

Population health profile of the Gold Coast

Division of General Practice

Population Profile Series: No. 72

PHIDU

November 2005



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National Library of Australia Cataloguing in Publication entry

Population health profile of the Gold Coast Division of General Practice.

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ISBN 0 7308 9480 0.

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362.1099432

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.

The data in this report are designed to be used for needs assessment and planning purposes: while they are based on the best available data and analytic processes, data available by postcode or Statistical Local Area, as used in this report, cannot be precisely translated to Division. Division totals in the report should, therefore, be seen as estimates. 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. (2005) *Population health profile of the Gold Coast Division of General Practice*. Population Profile Series: No. 72. Public Health Information Development Unit (PHIDU), Adelaide.

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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

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Population health profile of the Gold Coast Division of General Practice

Introduction

This profile has been designed to provide a description of the population of the Gold Coast Division of General Practice, and aspects of their health. Its purpose is to provide information to support a population health approach, which aims to improve the health of the entire population and to reduce health inequalities among population groups: a more detailed discussion of a population health approach is provided in the supporting information, page 17.

Contents

The profile includes a number of tables, maps and graphs to profile population health in the Division and provides comparisons with other areas (eg. Brisbane and Australia). Specific topics covered include:

- a socio-demographic profile (pages 2-6);
- GP workforce data (page 7);
- immunisation rates (page 7);
- rates of premature death (page 8); and
- estimates of the prevalence of chronic disease and selected risk factors (pages 9-13).

Key indicators

Location:	Queensland	
Division number:	406	
Population‡:	No.	%
Total	428,963	
65+	60,204	14.0%
<25	135,884	31.7%
Indigenous	4,215	1.1%
Disadvantage score¹:	1000	
GP services per head of population:		
Division‡	4.9	
Australia	4.7	
Population per FTE GP:		
Division‡	1,339	
Australia	1,403	
Premature death rate²:		
Division‡	237.7	
Australia	290.4	

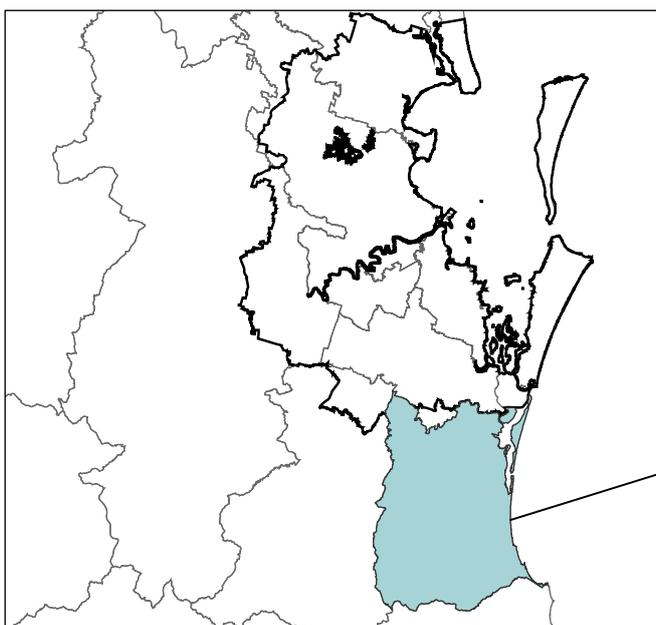
¹ An index number of 1000 is equivalent to the index score for Australia

² Deaths at ages 0 to 74 years per 100,000 population

‡ See note "Data converters and mapping" re calculation of Division Total

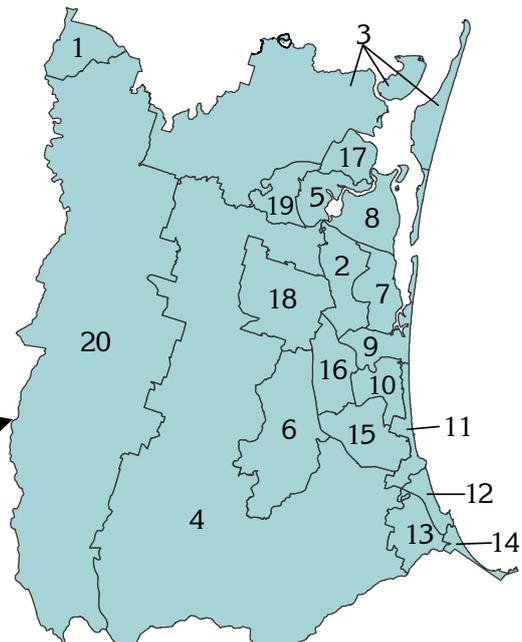
Gold Coast Division of General Practice

Brisbane Divisions of General Practice



— Queensland Divisions of General Practice
 — Brisbane Statistical Division

Gold Coast DGP by SLA/SLA group



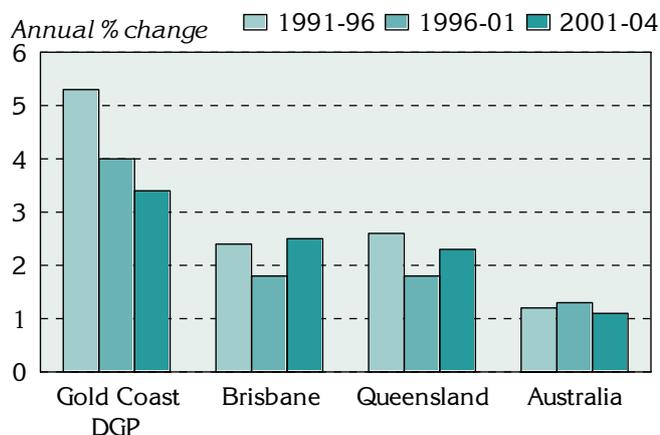
* Map legend: see page 6

Socio-demographic profile

Population

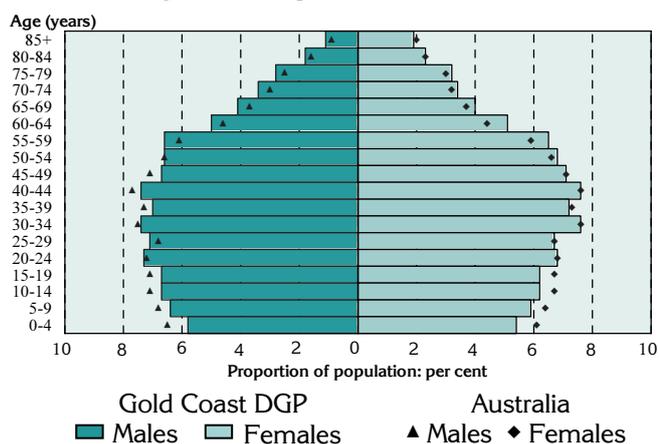
The Gold Coast DGP had an Estimated Resident Population of 428,963 at 30 June 2004.

Figure 1: Annual population change, Gold Coast DGP‡, Brisbane, Queensland and Australia, 1991 to 1996, 1996 to 2001 and 2001 to 2004



Over the five years from 1991 to 1996, the Division's population increased by 5.3% on average each year, notably higher than in Brisbane (2.4%), Queensland (2.6%) and Australia (1.2%). From 1996 to 2001, the annual percentage increase in the Division was 4.0%, higher than Brisbane and Queensland (both 1.8%) and Australia (1.3%). The growth rate of 3.6% per year from 2001 to 2004 was higher than the annual increases for Brisbane (2.5%), Queensland (2.3%), and Australia (1.1%).

Figure 2: Population in Gold Coast DGP‡ and Australia, by age and sex, 2004



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

- at younger ages – lower proportions of children aged 0 to 14 years and young people aged 15 to 19 years;
- from 30 to 49 years – lower proportions of males; and
- at older ages – higher proportions of males 55 years and over, and females 50 to 79 years.

Table 1: Population by age, Gold Coast DGP‡ and Australia, 2004

Age group (years)	Gold Coast DGP		Australia	
	No.	%	No.	%
0-14	78,370	18.3	3,978,751	19.8
15-24	57,514	13.4	2,762,769	13.8
25-44	124,638	29.1	5,881,048	29.3
45-64	108,238	25.2	4,864,037	24.2
65-74	32,097	7.5	1,374,792	6.8
75-84	21,779	5.1	934,505	4.7
85+	6,328	1.5	295,602	1.5
Total	428,963	100.0	20,091,504	100.0

As shown in the age-sex pyramid above, Gold Coast DGP had lower proportions of children aged 0 to 14 (18.3%) and young people aged 15 to 24 years (13.4%) than Australia as a whole (19.8% and 13.8%) (Table 1). The proportions of the Division's population aged 45 to 84 years were slightly higher than those for Australia.

The Gold Coast DGP comprised 6.8% of people born in predominantly non-English speaking countries and resident in Australia for five years or more (Table 2), compared to 7.6% in Brisbane as a whole. Recent arrivals (those resident in Australia for less than five years) from non-English speaking countries comprised 2.0% of the Division's population (the same as for Brisbane).

