# Population health profile of the

## Flinders and Far North

## Division of General Practice: supplement

Population Profile Series: No. 97a

PHIDU

March 2007







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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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This publication, the maps and supporting data, together with other publications on population health, are available from the PHIDU website (<a href="https://www.publichealth.gov.au">www.publichealth.gov.au</a>).

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## Population health profile

### of the Flinders and Far North Division of General Practice: supplement

This profile is a supplement to the *Population health profile of the Flinders and Far North Division of General Practice*, dated November 2005, available from <a href="www.publichealth.gov.au">www.publichealth.gov.au</a>. This supplement includes an update of the population of the Flinders and Far North 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:

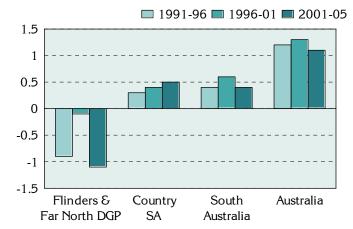
- Population [updated to June 2005]
- Additional socio-demographic indicators
- Unreferred attendances patient flow/ GP catchment
- Additional prevalence estimates: chronic diseases and risk factors combined
- Avoidable hospitalisations: hospital admissions resulting from ambulatory care sensitive conditions
- 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 Flinders and Far North Division had an Estimated Resident Population of 25,977 at 30 June 2005.

Figure 1: Annual population change, Flinders and Far North DGP, country South Australia, South Australia and Australia, 1991 to 1996, 1996 to 2001 and 2001 to 2005



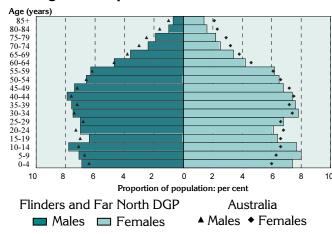
Over the five years from 1991 to 1996, there was a 0.9% decline in the Division's population, compared with small increases in country South Australia (0.3%) and South Australia (0.4%). From 1996 to 2001, the Division's population again declined, by 0.1%, compared to increases in country South Australia (0.4%) and South Australia (0.6%). The Division's rate of decline at 1.1% per year on average from 2001 to 2005 was in contrast to the annual increases for country South Australia (0.5%) and South Australia (0.4%).

Table 1: Population by age, Flinders and Far North DGP and Australia, 2005

| Age group (years) | Flinders and Far<br>North DGP |       | Australia        |
|-------------------|-------------------------------|-------|------------------|
|                   | No.                           | %     | No. %            |
| 0-14              | 5,836                         | 22.5  | 3,978,221 19.6   |
| 15-24             | 3,377                         | 13.0  | 2,819,834 13.9   |
| 25-44             | 7,751                         | 29.8  | 5,878,107 28.9   |
| 45-64             | 6,326                         | 24.4  | 4,984,446 24.5   |
| 65-74             | 1,552                         | 6.0   | 1,398,831 6.9    |
| 75-84             | 865                           | 3.3   | 954,143 4.7      |
| 85+               | 269                           | 1.0   | 315,027 1.5      |
| Total             | 25,977                        | 100.0 | 20,328,609 100.0 |

As shown in the accompanying table and the age-sex pyramid (Figure 2), the Flinders and Far North DGP had a higher proportion of the population at ages 0 to 14 years (22.5%) compared to Australia as a whole (with 19.6%) and 25 to 44 years (29.8%, compared to 28.9% for Australia) (Table 1). At other ages the proportions of the Division's population were lower than for Australia.

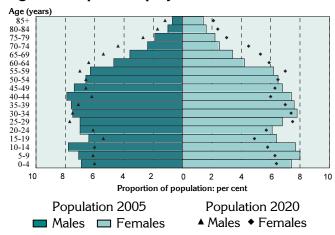
Figure 2: Population in Flinders and Far North DGP and Australia, by age and sex, 2005



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

- at younger ages higher proportions of male and female children aged 0 to 14 years;
- from 15 to 24 years lower proportions of both males and females;
- from 25 to 49 years slightly higher proportions of males and females (25 to 39 years); and
- from 60 years and over slightly higher proportions of males and females.

