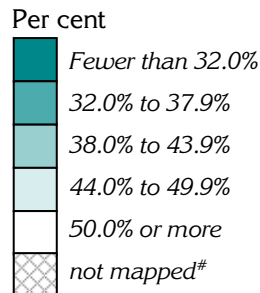
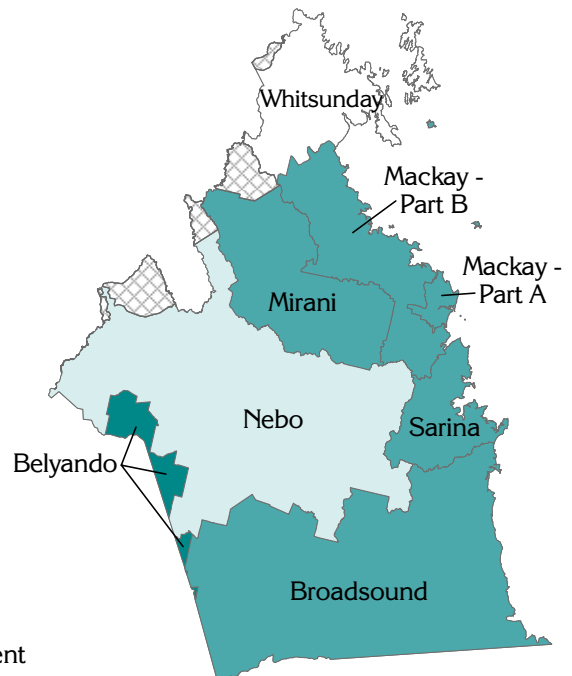
Details of the distribution of jobless families (Map 1) and of the population covered by private health insurance (Map 2) are shown by Statistical Local Area (SLA) in Maps 1 and 2, respectively.

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



[#] data were not mapped: see 'Mapping' note under Methods

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



[#] data were not mapped: see 'Mapping' note under Methods

GP services to residents of the Mackay 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 (93.7%) of GP unreferred attendances to residents of Mackay DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 478,514 GP unreferred attendances (Table 3). The remaining 6.3% of unreferred attendances were provided in other Divisions, and not just those Divisions nearby.

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

Division		Unreferred attendances	
Number	Name	No.	% ³
411	Mackay DGP	478,514	93.7
412	Townsville DGP	3,448	0.7
405	GPpartners DGP	3,032	0.6
410	Central Queensland Rural DGP	2,647	0.5
416	North & West Queensland DGP	2,395	0.5
419	Capricornia DGP	1,998	0.4
413	Cairns DGP	1,911	0.4
Other	..	16,957	3.3
Total	..	510,902	100.0

¹ Based on address in Medicare records

² Division of GP based on provider number

³ Proportion of all unreferred attendances of patients with an address in Division 411 by Division in which attendance occurred

The majority (90.5%) of unreferred attendances provided by GPs with a provider number in Mackay DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). The remaining 9.5% of unreferred attendances provided by the Division's GPs were to residents from other Divisions.

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

Division		Unreferred attendances	
Number	Name	No.	% ³
411	Mackay DGP	478,514	90.5
410	Central Queensland Rural DGP	4,960	0.9
416	North & West Queensland DGP	2,848	0.5
418	Sunshine Coast DGP	2,447	0.5
405	GPpartners DGP	2,350	0.4
412	Townsville DGP	2,157	0.4
406	Gold Coast DGP	2,048	0.4
419	Capricornia DGP	2,023	0.4
Other	..	31,180	5.9
Total	..	528,527	100.0

¹ Division of GP based on provider number

² Based on address in Medicare records

³ Proportion of all unreferred attendances to GPs with a provider number in Division 411 by Division of patient address

Additional prevalence estimates: chronic diseases and risk factors combined

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

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

It is estimated that there were more people in Mackay DGP who had asthma and were smokers, compared to Australia as a whole and (marginally more than) in country Queensland (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher. However, there were fewer people in Mackay DGP who had type 2 diabetes and were overweight/ obese, compared to Australia and country Queensland.