‡ See note under 'Data converters and mapping' re calculation of Division totals on this page

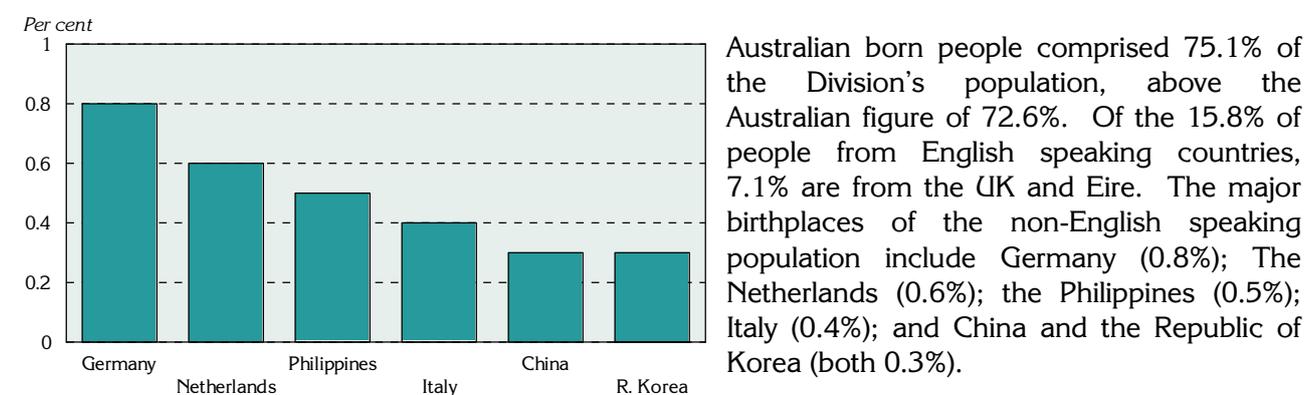
Of these residents, 1.1% had poor proficiency in English (determined when people aged five years and over born overseas in predominantly non-English speaking countries reported in the Census speaking another language and speaking English 'not well' or 'not at all'), less than the proportion in Brisbane (1.4%), but greater than Queensland (0.9%).

Table 2: Non-English speaking born, Gold Coast DGP, Brisbane, Queensland and Australia, 2001

People born in predominantly non-English speaking countries	Gold Coast DGP		Brisbane		Queensland		Australia	
	No.	%	No.	%	No.	%	No.	%
Resident in Australia for five years or more	25,362	6.8	122,983	7.6	204,783	5.8	2,019,410	10.8
Resident in Australia for less than five years	7,434	2.0	32,516	2.0	49,081	1.4	408,074	2.2
Poor proficiency in English ¹	3,777	1.1	21,426	1.4	30,109	0.9	425,399	2.4

¹ Calculated on persons aged 5 years and over who reported speaking another language and speaking English 'not well' or 'not at all'

Figure 3: Major non-English speaking birthplaces, Gold Coast DGP, 2001



Socioeconomic status

The indicators presented in this section describe geographic variations in the distribution of the population for a number of key socioeconomic influences, which impact on the health and wellbeing of populations.

The Gold Coast DGP had a higher proportion of single parent families (12.6%) compared to Brisbane as a whole (11.6%), and a much lower proportion of Aboriginal and Torres Strait Islanders (1.1%, compared with 1.8% for Brisbane) (Figure 4, Table 3).

Full-time secondary school education participation of 16 year olds living in the Division (75.3%) was lower than that for Brisbane (80.3%).

A markedly higher proportion of the Division's households received rent assistance from Centrelink (26.5%) compared to Brisbane (18.4%), but there were also markedly fewer dwellings rented from the State housing authority (2.2%, compared to 4.3%). The proportion of dwellings with no access to a motor vehicle (8.7%) was lower than that for Brisbane (9.8%) and for Queensland (9.3%).

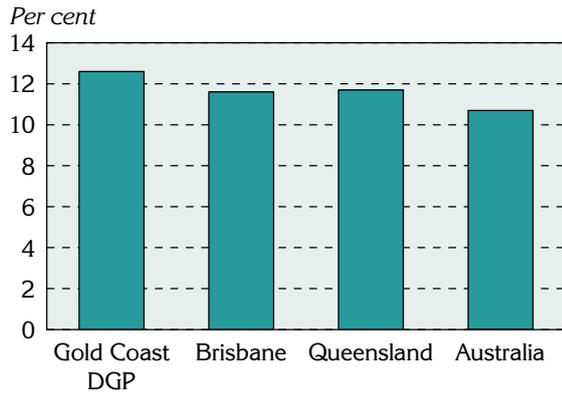
The Division had notably lower proportions of the population who reported using, at home, a computer (41.6%) and the Internet (29.6%), compared to Brisbane (46.0% and 31.7%).

These socioeconomic indicators show the Division to comprise a mixed population, with many of the features of a disadvantaged population, but the Index of Relative Socio-Economic Disadvantage (page 5, Summary of socioeconomic ranking), shows it to be of average socioeconomic status.

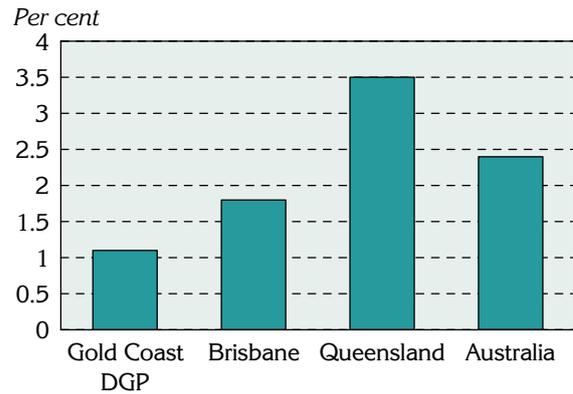
Figure 4: Socio-demographic indicators, Gold Coast DGP, Brisbane, Queensland and Australia, 2001

Note the different scales

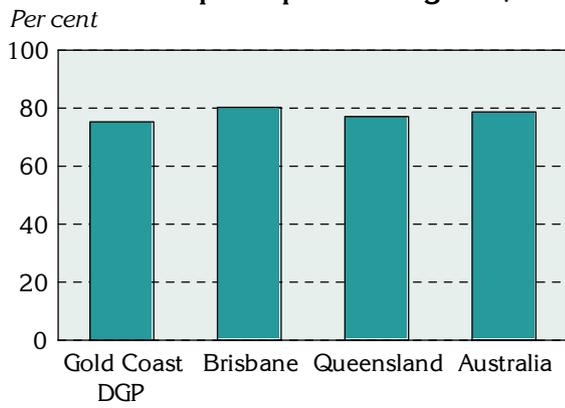
Single parent families



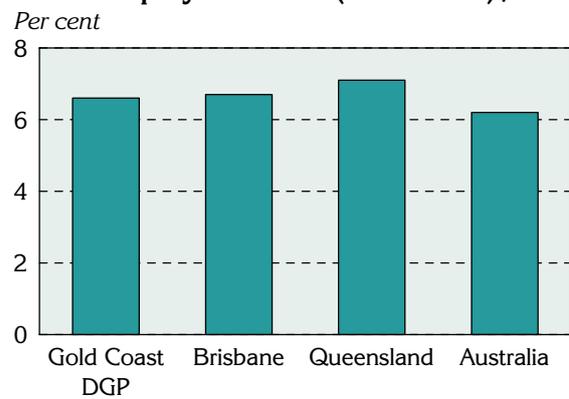
Indigenous‡



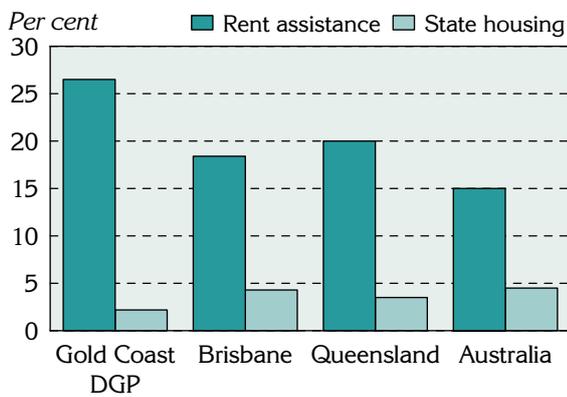
Education participation at age 16‡



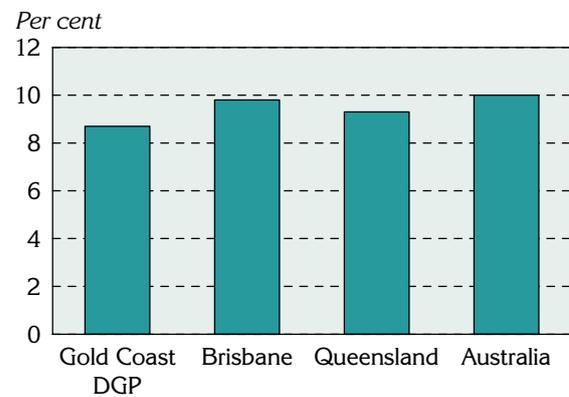
Unemployment rate (June 2003)‡



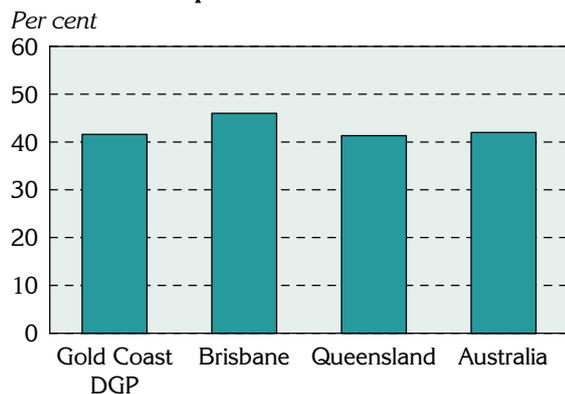
Households receiving rent assistance & Dwellings rented from State housing authority