Figure 3: Population projections for Flinders and Far North DGP, by age and sex, 2005 and 2020



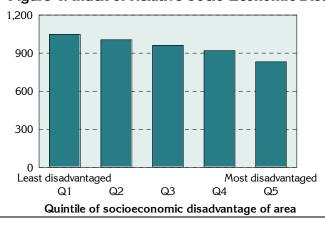
The population projections for the Division show a number of changes in age distribution, with the 2020 population projected to have:

- at younger ages lower proportions of children, young people and young adults aged 0 to 24 years;
- from 30 to 49 years lower proportions of both males and females; and
- from 55 years onwards higher proportions, particularly between 55 and 74 years, of both males and females.

## Additional socio-demographic indicators

Please refer to the earlier *Population health profile of the Flinders and Far North Division of General Practice*, dated November 2005, available from <a href="www.publichealth.gov.au">www.publichealth.gov.au</a>, for other socio-demographic indicators.

Figure 4: Index of Relative Socio-Economic Disadvantage, Flinders and Far North DGP, 2001



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

The Flinders and Far North DGP has an index score of 958, below the score for Australia of 1000: this score varies across the Division, from a low of 831 in the most disadvantaged areas to 1047 in the least disadvantaged areas.

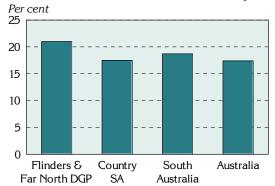
Note: each 'quintile' comprises approximately 20% of the population of the Division.

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 Flinders & Far North DGP (21.0%), compared to country South Australia as a whole (17.5%) (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 markedly fewer people with private health insurance (34.1%), compared to country South Australia (43.5%) (Figure 5, Table 2).

Figure 5: Socio-demographic indicators, Flinders and Far North DGP, country South Australia, South Australia, 2001

### Jobless families with children under 15 years old



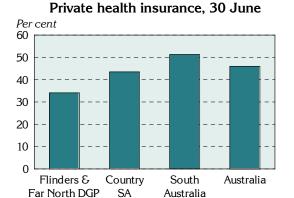
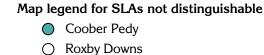


Table 2: Socio-demographic indicators, Flinders and Far North DGP, country South Australia, South Australia and Australia, 2001

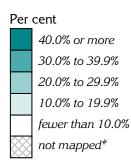
| Indicator   | Flinders and Far<br>North DGP |      | Country SA |      | South<br>Australia |      | Australia |      |
|---|-------------------------------|------|------------|------|--------------------|------|-----------|------|
|   | No.                           | %    | No.        | %    | No.                | %    | No.       | %    |
| Jobless families with children under 15 years old | 643                           | 21.0 | 7,725      | 17.5 | 29,203             | 18.7 | 357,563   | 17.4 |
| Private health insurance (30 June)                | 9,870                         | 34.1 | 173,066    | 43.5 | 754,598            | 51.3 | 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, Flinders & Far North DGP, 2001

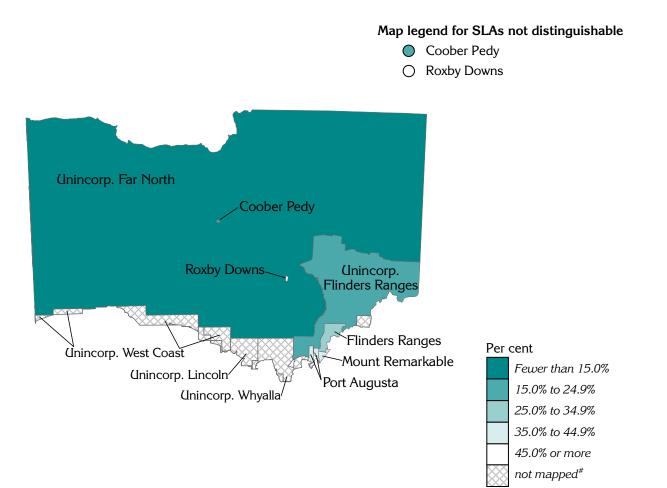






data were not mapped: see'Mapping' note under Methods

Map 2: People covered by private health insurance by SLA, Flinders & Far North DGP, 30 June 2001