Figure 6: Estimates of selected chronic diseases and risk factors, Mackay DGP, country Queensland and Australia, 2001



Table 5: Estimates of selected chronic diseases and risk factors, Mackay DGP, country Queensland, Queensland and Australia, 2001

Variable	Mackay DGP		Country Queensland		Queensland		Australia	
	No. ¹	Rate ²	No. ¹	Rate ²	No. ¹	Rate ²	No. ¹	Rate ¹
Had asthma & smoked ³	2,929	25.4	46,582	24.8	83,759	23.2	397,734	20.8
Had type 2 diabetes & were overweight/obese ⁴	1,486	13.5	29,819	14.5	52,952	15.0	283,176	15.2

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

² Rate is the indirectly age-standardised rate per 1,000 population

³ Population aged 18 years and over

⁴ Population aged 15 years and over

Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions

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

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

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

In 2001 to 2002, the 2,818 admissions from ambulatory care sensitive (ACS) conditions accounted for 7.5% of all admissions in the Mackay DGP (Table 6, Figure 7), notably below the levels in Queensland (8.5%) and Australia (8.7%).

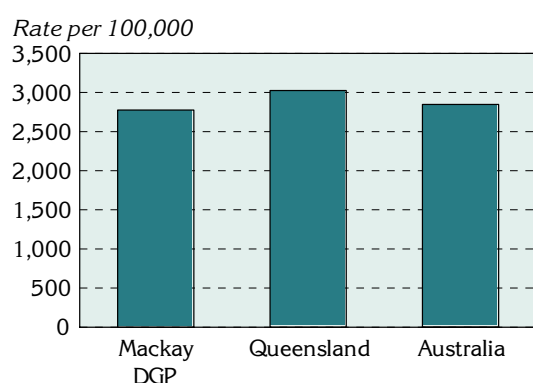
Table 6: Avoidable¹ and unavoidable hospitalisations, Mackay DGP, Queensland, and Australia, 2001/02

Category	Mackay DGP			Queensland			Australia		
	No.	Rate ²	%	No.	Rate ²	%	No.	Rate ²	%
Avoidable ¹	2,818	2,775.5	7.5	106,884	3,025.0	8.5	552,786	2,847.5	8.7
Unavoidable	34,696	33,199.3	92.5	1,153,519	32,410.1	91.5	5,818,199	29,970.7	91.3
Total	37,514	35,984.6	100.0	1,260,403	35,435.5	100.0	6,370,985	32,818.2	100.0

¹ Admissions resulting from ACS conditions

² Rate is the indirectly age-standardised rate per 100,000 population

Figure 7: Avoidable hospitalisations¹, Mackay DGP, Queensland and Australia, 2001/02



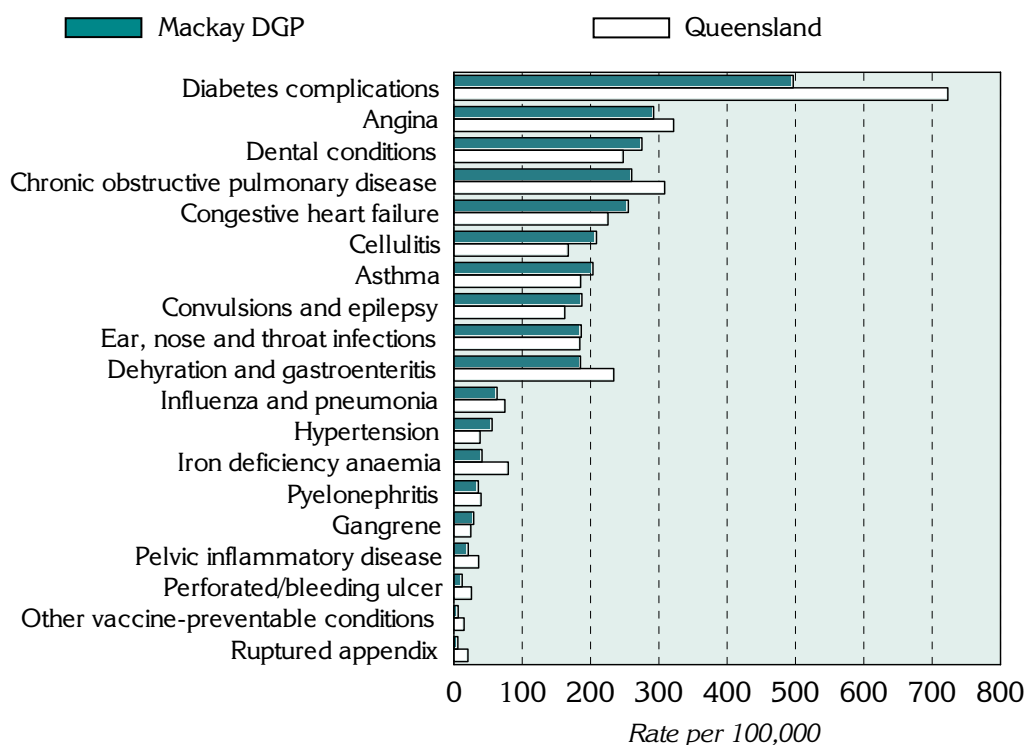
The rate of avoidable hospitalisations in Mackay DGP is lower, a rate of 2,775.5 admissions per 100,000 population, compared to Queensland (a rate of 3,025.0) and Australia (2,847.5).