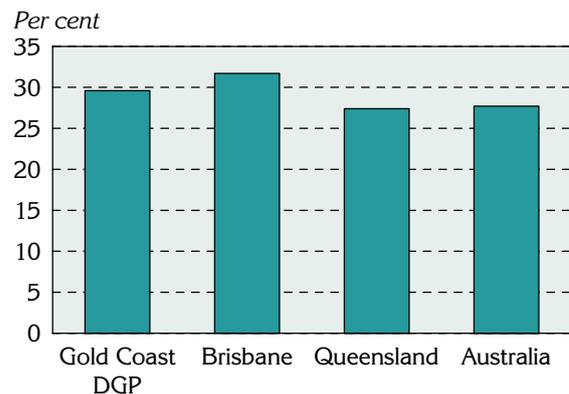
Dwellings with no motor vehicle



Computer use at home



Internet use at home



‡ See note under 'Data converters and mapping' re calculation of Division totals

Table 3: Socio-demographic indicators, Gold Coast DGP, Brisbane, Queensland and Australia, 2001

Indicator	Gold Coast DGP		Brisbane		Queensland		Australia	
	No.	%	No.	%	No.	%	No.	%
Single parent families	12,549	12.6	49,762	11.6	109,687	11.7	529,969	10.7
Indigenous‡	4,215	1.1	29,641	1.8	125,908	3.5	458,261	2.4
Full-time secondary education participation at age 16‡	3,730	75.3	18,673	80.3	40,051	77.1	130,198	78.7
Households: rent assistance	37,533	26.5	107,911	18.4	253,773	20.0	1,006,599	15.0
Dwellings rented from the State housing authority	3,418	2.2	26,043	4.3	47,286	3.5	317,171	4.5
Dwellings: no motor vehicle	13,663	8.7	59,167	9.8	125,606	9.3	708,073	10.0
Computer use at home	161,757	41.6	739,819	46.0	1,481,238	41.3	7,881,983	42.0
Internet use at home	109,640	29.6	510,705	31.7	964,143	27.4	5,199,286	27.7

‡ See note under 'Data converters and mapping' re calculation of Division total

The unemployment rate of 6.6% in Gold Coast DGP was consistent with the rate of 6.7% for Brisbane (6.7%), and was slightly below that for Queensland (7.1%) (Figure 4, Table 4). The labour force participation rate (75.1%) was similar to the rates for Brisbane (76.0%) and Queensland (75.4%), while the female labour force participation rate (69.9%) was lower than in Brisbane (71.4%), but similar to that for Queensland (69.5%).

Table 4: Unemployment and labour force participation, Gold Coast DGP, Brisbane, Queensland and Australia, 2003

Labour force indicators	Gold Coast DGP		Brisbane		Queensland		Australia	
	No.	%	No.	%	No.	%	No.	%
Unemployment rate‡	13,973	6.6	59,542	6.7	136,589	7.1	623,791	6.2
Labour force participation‡	210,923	75.1	889,867	76.0	1,926,589	75.4	10,038,147	75.2
Female labour force participation (2001)	66,161	69.9	302,824	71.4	618,570	69.5	3,306,521	69.7

‡ See note under 'Data converters and mapping' re calculation of Division total

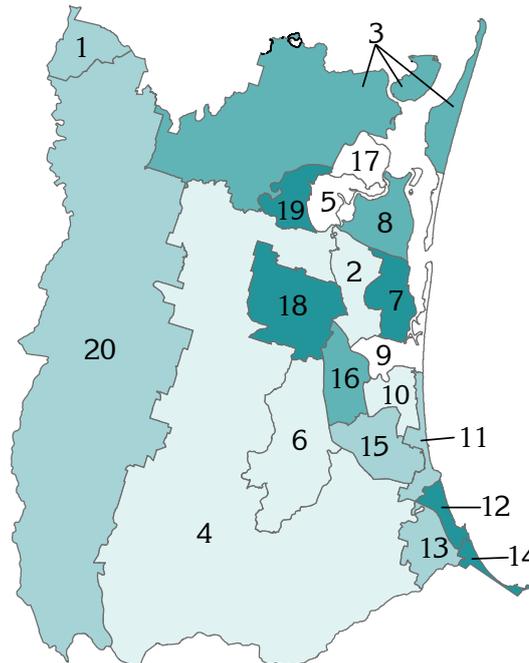
Summary of the socioeconomic ranking of the Gold Coast DGP

Following the 2001 Census, the Australian Bureau of Statistics (ABS) produced four socioeconomic indexes for areas (SEIFA) which describe various aspects of the socioeconomic make-up of populations in areas. The scores for these indexes for individual Statistical Local Areas (SLAs) or groups of SLAs in Gold Coast DGP are shown in the supporting information, Table 9, page 18: SLAs are described on page 19.

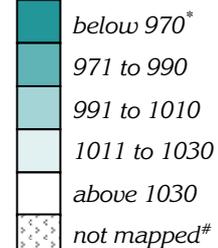
The Gold Coast DGP area's SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) score is 1000, equal to the average for Australia (1000), and just below that for Brisbane (1008); this highlights the average socioeconomic status profile of the Gold Coast DGP population. However, there are marked variations in the IRSD at the SLA level within the Division (Map 1).

Map 1: Index of Relative Socio-Economic Disadvantage by SLA/SLA group, Gold Coast DGP, 2001

See note under 'Methods' re Data converters and mapping concerning SLAs mapped to the Division. This is of particular relevance where part of an SLA is mapped to the Division.



Index scores



* most disadvantaged

data were not mapped: see note under 'Methods' re Data converters and mapping.

Alphabetical key to SLA/SLA group, Gold Coast DGP, 2001

Arundel/Ashmore	2	Helensvale	5
Beaudesert - Part B	20	Hope Island	17
Broadbeach/Burleigh Heads	11	Labrador/Southport	7
Broadbeach Waters/Mermaid Waters	10	Nerang	18
Carrara-Merrimac	16	Oxenford	19
Coolangatta/Tugun	14	Palm Beach/Currumbin	12
Coomera-Cedar Creek	3	Paradise Point/Biggera Waters	8
Currumbin Waters/Elanora	13	Robina/Burleigh Waters	15
Greenbank/Beaudesert	1	Surfers Paradise/Benowa	9
Guanaba-Currumbin Valley	4	Worongary-Tallai/Mudgeeraba	6

General medical practitioner (GP) supply

A total of 315.5 full-time equivalent (FTE) GPs, and 379.1 full-time workload equivalent (FWE¹) GPs worked in the Gold Coast DGP in 2003/04 (Table 5). Of the FWE GPs, 16.3% were female, and 32.2% were over 55 years of age (compared to 26.7% and 25.2%, respectively, for Queensland).

Apart from the day-time population, the rates of population per FTE GP varied, depending on the population measure used, from a high of 1,342 people per GP (calculated on the 1 August 2001 Census count – all people counted in the Division on Census night, including visitors from Australia and overseas), to a low of 1,278 people per GP (calculated on the 1 August 2001 Usual Resident Population (URP) – usual residents of the Division counted in Australia on Census night). This reflects the number of tourists in the Division on Census night. The rates of population per FWE GP were lower, ranging from 1,063 (calculated on URP) to 1,117 (calculated on the Census count). When calculated on the estimated day-time population, the rates of population were 6.7% below those calculated on the URP.

Based on the average Estimated Resident Population (ERP) as at 30 June 2003 and 30 June 2004, the rates of population per GP in Gold Coast DGP differed little for the rates for Queensland and Australia, indicating a similar level of provision of GP services in the Division.

Table 5: Population per GP in Gold Coast DGP, Queensland and Australia, 2003/04

Population measure	Population	GPs		Population per GP	
		FTE	FWE	FTE	FWE
Gold Coast DGP					
Census count (adjusted)*	423,324	315.5	379.1	1,342	1,117
Usual Resident Population (URP) (adjusted)*	403,130	..	..	1,278	1,063
Estimated Resident Population (ERP)	422,409	..	..	1,339	1,114
Day-time population (estimated on URP)* ‡	375,948	..	..	1,191	992
Queensland (ERP)	3,841,538	2,739	3,256	1,403	1,180
Australia (ERP)	19,989,303	14,246	16,872	1,403	1,185

* The Census count, Usual Resident Population and Day-time population were adjusted to reflect population change between 2001 and 2003/04, as measured by the ERP

‡ See note under 'Data converters and mapping' re calculation of Division totals

Immunisation

Data from the Australian Childhood Immunisation Register show that 94.3% of children in the Division in 2002 were fully immunised at age one, consistent with the Australian proportion of 94.2%.