data were not mapped: see 'Mapping' note under Methods

### GP services to residents of the Flinders and Far North 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 (89.7%) of GP unreferred attendances to residents of Flinders and Far North DGP were provided in the Division (ie. by a GP with a provider number in the Division): this represented 116,827 GP unreferred attendances (Table 3). A further 1.6% of unreferred attendances were provided by GPs with a provider number in Eyre Peninsula DGP, with 1.3% by GPs in Adelaide Central and Eastern DGP.

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

| Division |                                  | Unreferred a | attendances |
|----------|----------------------------------|--------------|-------------|
| Number   | Name                             | No.          | $\%^3$      |
| 512      | Flinders and Far North DGP       | 116,827      | 89.7        |
| 511      | Eyre Peninsula DGPDGP            | 2,144        | 1.6         |
| 504      | Adelaide Central and Eastern DGP | 1,702        | 1.3         |
| 508      | Mid North Rural DGP              | 1,463        | 1.1         |
| 505      | Adelaide Southern DGP            | 1,302        | 1.0         |
| Other    |                                  | 6,778        | 5.2         |
| Total    |                                  | 130,216      | 100.0       |

<sup>&</sup>lt;sup>1</sup> Based on address in Medicare records

The majority (89.1%) of unreferred attendances provided by GPs with a provider number in Flinders and Far North DGP were also to people living in the Division (ie. their Medicare address was in the Division) (Table 4). A further 1.5% of unreferred attendances provided by the Division's GPs were to residents of Mid North Rural DGP, with 1.2% to people living in Eyre Peninsula DGP.

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

| Division |                            | Unreferred attendances |                       |  |  |  |
|----------|----------------------------|------------------------|-----------------------|--|--|--|
| Number   | Name                       | No.                    | <b>%</b> <sup>3</sup> |  |  |  |
| 512      | Flinders and Far North DGP | 116,827                | 89.1                  |  |  |  |
| 508      | Mid North Rural DGP        | 2,031                  | 1.5                   |  |  |  |
| 511      | Eyre Peninsula DGP         | 1,633                  | 1.2                   |  |  |  |
| 501      | Adelaide Western DGP       | 1,055                  | 0.8                   |  |  |  |
| 802      | Central Australian DGP     | 995                    | 0.8                   |  |  |  |
| Other    |                            | 8,628                  | 6.6                   |  |  |  |
| Total    |                            | 131,169                | 100.0                 |  |  |  |

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

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

<sup>&</sup>lt;sup>3</sup> Proportion of all unreferred attendances of patients with an address in Division 512 by Division in which attendance occurred

<sup>&</sup>lt;sup>2</sup> Based on address in Medicare records

<sup>&</sup>lt;sup>3</sup> Proportion of all unreferred attendances to GPs with a provider number in Division 512 by Division of patient address

# Additional prevalence estimates: chronic diseases and risk factors combined: Pt Augusta (part of Flinders and Far North DGP)

Please refer to the earlier *Population health profile of the Flinders and Far North Division of General Practice*, dated November 2005, available from <a href="www.publichealth.gov.au">www.publichealth.gov.au</a>, 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 SLA of Port Augusta, which comprises approximately 50.0% of the Division's population. The estimates have not been made for the whole Division as only this SLA was included in the National Health Survey. 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 Port Augusta SLA who had asthma and were smokers, compared to country South Australia or Australia as a whole (Figure 6, Table 5): that is, the prevalence rates per 1,000 population were higher. Similarly, there was a higher rate of people in Port Augusta SLA who had type 2 diabetes and were overweight/ obese, compared to country South Australia (in particular) or Australia.