¹ Admissions resulting from ACS conditions

Diabetes complications, angina, dental conditions, chronic obstructive pulmonary disease and congestive heart failure were the five conditions with the highest rates of avoidable hospitalisations in the Mackay 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. Dental conditions; and cellulitis have the highest rates of avoidable hospitalisations for the acute conditions.

Figure 8: Avoidable hospitalisations¹ by condition, Mackay DGP and Queensland, 2001/02



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

Table 7: Avoidable hospitalisations¹ by condition, Mackay DGP, Queensland and Australia, 2001/02

Sub-category/ condition	Mackay DGP		Queensland		Australia	
	No.	Rate ²	No.	Rate ²	No.	Rate ²
Vaccine-preventable	72	69.5	3,188	89.6	16,573	85.4
Influenza and pneumonia	65	63.2	2,646	74.6	13,021	67.1
Other vaccine preventable	7	6.3	542	15.0	3,552	18.3
Chronic³	1,533	1,605.4	65,455	1,882.0	352,545	1,816
Diabetes complications	477	496.7	25,175	722.9	141,345	728.1
Iron deficiency anaemia	40	41.2	2,772	79.7	16,451	84.7
Hypertension	53	56.0	1,324	38.3	6,354	32.7
Congestive heart failure	216	255.3	7,617	225.5	42,447	218.6
Angina	275	292.5	11,134	321.5	49,963	257.4
Chronic obstructive pulmonary disease	236	260.3	10,619	308.5	54,853	282.6
Asthma	236	203.4	6,814	185.6	41,009	211.3
Acute	1,270	1,146.6	41,300	1,143.3	200,913	1,035
Dehydration and gastroenteritis	189	185.2	8,278	234.1	37,766	194.5
Convulsions and epilepsy	214	187.4	5,902	162.3	31,137	160.4
Ear, nose and throat infections	222	186.5	6,829	184.4	32,075	165.2
Dental conditions	322	275.4	9,101	247.8	43,667	224.9
Perforated/bleeding ulcer	11	12.1	892	25.8	5,795	29.9
Ruptured appendix	7	5.8	754	20.7	3,866	19.9
Pyelonephritis	38	35.7	1,437	39.8	7,386	38.0
Pelvic inflammatory disease	23	21.0	1,315	36.2	6,547	33.7
Cellulitis	217	208.6	5,930	167.4	28,204	145.3
Gangrene	27	28.9	862	24.8	4,470	23.0
Total avoidable hospitalisations⁴	2,818	2,775.5	106,884	3,025.0	552,786	2,847.5

¹ Admissions resulting from ACS conditions

² Rate is the indirectly age-standardised rate per 100,000 population

³ Excludes nutritional deficiencies as less than ten admissions

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

Avoidable mortality

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

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

Almost three quarters (73.6%) of all deaths in Mackay DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, marginally above the proportion for country Queensland (72.8%) (Table 8). Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 29.7% of all deaths at ages 0 to 74 years in Mackay DGP, compared to 29.3% in country Queensland.

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

Mortality category	Mackay DGP		Country Queensland		Queensland		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Avoidable	1,071	228.1	20,859	227.8	35,515	220.6	189,845	211.8
% of total	73.6	..	72.8	..	72.8	..	71.5	..
(Amenable)	(432)	(93.6)	(8,383)	(91.5)	(14,323)	(89.3)	(76,249)	(85.1)
(% of total)	(29.7)	(..)	(29.3)	(..)	(29.3)	(..)	(28.7)	(..)
Unavoidable	385	82.8	7,793	85.0	13,291	82.7	75,582	84.3
% of total	26.4	..	27.2	..	27.2	..	28.5	..
Total mortality	1,456	311.0	28,652	312.8	48,806	303.4	265,427	296.1
%	100.0	..	100.0	..	100.0	..	100.0	..