Immunisation by provider type for children between the ages of 0 to 6 is shown in Table 6. The proportion of children in the Division who were immunised by a general practitioner was 94.0%, compared to 70.0% for Australia, with 5.3% immunised at a local government council.

Table 6: Childhood immunisation at ages 0 to 6 by provider type, Gold Coast DGP and Australia, 2003/04

Provider	Gold Coast DGP	Australia
	%	%
General practitioner	94.0	70.0
Local government council	5.3	16.6
Community health centre/ worker	0.0	9.8
Public hospital	0.2	2.1
Aboriginal health service/ worker	0.5	0.9
Other*	0.0	0.6
Total: Per cent	100.0	100.0
Number	69,376	3,843,610

* Includes immunisations in/ by State Health Departments, RFDS and private hospitals

¹The FWE value is calculated for each GP location by dividing the GP's total Medicare billing (Schedule fee value of services provided during the reference period) by the mean billing of full-time doctors in that derived major speciality for the reference period. Thus, a GP earning 20% more than the mean billing of full-time doctors is shown as 1.2 FWE: this differs from full-time equivalent (FTE) counts, where the FTE value of any GP cannot exceed 1.0

Premature mortality

Deaths at ages below 75 years are used as an indicator of health status, as they largely reflect premature deaths, given the current levels of life expectancy in Australia.

The 'all causes' death rate in the Division at ages 0 to 74 years (237.7 deaths per 100,000 population) is markedly lower than for Brisbane (277.8) and for Australia (290.4); the rates have been age standardised to allow for comparisons between areas, regardless of differences in age profiles between the Division and Australia.

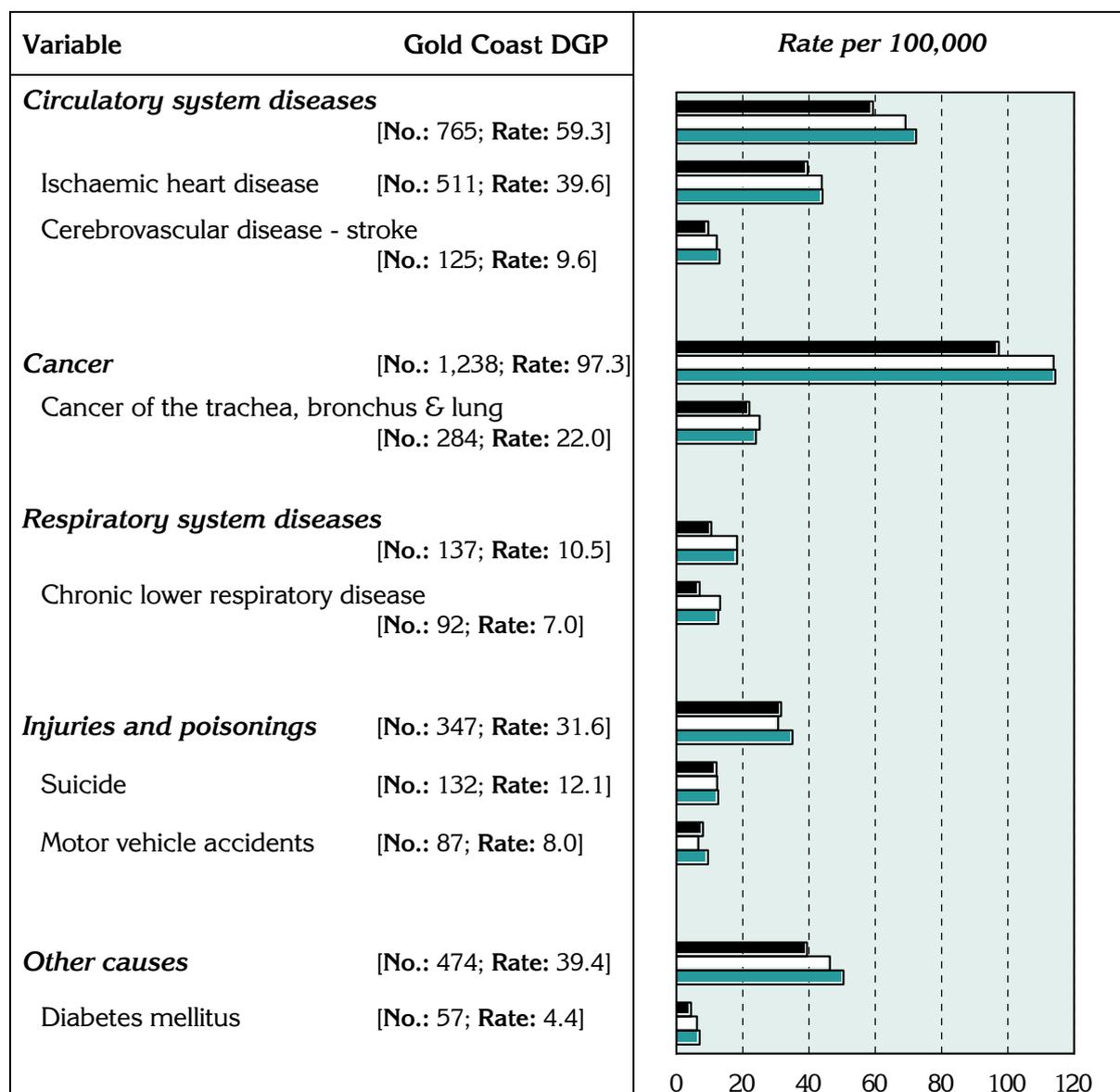
The major causes of premature mortality in the Division, as for Brisbane and Australia as a whole, are cancer and diseases of the circulatory system (Figure 5). For all of the major conditions and selected causes shown, death rates in the Division were generally lower than for Brisbane and Australia.

The data on which the following chart is based are in Table 11.

Figure 5: Deaths before 75 years of age by major condition group and selected cause, Gold Coast DGP‡, Brisbane and Australia, 2000-02*

Indirectly age standardised rate per 100,000 population

■ Gold Coast DGP □ Brisbane ■ Australia



* 'No.' is the total number of deaths for the 2000-02 period; 'Rate' is an annual rate, based on the 3 year average

‡ See note under 'Data converters and mapping' re calculation of Division totals

Chronic diseases and risk factors

The term “chronic disease” describes health problems that persist across time and require some degree of health care management (WHO 2002). Chronic diseases tend to have complex causes, are often long lasting and persistent in their effects, and can produce a range of complications (Thacker et al. 1995). They are responsible for a significant proportion of the burden of disease and illness in Australia and other westernised countries. Given the ageing of the population, this trend is likely to continue.

At different life stages, risk factors for chronic diseases and their determinants include genetic predisposition; poor diet and lack of exercise; alcohol misuse and tobacco smoking; poor intra-uterine conditions; stress, violence and traumatic experiences; and inadequate living environments that fail to promote healthy lifestyles (NPHP 2001). Risk factors are also more prevalent in areas of low socioeconomic status, and in communities characterised by low levels of educational attainment; high levels of unemployment; substantial levels of discrimination, interpersonal violence and exclusion; and poverty. There is a higher prevalence of risk factors among Indigenous communities, and other socioeconomically disadvantaged Australians (NPHP 2001).

Background

In this section, estimates of the prevalence of selected chronic diseases and risk factors, and two summary measures of health, are shown for the Division‡, and for SLAs within the Division: note that the estimates have been predicted from self-reported data, and are not based on clinical records or physical measures. The chronic diseases and risk factors are those for which sufficiently reliable estimates can be made for the Division from national survey data. The process by which the estimates have been made, and details of their limitations, are described in the Notes section, pages 15-16. The data on which the following charts are based are in Table 12.

The estimates provide information of relevance to a number of the National Health Priority Areas (NHPAs – asthma; cardiovascular health; diabetes mellitus; injury prevention and control; mental health; and arthritis and musculoskeletal conditions: estimates have not been made for cancer control, the other NHPA). The risk factors for which estimates have been made are those which are accepted as being associated with these important chronic conditions. They are overweight (not obese), obesity, smoking, lack of exercise and high-risk alcohol use.

The numbers are estimates for an area, not measured events as are death statistics: they should be used as indicators of likely levels (and not actual levels) of a condition or risk factor in an area.

Prevalence estimates: chronic disease‡

It is estimated that similar proportions of the population in Gold Coast DGP reported having any of the selected chronic conditions compared to Australia as a whole (Figure 6): that is, the prevalence rates per 1,000 population were consistent with the national average.

Prevalence estimates: self-reported health‡

The NHS includes two measures of self-reported health. One is the Kessler Psychological Distress Scale–10 items (K–10). This is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the four weeks prior to interview, asked of respondents 18 years and over (ABS 2002). The other asks respondents aged 15 years and over to rate their health on a scale from ‘excellent’, through ‘very good’, ‘good’ and ‘fair’, to ‘poor’ health.