Figure 6: Estimates of selected chronic diseases and risk factors, Pt Augusta SLA, country South Australia and Australia, 2001

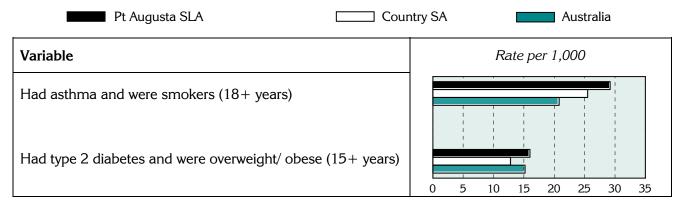


Table 5: Estimates of selected chronic diseases and risk factors, Pt Augusta SLA, country South Australia, South Australia and Australia, 2001

| Variable  | Pt Augusta SLA |                   | Count | Country SA        |        | South Australia   |                  | Australia         |  |
|---|----------------|-------------------|-------|-------------------|--------|-------------------|------------------|-------------------|--|
|   | No.1           | Rate <sup>2</sup> | No.1  | Rate <sup>2</sup> | No.1   | Rate <sup>2</sup> | No. <sup>1</sup> | Rate <sup>1</sup> |  |
| Had asthma & smoked <sup>3</sup>                          | 387            | 29.2              | 9,057 | 25.5              | 32,487 | 22.3              | 397,734          | 20.8              |  |
| Had type 2 diabetes δ were overweight/ obese <sup>4</sup> | 219            | 16.0              | 5,425 | 12.8              | 23,187 | 14.9              | 283,176          | 15.2              |  |

<sup>&</sup>lt;sup>1</sup> No. is a weighted estimate of the number of people in Port Augusta SLA reporting these chronic conditions/ with these risk factors and is derived from synthetic predictions from the 2001 NHS

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

<sup>&</sup>lt;sup>3</sup> Population aged 18 years and over

<sup>&</sup>lt;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 <a href="https://www.publichealth.gov.au">www.publichealth.gov.au</a>.

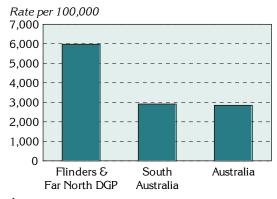
In 2001 to 2002, the 1,433 admissions from ambulatory care sensitive (ACS) conditions accounted for 11.4% of all hospitalisations in the Flinders and Far North DGP (Table 6, Figure 7), markedly above the levels in South Australia (8.5) and Australia (8.7%).

Table 6: Avoidable<sup>1</sup> and unavoidable hospitalisations, Flinders and Far North DGP, South Australia, and Australia, 2001/02

| Category               | Flinders and Far North DGP |                   |       | Sou     | ıth Australia     | a     | Australia |                   |       |  |
|------------------------|----------------------------|-------------------|-------|---------|-------------------|-------|-----------|-------------------|-------|--|
|                        | No.                        | Rate <sup>2</sup> | %     | No.     | Rate <sup>2</sup> | %     | No.       | Rate <sup>2</sup> | %     |  |
| Avoidable <sup>1</sup> | 1,433                      | 5,976.9           | 11.4  | 47,247  | 2,915.7           | 8.5   | 552,786   | 2,847.5           | 8.7   |  |
| Unavoidable            | 11,170                     | 45,081.4          | 88.6  | 507,053 | 32,039.4          | 91.5  | 5,818,199 | 29,970.7          | 91.3  |  |
| Total                  | 12,602                     | 51,007.8          | 100.0 | 554,300 | 34,952.2          | 100.0 | 6,370,985 | 32,818.2          | 100.0 |  |

<sup>&</sup>lt;sup>1</sup> Admissions resulting from ACS conditions

Figure 7: Avoidable hospitalisations<sup>1</sup>, Flinders and Far North DGP, South Australia and Australia, 2001/02



The rate of avoidable hospitalisations in Flinders and Far North DGP is substantially higher, a rate of 5,976.9 admissions per 100,000 population, compared to both South Australia (a rate of 2,915.7), and Australia (2,847.5).