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

Rates of avoidable mortality were higher for males than for females in each of the comparator areas. Mackay DGP's rate of avoidable mortality for males was 306.2 deaths per 100,000 males, more than twice the rate of 147.5 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 110.8, compared to 75.5 for females, a rate ratio of 1.47 (Figure 9, Table 9).

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

Note: the different scales

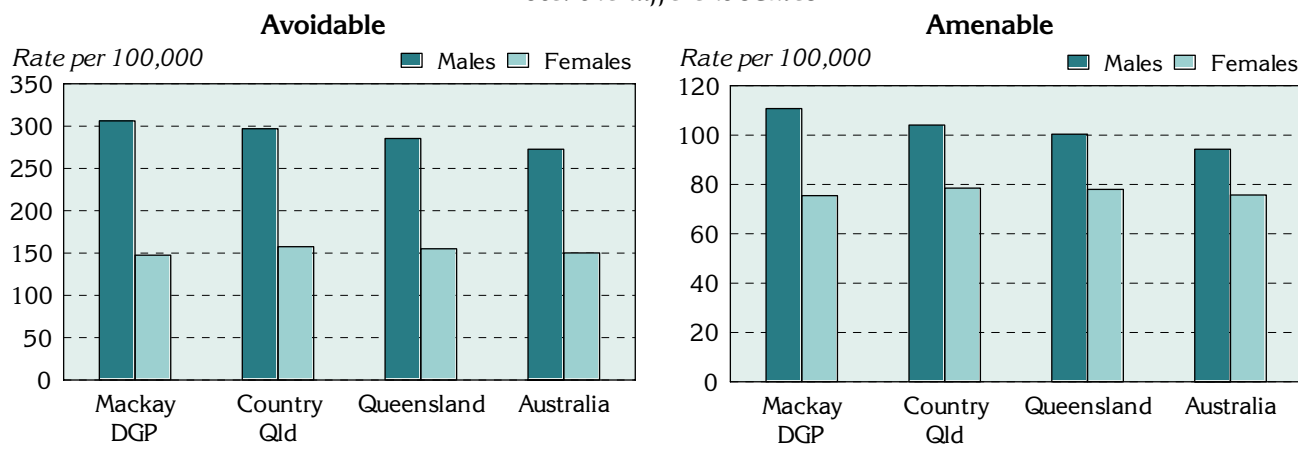


Table 9: Avoidable and amenable mortality (0 to 74 years) by sex, Mackay DGP, country Queensland, Queensland and Australia, 1997 to 2001

Mortality category and sex	Mackay DGP		Country Queensland		Queensland		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Avoidable								
Males	750	306.2	9,362	269.5	23,316	285.3	123,026	272.6
Females	321	147.5	5,294	152.0	12,199	155.1	66,819	150.1
Total	1,071	228.1	14,656	211.2	35,515	220.6	189,845	211.8
Rate ratio-M:F²	..	2.08**	..	1.77**	..	1.84**	..	1.82**
Amenable								
Males	267	110.8	3,249	95.2	8,181	100.4	42,568	94.3
Females	165	75.5	2,691	77.4	6,142	78.0	33,681	75.7
Total	432	93.6	5,940	86.4	14,323	89.3	76,249	85.1
Rate ratio-M:F²	..	1.47**	..	1.23**	..	1.29**	..	1.25**

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

² Rate ratio (M:F) is the ratio of male to female rates; rate ratios differing significantly from 1.0 are shown with * p <0.05; ** p <0.01

Another way of measuring premature mortality is to calculate the number of years of life lost (YLL)¹, which takes into account the years a person could have expected to live at each age of death based on the average life expectancy at that age.

The numbers of YLL for Mackay DGP, country Queensland, Queensland and Australia over the period of analysis are shown in Table 10 by mortality category. However, given the substantial variation in the populations of these areas, a comparison of the proportion of YLL for each area is also shown.

YLL from avoidable mortality accounted for 73.0% of total YLL (0 to 74 years) for Mackay DGP, consistent with the 72.9% for country Queensland. Similarly, the proportion of YLL from amenable mortality of 28.8% for Mackay DGP was consistent with the 28.5% for country Queensland.