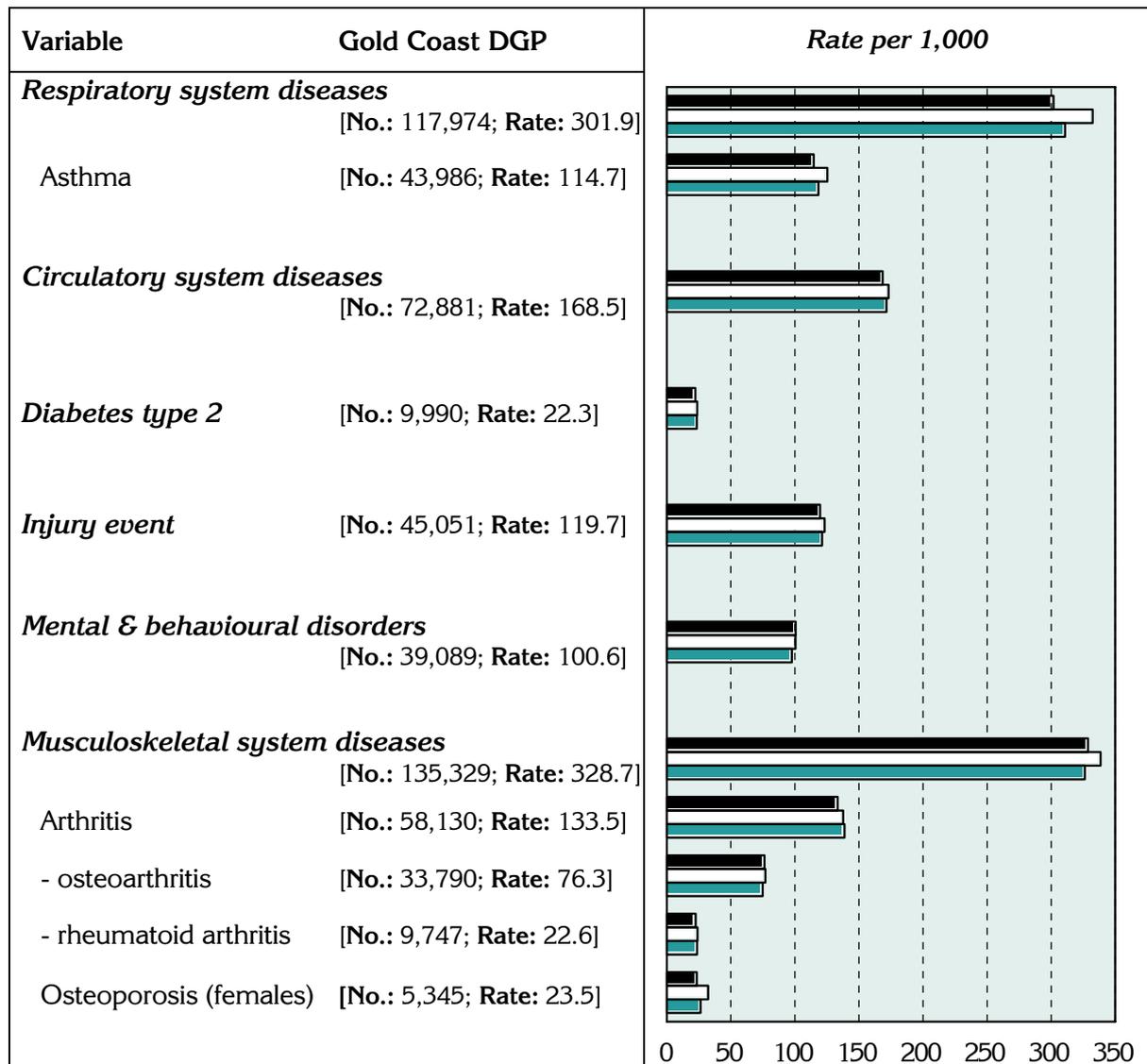
The population of the Division aged 18 years and over is estimated to have a similar proportion with very high psychological distress levels as measured by the K–10 (Figure 7) compared to Australia as a whole. The proportion of the population aged 15 years and over estimated to have reported their health as ‘fair’ or ‘poor’ is slightly below the national average.

‡ See note under ‘Data converters and mapping’ re calculation of Division totals

Figure 6: Estimates* of chronic disease and injury, Gold Coast DGP‡, Brisbane and Australia, 2001

Indirectly age standardised rate per 1,000 population

Gold Coast DGP Brisbane Australia



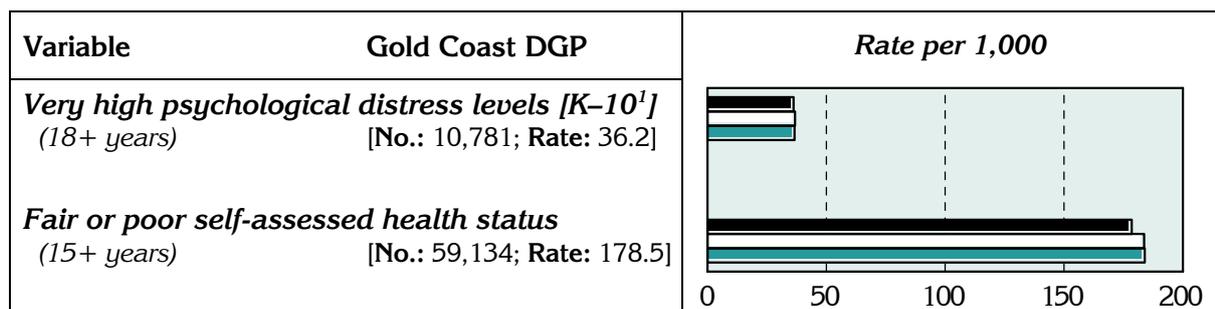
* 'No.' is a weighted estimate of the number of people in Gold Coast DGP reporting each chronic condition and is derived from synthetic predictions from the 2001 NHS

‡ See note under 'Data converters and mapping' re calculation of Division totals

Figure 7: Estimates* of measures of self-reported health, Gold Coast DGP‡, Brisbane and Australia, 2001

Indirectly age standardised rate per 1,000 population

Gold Coast DGP Brisbane Australia



* 'No.' is a weighted estimate of the number of people in Gold Coast DGP reporting under these measures and is derived from synthetic predictions from the 2001 NHS

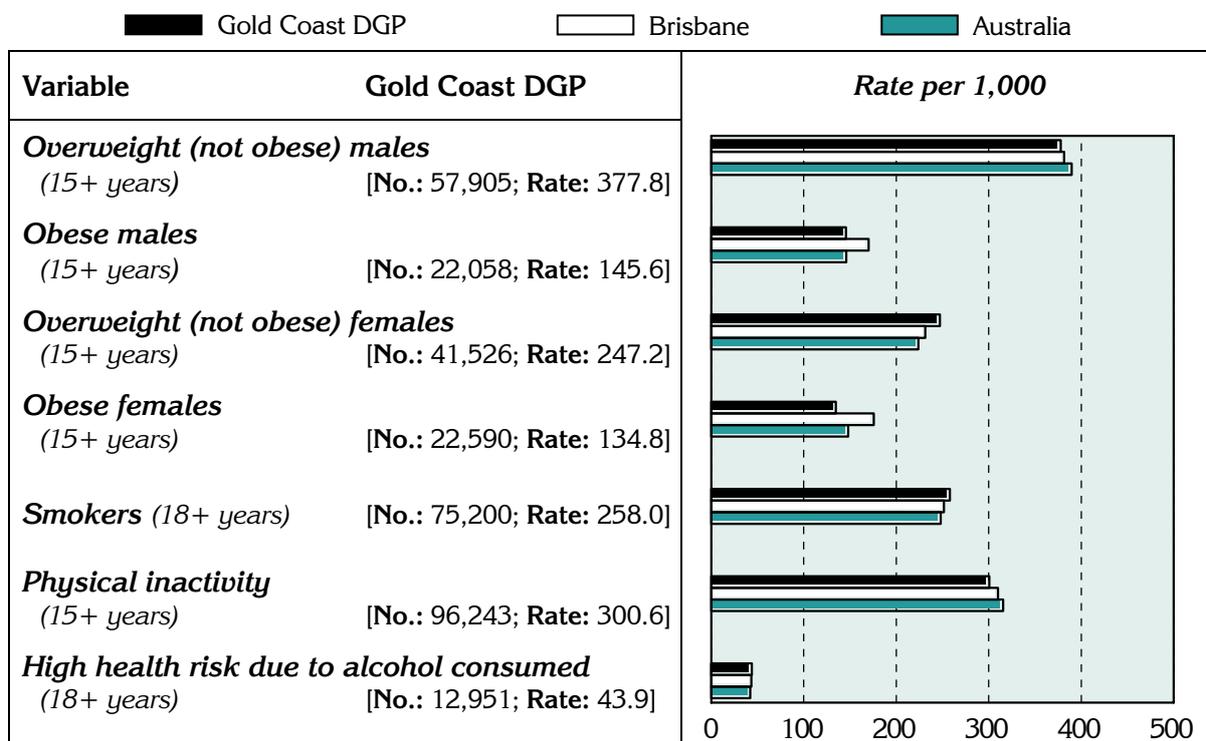
¹ Kessler 10

‡ See note under 'Data converters and mapping' re calculation of Division totals

Prevalence estimates: risk factors‡

The Gold Coast DGP reported similar or lower rates (when compared with the Australian population) for the selected risk factors except for overweight in females and smoking (Figure 8).