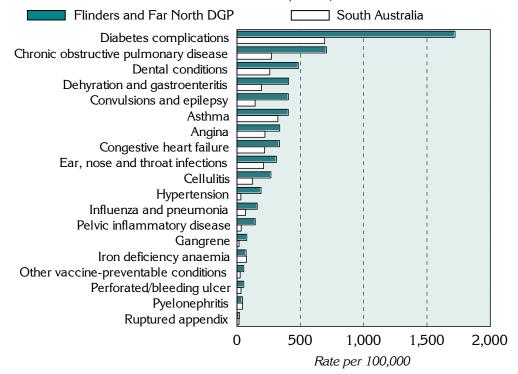
Diabetes complications, , chronic obstructive pulmonary disease, dental conditions and dehydration and gastroenteritis, were the four conditions with the highest rates of avoidable hospitalisations in the Flinders and Far North DGP (Figure 8, Table 7).

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. The majority of avoidable hospitalisations are attributable to chronic health conditions. The predominance of hospitalisations for chronic conditions in this period can be primarily attributed to the large number of admissions for diabetes complications. Dental conditions, and dehydration and gastroenteritis, have the highest rates of avoidable hospitalisations for the acute conditions.

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

<sup>&</sup>lt;sup>1</sup> Admissions resulting from ACS conditions

Figure 8: Avoidable hospitalisations<sup>1</sup> by condition, Flinders and Far North DGP and South Australia, 2001/02



<sup>&</sup>lt;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, Flinders and Far North DGP, South Australia and Australia, 2001/02

| Sub-category/ condition                       | Flinders a |                   | South A | ustralia          | Austr   | alia              |
|---|------------|-------------------|---------|-------------------|---------|-------------------|
|   | No.        | Rate <sup>2</sup> | No.     | Rate <sup>2</sup> | No.     | Rate <sup>2</sup> |
| Vaccine-preventable                           | 54         | 214.6             | 1,466   | 92.9              | 16,573  | 85.4              |
| Influenza and pneumonia                       | 39         | 160.3             | 1,075   | 67.0              | 13,021  | 67.1              |
| Other vaccine preventable                     | 15         | 54.3              | 391     | 25.9              | 3,552   | 18.3              |
| Chronic <sup>3</sup>                          | 840        | 3,771.1           | 30,607  | 1,837.6           | 352,545 | 1,816             |
| Diabetes complications                        | 386        | 1,722.0           | 11,640  | 692.9             | 141,345 | 728.1             |
| Iron deficiency anaemia                       | 16         | 72.6              | 1,271   | 76.1              | 16,451  | 84.7              |
| Hypertension                                  | 41         | 190.5             | 532     | 31.6              | 6,354   | 32.7              |
| Congestive heart failure                      | 63         | 336.6             | 3,900   | 219.1             | 42,447  | 218.6             |
| Angina  | 73         | 338.0             | 3,778   | 221.6             | 49,963  | 257.4             |
| Chronic obstructive pulmonary disease         | 147        | 706.2             | 4,710   | 272.9             | 54,853  | 282.6             |
| Asthma  | 114        | 405.2             | 4,776   | 323.4             | 41,009  | 211.3             |
| Acute   | 592        | 2,220.3           | 16,405  | 1,077.6           | 200,913 | 1,035             |
| Dehydration and gastroenteritis               | 98         | 408.6             | 3,111   | 194.8             | 37,766  | 194.5             |
| Convulsions and epilepsy                      | 113        | 405.9             | 2,153   | 143.6             | 31,137  | 160.4             |
| Ear, nose and throat infections               | 92         | 312.7             | 3,046   | 210.9             | 32,075  | 165.2             |
| Dental conditions                             | 139        | 484.0             | 3,831   | 259.2             | 43,667  | 224.9             |
| Perforated/bleeding ulcer                     | 12         | 54.0              | 555     | 32.5              | 5,795   | 29.9              |
| Ruptured appendix                             | 6          | 20.2              | 255     | 17.0              | 3,866   | 19.9              |
| Pyelonephritis                                | 11         | 43.8              | 681     | 44.7              | 7,386   | 38.0              |
| Pelvic inflammatory disease                   | 37         | 144.6             | 497     | 33.7              | 6,547   | 33.7              |
| Cellulitis                                    | 67         | 268.2             | 1,987   | 124.1             | 28,204  | 145.3             |
| Gangrene                                      | 17         | 78.3              | 289     | 17.1              | 4,470   | 23.0              |
| Total avoidable hospitalisations <sup>4</sup> | 1,433      | 5,976.9           | 47,247  | 2,915.7           | 552,786 | 2,847.5           |