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

Mortality category	Mackay DGP		Country Queensland		Queensland		Australia	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Avoidable	19,260	73.0	369,609	72.9	629,779	72.9	3,327,375	71.9
(Amenable)	(7,603)	(28.8)	(144,553)	(28.5)	(247,893)	(28.7)	(1,298,430)	(28.0)
Unavoidable	7,140	27.0	137,686	27.1	234,699	27.1	1,303,289	28.1
Total	26,400	100.0	507,294	100.0	864,478	100.0	4,630,664	100.0

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

In each of the areas in Table 11, the majority of avoidable mortality at ages 0 to 74 years occurred in the 65 to 74 year age group (Table 11), with 1,503.3 deaths per 100,000 population in Mackay 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 340.8 in Mackay DGP.

Table 11: Avoidable and amenable mortality by age, Mackay DGP, country Queensland, Queensland and Australia, 1997 to 2001

Mortality category and age (years)	Mackay DGP		Country Queensland		Queensland		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Avoidable								
0-14	43	32.8	500	30.1	1,208	32.2	5,669	28.8
15-24	42	54.6	562	44.8	1,386	54.3	7,045	52.8
25-44	140	75.8	1,916	77.8	4,527	84.9	24,356	83.9
45-64	405	340.8	5,107	301.7	12,543	322.5	64,282	304.9
65-74	441	1,503.3	6,571	1410.9	15,851	1404.6	88,493	1,358.1
Total	1,071	228.1	14,656	211.2	35,515	220.6	189,845	211.8
Amenable								
0-24	37	17.3	451	15.9	1,059	16.8	5,083	15.4
25-44	33	17.6	491	20.1	1,165	21.8	5,946	20.5
45-64	174	148.5	2,236	132.2	5,352	137.9	27,464	130.3
65-74	188	644.7	2,762	591.5	6,748	599.1	37,756	579.4
Total	432	93.6	5,940	86.4	14,323	89.3	76,249	85.1

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

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

The highest rates of avoidable mortality for the selected major condition groups in the Mackay DGP were for cancer, with a rate of 79.8 deaths per 100,000 population, and cardiovascular diseases, 74.5 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 56.0 per 100,000 population and 29.7 per 100,000, respectively.

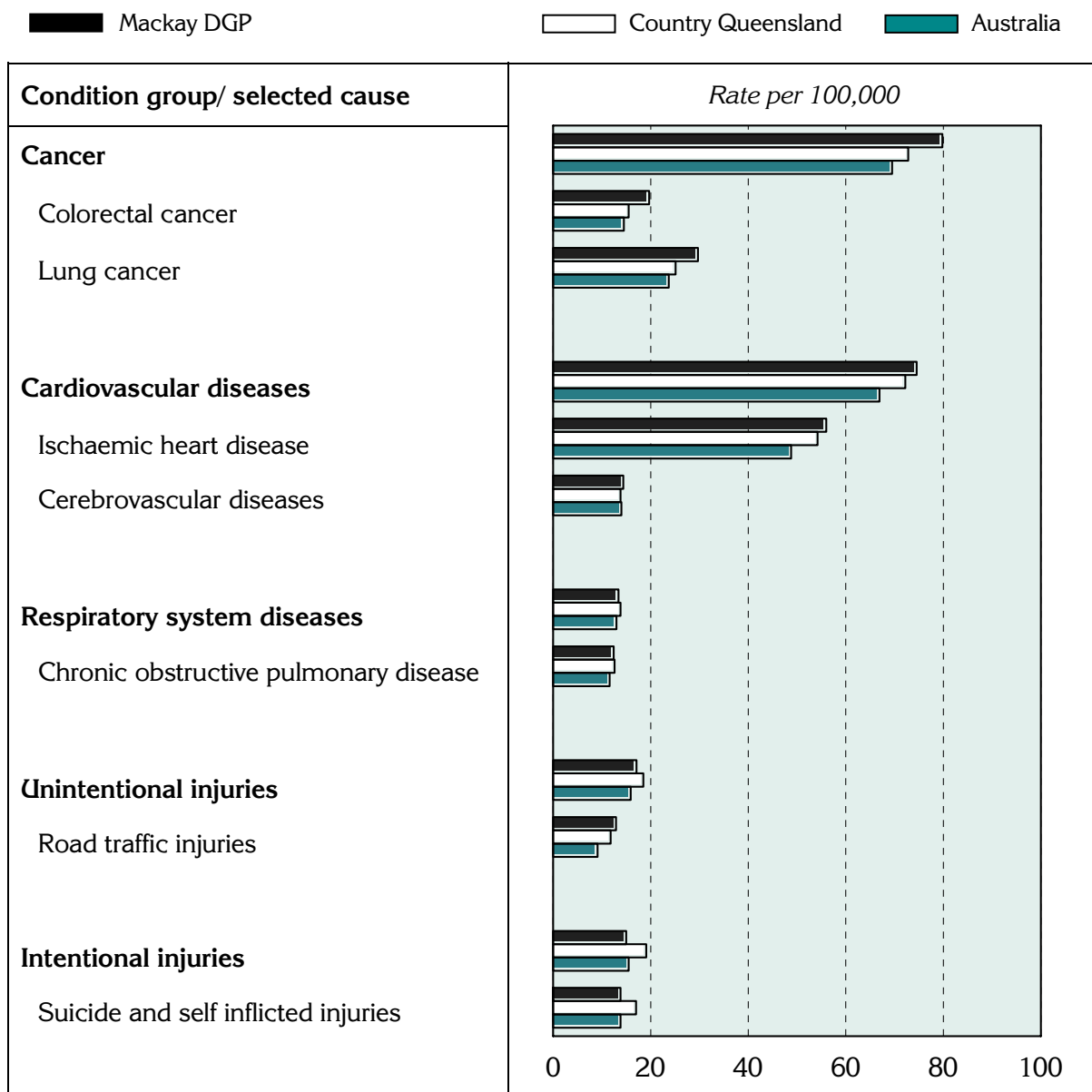
Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Mackay DGP, country Queensland, Queensland and Australia, 1997 to 2001