Figure 8: Estimates* of selected risk factors, Gold Coast DGP‡, Brisbane and Australia, 2001
Indirectly age standardised rate per 1,000 population



* 'No.' is a weighted estimate of the number of people in Gold Coast DGP with these risk factors and has been predicted using data from the 2001 NHS and known data for the Division

‡ See note under 'Data converters and mapping' re calculation of Division totals

The following maps provide details of the geographic distribution, at the SLA level, of the estimated prevalence of chronic disease (Map 2), self-reported health (Map 3) and risk factors associated with chronic disease (Map 4).

In the following maps, users should note that the estimates shown for part SLAs in the Division (see Table 10, page 19, for per cent of SLA population in the Division) represent the estimates for the whole SLA, and not just the part shown. However, SLAs with only a small proportion of their population in the Division are likely to have little influence on the total estimates for the Division, which have been based on the percentage of the SLA population in the Division.

Map 2: Estimates* of chronic disease and injury by SLA/SLA group, Gold Coast DGP, 2001

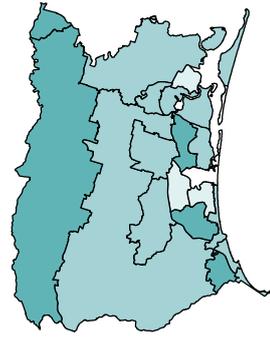
Respiratory system diseases



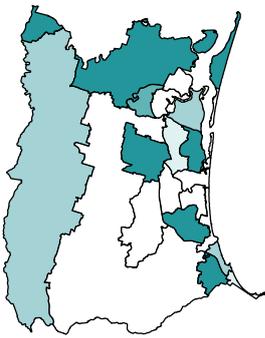
Respiratory system diseases: Asthma



Circulatory system diseases



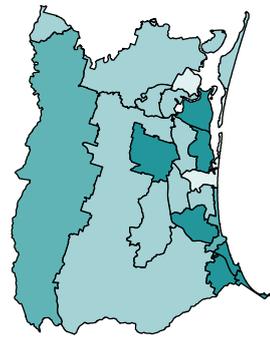
Diabetes type 2



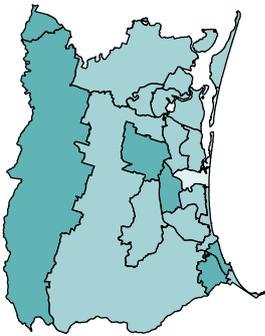
Injury event



Mental & behavioural disorders



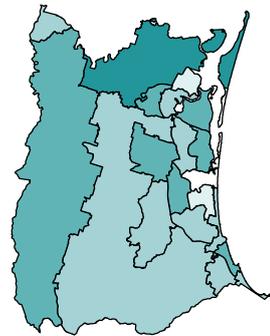
Musculoskeletal system diseases



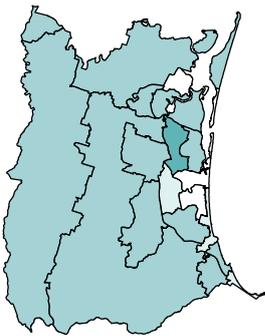
Musculoskeletal system diseases: Arthritis



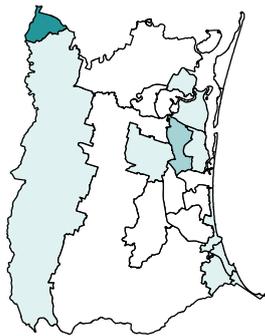
Arthritis: Osteoarthritis



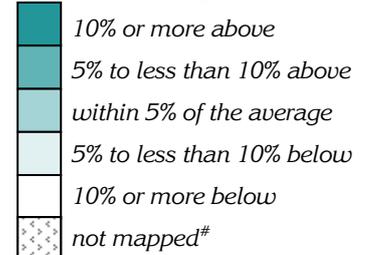
Arthritis: Rheumatoid arthritis



Osteoporosis (females)



Per cent difference from Australian average

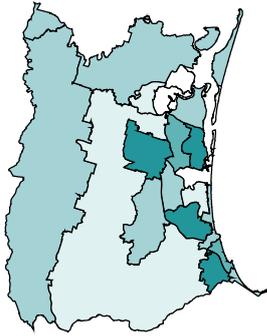


* The estimates are synthetic predictions of the prevalence of these conditions: see Notes on the data.

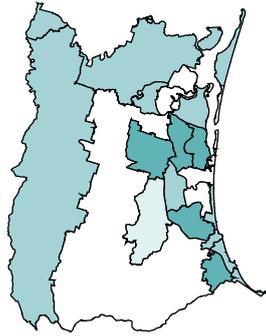
Data not mapped: see Notes on the data.

Map 3: Estimates* of measures of self-reported health by SLA/SLA group, Gold Coast DGP, 2001

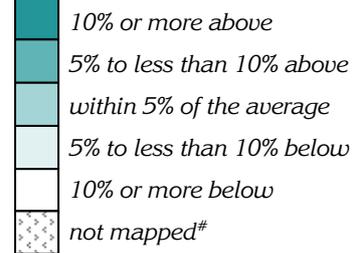
Very high psychological distress levels [K-10¹] (18+ years)



Fair or poor self-assessed health status (15+ years)



Per cent difference from Australian average



* The estimates are synthetic predictions of the prevalence of these conditions: see Notes on the data.
Data not mapped: see Notes on the data.

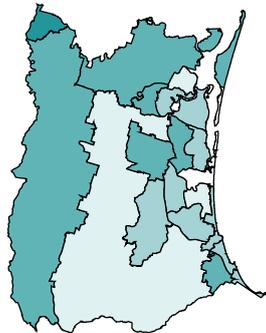
¹ Kessler 10

Map 4: Estimates* of selected risk factors by SLA/SLA group, Gold Coast DGP, 2001

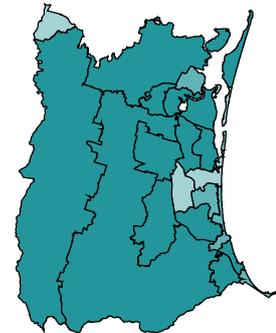
Overweight (not obese) males (15+ years)



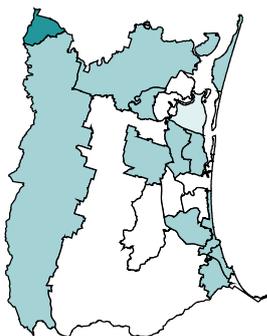
Obese males (15+ years)



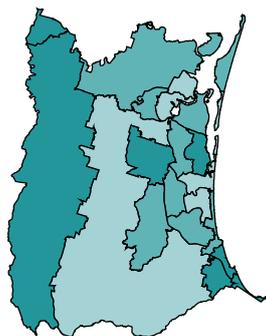
Overweight (not obese) females (15+ years)



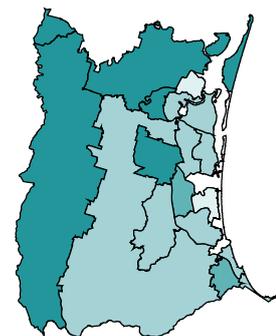
Obese females (15+ years)



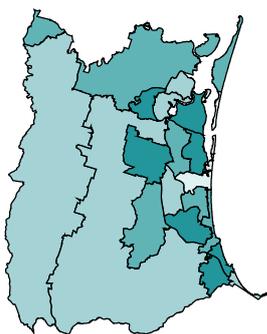
Smokers (18+ years)



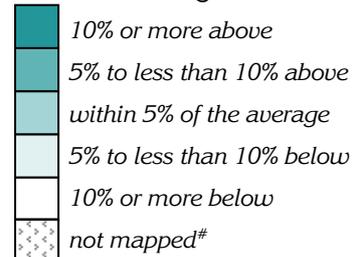
Physical inactivity (15+ years)



High health risk due to alcohol consumed (18+ years)



Per cent difference from Australian average



* The estimates are synthetic predictions of the prevalence of these conditions: see Notes on the data.
Data not mapped: see Notes on the data.

Notes on the data

Data sources and limitations

General

Unless stated otherwise, references to 'country Queensland' relate to the remainder of the state areas in the Queensland Statistical Division (excluding the Brisbane Statistical Division).

Data sources

Table 7 details the data sources for the material presented in this profile.