Condition group/ selected cause	Mackay DGP		Country Queensland		Queensland		Australia	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Cancer	364	79.8	6,690	72.8	11,618	72.6	62,338	69.5
Colorectal cancer	89	19.7	1,425	15.5	2,392	15.0	13,008	14.5
Lung cancer	134	29.7	2,329	25.1	4,062	25.4	21,208	23.7
Cardiovascular diseases	333	74.5	6,646	72.2	11,294	71.0	59,945	66.9
Ischaemic heart disease	252	56.0	5,005	54.2	8,434	52.9	43,712	48.8
Cerebrovascular diseases	63	14.4	1,263	13.8	2,210	14.0	12,558	14.0
Respiratory system diseases	58	13.4	1,262	13.8	2,168	13.7	11,612	13.0
Chronic obstructive pulmonary disease	53	12.4	1,159	12.6	1,970	12.5	10,395	11.6
Unintentional injuries	91	17.1	1,662	18.5	2,630	15.8	14,224	15.9
Road traffic injuries	69	12.9	1,054	11.8	1,565	9.4	8,138	9.1
Intentional injuries	82	15.0	1,712	19.1	3,017	18.2	13,891	15.5
Suicide and self inflicted injuries	75	13.8	1,521	17.0	2,719	16.4	12,393	13.8

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

Rates in the Division for the condition groups and selected causes were generally above, or consistent with, those for country Queensland and Australia: the main exceptions were the injury categories, with higher rates in country Queensland (Figure 10).

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



Notes on the data

Data sources and limitations

General

References to 'country Queensland' relate to Queensland excluding the Brisbane Statistical Division.

Data sources

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

Table 13: Data sources

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

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

Methods

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

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

Mapping

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

Statistical geography of the Mackay DGP

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

Statistical Local Areas (SLAs) are defined by the Australian Bureau of Statistics to produce areas for the presentation and analysis of data. In this Division, some Local Government Areas (LGAs) have been split into SLAs. For example, the LGA of Mackay is comprised of two SLAs, Part A and Part B. 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 Mackay 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
30600	Belyando	20.3	2,162
31700	Broadsound	28.3	1,909
34762	Mackay - Part A	100.0	70,686
34765	Mackay - Part B	100.0	11,602
35050	Mirani	100.0	5,360
35700	Nebo	100.0	2,107
36550	Sarina	100.0	10,157
37330	Whitsunday	100.0	17,512

* 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