Table 7: Data sources

Section	Source
Key indicators	
GP services per head of population	GP services data supplied by Department of Health and Ageing, 2003/04 Population data: Estimated Resident Population, ABS, mean of 30 June 2003 and 30 June 2004 populations
Socio-demographic profile	
Figures 1 and 2; Table 1	Estimated Resident Population, ABS, 30 June for the periods shown
Tables 2, 3 and 4; Figures 3 and 4	Data were extracted by postal area from the ABS Population Census 2001 ¹ , except for the following indicators: - <i>Indigenous</i> – Experimental estimates of Aboriginal and Torres Strait Islander people, ABS 2001 (unpublished) - <i>Full-time secondary education participation at age 16</i> – Census 2001 (unpublished) - <i>Households receiving rent assistance</i> – Centrelink, December Quarter 2001 (unpublished) - <i>Unemployment rate / Labour force participation</i> – extracted from <i>Small Area Labour Markets Australia</i> , June Quarter 2003, Department of Employment and Workplace Relations
Map 1; Table 9	ABS SEIFA package, Census 2001
General medical practitioner (GP) supply	
Table 5	GP data supplied by Department of Health and Ageing, 2003/04 Population estimates used in calculating the population per GP rates are the: - Census count ² , ABS Population Census 2001, scaled to 2003/04 - Usual Resident Population ³ , ABS Population Census 2001, scaled to 2003/04 - Day-time population: calculated from journey to work data, ABS Population Census (URP) 2001 (unpublished); and 2001 Census URP, scaled to 2003/04 - Estimated Resident Population, ABS, June 2003/2004
Immunisation	
Text comment: 1 year olds	National Centre for Immunisation Research and Surveillance, 2002
Table 6	Australian Childhood Immunisation Register, Health Insurance Commission, 2003/04 (unpublished)
Premature mortality	
Figure 5; Table 11	ABS Deaths, 2000 to 2002
Chronic diseases and associated risk factors⁴	
Figures 6, 7 and 8; Maps 2, 3 and 4; Table 12	Estimated from 2001 National Health Survey (NHS), ABS (unpublished)

¹ All data extracted from Usual Residents Profile, except for data variables only released in the Basic Community Profile

² *Census count* - those counted in the Division on Census night, including tourists, business people and other visitors

³ *Usual Resident Population* - those who usually live there and who were in Australia at the time and would have provided details in the Census at the address where they were counted

⁴ See notes below

Chronic diseases and associated risk factors

The data for chronic conditions and risk factors for SLAs have been estimated from the 2001 National Health Survey (NHS), conducted by the ABS: see note below on synthetic estimates. The NHS sample includes the majority of people living in private households, but excludes the most remote areas of Australia. These areas cover 86.4% of Australia's land mass and comprise just 3% of the total population, however, 28% of Australia's Indigenous population live in these areas. Thus it has not been possible to produce these estimates for Divisions with relatively high proportions of their population in the most remote areas of Australia.

The data for chronic conditions and risk factors are self-reported data, reported to interviewers in the 2001 NHS. Table 8 includes notes relevant to this data.

Table 8: Notes on estimates of chronic diseases and associated risk factors

Indicator	Notes on the data
Estimates of chronic disease and injury (Figure 6 and Map 2)	
Long term conditions	- Respondents were asked whether they had been diagnosed with any long term health condition (a condition which has lasted or is expected to last for 6 months or more), and were also asked whether they had been told by a doctor or nurse that they had asthma, cancer, heart and circulatory conditions, and/or diabetes
Injury event	- Injuries which occurred in the four weeks prior to interview
Estimates of measures of self-reported health (Figure 7 and Map 3)	
Very high psychological distress levels (K10)	- Derived from the Kessler Psychological Distress Scale-10 items (K-10), which is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the 4 weeks prior to interview. 'Very high' distress is the highest level of distress category (of a total of four categories)
Fair or poor self-assessed health status	- Respondent's general assessment of their own health, against a five point scale from excellent through to poor – 'fair' or 'poor' being the two lowest in the scale
Estimates of selected risk factors (Figure 8 and Map 4)	
Overweight (not obese)	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) - overweight: 25.0 to less than 30.0
Obese	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) – obese: 30.0 and greater
Smokers	- Respondent's undertaking regular (or daily) smoking at the time of interview
Physical inactivity	- Did not exercise in the two weeks prior to interview through sport, recreation or fitness (including walking) – excludes incidental exercise undertaken for other reasons, such as for work or while engaged in domestic duties
High health risk due to alcohol consumed	- Respondent's estimated average daily alcohol consumption in the seven days prior to interview (based on number of days and quantity consumed). Alcohol risk levels were grouped according to NHMRC risk levels for harm in the long term, with 'high risk' defined as a daily consumption of more than 75 ml for males and 50 ml for females

Note: For a full description, refer to *ABS 2001 National Health Survey, Cat. No. 4364.0* and *ABS 2001 Health Risk Factors, Cat. No. 4812.0*

Methods

Synthetic estimates

The estimates of the prevalence of chronic disease and associated risk factors have been predicted for a majority of SLAs across Australia, using modelled survey data collected in the 2001 ABS National Health Survey (NHS) and known characteristics of the area. A synthetic prediction can be interpreted as the likely value for a 'typical' area with those characteristics: the SLA is the area level of interest for this project (where SLAs had small populations they were grouped to larger areas). This work was undertaken by the Australian Bureau of Statistics, as they hold the NHS unit record files: the small area data were compiled by PHIDU.

The approach used is to undertake an analysis of the survey data for Australia to identify associations in the NHS data between the variables that we wish to predict at the area level (eg. prevalence of chronic conditions and risk factors) and the data we have at the area level (eg. socioeconomic status, use of health services). The relationship between these variables for which we have area level data (the predictors) and the reporting of chronic conditions in the NHS is also a part of the model that is developed by the ABS. For example, such associations might be between the number of people reporting specified chronic conditions in the NHS and:

- the number of hospital admissions (in total, to public and to private hospitals, by age, sex and diagnosis),
- socioeconomic status (as indicated by Census data, or for recipients of government pensions and benefits), and
- the number of visits to a general medical practitioner.

The results of the modelling exercise are then applied to the SLA counts of the predictors. The prediction is, effectively, the likely value for a typical area with those characteristics. The raw numbers were then age-standardised, to control for the effects of differences in the age profiles of areas.

The numbers are estimates for an area, not measured events as are death statistics: they should be used as indicators of likely levels of a condition or risk factor in an area.

Premature deaths

Details of deaths by SLA were purchased from the ABS. The raw numbers were then age-standardised, by the indirect method, to control for the effects of differences in the age profiles of areas.

Data converters and mapping

[Conversion to Division of data available by postcode](#)

The allocation of postcodes to Divisions was undertaken using information from the Department of Health and Ageing's web site, which shows the proportion of a postcode in a Division (see page 19).

[Conversion to Division of data available by SLA](#)

(marked in this profile as ‡ See note under 'Data converters and mapping' re calculation of Division total)

Where the data presented in these profiles were only available by SLA they have been converted to Division of General Practice areas using a concordance based on data at the 2001 Census. A copy of the concordance is included in the Population data: A Guide for Divisions of General Practice: it is also available from the Divisions' data area on PHIDU web site.

In brief, the concordance splits the data (eg number of deaths) for each SLA across one or more Divisions. The proportion of an SLA's data that is allocated to each Division was calculated from (a) CD level Census 2001 data that splits SLAs across approximations to postcodes (referred to as postal areas) and (b) data on the DoHA website that splits postcodes across Divisions. This concordance can be adjusted to meet any new configuration of Division boundaries based on the 2001 Collection Districts, or combinations thereof.

The estimated population of each SLA in this Division is shown in Table 10.

[Mapping](#)

In some Divisions the maps may include a very small part of an SLA which has not been allocated any population, or either has a population of less than 100 or has less than 1% of the SLA's total population: these areas are mapped with a pattern.

Supporting information

This and other information is also available at www.publichealth.gov.au.

A definition of population health

Population health, in the context of general practice, has been defined¹ as:

“The prevention of illness, injury and disability, reduction in the burden of illness and rehabilitation of those with a chronic disease. This recognises the social, cultural and political determinants of health. This is achieved through the organised and systematic responses to improve, protect and restore the health of populations and individuals. This includes both opportunistic and planned interventions in the general practice setting.”

The key determinants of health are social support networks, employment and working conditions, social environments, physical environments, geographical isolation, personal health practices, healthy child development, ageing and disability, biology and genetic endowment, health services, gender and culture.

In the Aboriginal and Torres Strait Islander context this means that a population health approach to health services will assist in ensuring “that Aboriginal and Torres Strait Islander people enjoy a healthy life equal to that of the general population, that is enshrined by a strong living culture, dignity and justice”.² This recognises the importance of achieving improvements to Aboriginal and Torres Strait Islander health and respects the particular health issues facing Indigenous people.

¹ “The role of general practice in population health – A Joint Consensus Statement of the General Practice Partnership Advisory Council and the National Public Health Partnership Group” (Joint Advisory Group on General Practice and Population Health 2001)

² As defined in the Strategic Framework for Aboriginal and Torres Strait Islander Health

SEIFA scores

Following the 2001 Census, the Australian Bureau of Statistics (ABS) produced four socioeconomic indexes for areas (SEIFA). The indexes describe various aspects of the socioeconomic make-up of populations in areas, using data collected in the 2001 Census.

The Index of Relative Socio-Economic Disadvantage (labelled ‘Disadvantage’ in Table 9) includes all variables that either reflect or measure disadvantage. The Index of Advantage/Disadvantage is used to rank areas in terms of both advantage and disadvantage: any information on advantaged persons in an area will offset information on disadvantaged persons in the area. The Index of Economic Resources and the Index of Education and Occupation were targeted towards specific aspects of advantage/disadvantage.

For further information on the composition and calculation of these indexes see the ABS Information Paper ABS Cat No. 2039.0 available on the ABS web site www.abs.gov.au. The scores for these indexes for each Statistical Local Area (SLA) or part SLA in Gold Coast DGP are shown in Table 9.

In using this table, users should note that the index score shown for SLAs with less than 100 per cent in the Division represents the score for the whole SLA, and not just the part shown. However, SLAs with small proportions may have little influence on the average index score for the Division which has been based on the postcodes in the Division.

Table 9: SEIFA scores by SLA/SLA group, Gold Coast DGP, 2001

SLA/ SLA group name (% per cent of SLA/ SLA group in the Division)	Index score			
	Disadvantage	Advantage	Economic Resources	Education & Occupation
Beaudesert - Part B (45.1)	996	964	959	964
Arundel/Ashmore# (100.0)	1013	1005	1018	995
Surfers Paradise/Benowa# (100.0)	1034	1042	1046	1051
Paradise Point/Biggera Waters# (100.0)	989	967	975	971
Coolangatta/Tugun# (72.0)	954	940	948	961
Broadbeach/Burleigh Heads (100.0)	1009	1003	1007	1015
Broadbeach Waters/Mermaid Waters# (100.0)	1026	1016	1020	1020
Palm Beach/Currumbin# (100.0)	966	953	957	968
Robina/Burleigh Waters# (100.0)	1010	993	997	996
Carrara-Merrimac (100.0)	990	979	983	979
Coomera-Cedar Creek (96.5)	990	980	1001	965
Currumbin Waters/Elanora# (100.0)	1000	971	976	973
Guanaba-Currumbin Valley (100.0)	1024	1009	1014	1001
Helensvale (100.0)	1033	1006	1020	986
Hope Island (100.0)	1068	1064	1078	1056
Labrador/Southport# (100.0)	946	949	934	976
Worongary-Tallai/Mudgeeraba# (100.0)	1023	1012	1016	997
Nerang (100.0)	967	952	963	944
Oxenford (100.0)	967	950	974	936
Greenbank/Beaudesert# (1.0)	992	963	998	927

* 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

SLA group: see Table 10 for codes for the individual SLAs in this group

Statistical geography of the Gold Coast DGP

The Gold Coast DGP covers 2,237 square kilometres, based on 2001 SLA data.

The postcodes in the Division (all 100%) are: 4209-4221, 4223-4230, 4270-4272, 4275, and 9726².

Statistical Local Areas (SLAs) are defined by the Australian Bureau of Statistics to produce areas for the presentation and analysis of data. In Gold Coast, SLAs are based on suburbs: as many of these have very small populations, they have in some cases been grouped to form areas of larger population: the groupings are those used in HealthWIZ. The individual suburbs and groups of suburbs that comprise the Division are listed in Table 10. The SLA group name does not in all cases include the names of all suburbs (SLAs) in the group: all relevant SLA codes are shown in the table.

Table 10: SLAs/SLA groups in Gold Coast DGP by 2001 boundaries

SLA code ¹	SLA/ SLA group name	Per cent of SLA/SLA group's population in the Division*	Estimate of the SLA/SLA group's 2004 population in the Division
31187, 31631	Beaudesert - Part B	45.1	12,837
33497, 33501, 33541, 33577	Arundel/Ashmore	100.0	34,826
33504, 33517, 33555, 33587	Surfers Paradise/Benowa	100.0	34,773
33507, 33531, 33545, 33575, 33583	Paradise Point/ Biggera Waters	100.0	31,069
33512, 33527, 33591	Coolangatta/Tugun	72.0	8,103
33513	Broadbeach/Burleigh Heads	100.0	25,015
33515, 33562	Broadbeach Waters/Mermaid Waters	100.0	22,234
33521, 33557, 33563	Palm Beach/Currumbin	100.0	16,493
33523, 33582, 33586	Robina/Burleigh Waters	100.0	44,119
33525	Carrara-Merrimac	100.0	15,981
33532	Coomera-Cedar Creek	96.5	14,544
33535, 33537	Currumbin Waters/Elanora	100.0	22,489
33542	Guanaba-Currumbin Valley	100.0	31,539
33543	Helensvale	100.0	14,125
33547	Hope Island	100.0	5,492
33553, 33585	Labrador/Southport	100.0	41,023
33565, 33593	Worongary-Tallai/Mudgeeraba	100.0	19,040
33567	Nerang	100.0	24,789
33571	Oxenford	100.0	10,068
34068,30552	Greenbank/Beaudesert	1.0	398

* 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

¹ For further details refer to Australian Standard Geographical Classification, 2001, ABS Cat No. 1216.0, 2001

² As per the Department of Health and Ageing web site (accessed online version as at February 2005): <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-divisions-divspc.htm>

Supporting data

The data used in Figure 5 to illustrate the rates of premature mortality in the Division are shown below in Table 11.

Table 11: Deaths before 75 years of age by major condition group and selected cause, Gold Coast DGP‡, Brisbane and Australia, 2000-02*

Indirectly age standardised rate per 100,000 population

Variable	Gold Coast DGP‡		Brisbane		Australia	
	No.	Rate	No.	Rate	No.	Rate
Circulatory system diseases	765	59.3	2,781	69.1	38,357	72.3
Ischaemic heart disease	511	39.6	1,764	43.9	23,364	44.1
Cerebrovascular disease – stroke	125	9.6	488	12.2	6,920	13.0
Cancer	1,238	97.3	4,629	113.8	60,603	114.3
Cancer of the trachea, bronchus & lung	284	22.0	1,008	25.1	12,715	24.0
Respiratory system diseases	137	10.5	728	18.3	9,726	18.3
Chronic lower respiratory disease	92	7.0	523	13.2	6,657	12.6
Injuries and poisonings	347	31.6	1,387	30.7	18,573	35.0
Suicide	132	12.1	556	12.3	6,706	12.6
Motor vehicle accidents	87	8.0	302	6.6	5,014	9.5
Other causes	474	39.4	1,946	46.3	26,735	50.4
Diabetes mellitus	57	4.4	252	6.2	3,734	7.0

* 'No.' is the total number of deaths for the 2000-02 period; 'Rate' is an annual rate, based on the 3 year average

‡ See note under 'Data converters and mapping' re calculation of Division totals

The data used to illustrate the prevalence estimates of chronic disease (Figure 6), measures of self-reported health (Figure 7), and selected risk factors (Figure 8), are shown in Table 12 below.

Table 12: Estimates of chronic disease and associated risk factors Gold Coast DGP‡, Brisbane and Australia, 2001

Indirectly age standardised rate per 1,000 population

Variable	Gold Coast DGP‡	Brisbane	Australia
Chronic disease and injury (Figure 6)			
Respiratory system diseases	301.9	332.4	310.8
Asthma	114.7	125.4	118.3
Circulatory system diseases	168.5	173.1	171.5
Diabetes type 2	22.3	23.7	23.4
Injury event	119.7	123.2	121.2
Mental & behavioural disorders	100.6	100.5	97.6
Musculoskeletal system diseases	328.7	338.6	326.2
Arthritis	133.5	137.7	138.8
- Osteoarthritis	76.3	77.0	74.9
- Rheumatoid arthritis	22.6	24.0	23.6
Osteoporosis (females)	23.5	32.4	26.4
Measures of self-reported health (Figure 7)			
Very high psychological distress levels (18+ years)	36.2	36.8	36.6
Fair or poor self-assessed health status (15+ years)	178.5	183.7	184.0
Risk factors (Figure 8)			
Overweight (not obese) males (15+ years)	377.8	381.5	389.7
Obese males (15+ years)	145.6	170.2	145.9
Overweight (not obese) females (15+ years)	247.2	231.4	223.9
Obese females (15+ years)	134.8	175.7	148.0
Smokers (18+ years)	258.0	251.6	248.0
Physical inactivity (15+ years)	300.6	309.9	315.5
High health risk due to alcohol consumed (18+ years)	43.9	43.3	42.1

‡ See note under 'Data converters and mapping' re calculation of Division totals

References

Australian Bureau of Statistics (ABS) (2002). *2001 National Health Survey: summary of results*. Australia. (ABS Cat. No. 4364.0). Canberra: ABS.

National Public Health Partnership (NPHP) (2001). *Preventing Chronic Disease: A Strategic Framework*. Melbourne, Victoria.

Thacker S, Stroup D & Rothenberg R (1995). Public health surveillance for chronic conditions: a scientific basis for decisions. *Statistics in Medicine* 14: 629-641.

World Health Organization (2002). *The World Health Report 2002: Reducing Risks, Promoting Healthy Life*. Geneva: World Health Organization.

Acknowledgements

Funding for these profiles was provided by the Population Health Division of the Department of Health and Ageing (DoHA). Assistance, by way of comment on the profiles and assistance in obtaining some datasets, has also been received from the Primary Care Division of the DoHA, the ABS and the ACIR.

Further developments and updates

Subject to agreement and funding, a number of developments could be undertaken:

- Details of hospitalisations potentially avoidable through ambulatory care interventions are currently being prepared and will be forwarded to Divisions (and posted on the PHIDU web site) when they are available. Other enhancements will be considered as appropriate datasets become available.

The profiles could be updated as the data are updated. For example:

- Population estimates, avoidable hospitalisations, immunisation, and GP activity and workforce data – annually;
- Chronic disease estimates – three-yearly;
- Census data – five-yearly.

Any developments would be informed by consultation, including with Divisions.

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