<sup>&</sup>lt;sup>1</sup> Admissions resulting from ACS conditions

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

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

<sup>&</sup>lt;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 <a href="https://www.publichealth.gov.au">www.publichealth.gov.au</a>.

Over three quarters (77.1%) of all deaths in Flinders and Far North DGP at ages 0 to 74 years over the period 1997 to 2001 are considered to be avoidable, higher than the proportion for country South Australia (72.5%) (Table 8). The rate in the Division is markedly higher than that in country South Australia, a differential of 1.36.

Deaths amenable to health care (amenable mortality, a subset of avoidable mortality) accounted for 31.2% of all deaths at ages 0 to 74 years in Flinders and Far North DGP, higher than the 29.8% in country South Australia.

Table 8: Avoidable and unavoidable mortality (0 to 74 years) by area, Flinders and Far North DGP, country South Australia, South Australia and Australia, 1997 to 2001

| Mortality category | Flinders and Far<br>North DGP |                   | Count   | ountry SA South A |         | ustralia          | Austr    | Australia         |  |
|--------------------|-------------------------------|-------------------|---------|-------------------|---------|-------------------|----------|-------------------|--|
|                    | No.                           | Rate <sup>1</sup> | No.     | Rate <sup>1</sup> | No.     | Rate <sup>1</sup> | No.      | Rate <sup>1</sup> |  |
| Avoidable          | 363                           | 312.8             | 4,852   | 230.3             | 15,938  | 210.4             | 189,845  | 211.8             |  |
| % of total         | 77.1                          |                   | 72.5    |                   | 71.4    |                   | 71.5     |                   |  |
| (Amenable)         | (147)                         | (129.4)           | (1,993) | (93.6)            | (6,556) | (85.9)            | (76,249) | (85.1)            |  |
| (% of total)       | (31.2)                        | ()                | (29.8)  | ()                | (29.4)  | ()                | (28.7)   | ()                |  |
| Unavoidable        | 108                           | 94.3              | 1,837   | 86.5              | 6,369   | 83.7              | 75,582   | 84.3              |  |
| % of total         | 22.9                          |                   | 27.5    |                   | 28.6    | ••                | 28.5     |                   |  |
| Total mortality    | 471                           | 407.4             | 6,688   | 316.8             | 22,307  | 294.1             | 265,427  | 296.1             |  |
| %                  | 100.0                         |                   | 100.0   |                   | 100.0   |                   | 100.0    |                   |  |

<sup>&</sup>lt;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. Flinders and Far North DGP's rate of avoidable mortality for males was 389.7 deaths per 100,000 males, higher than the rate of 238.0 for females. Similarly, the rate of amenable mortality for males in the Division was higher, 137.9, compared to 122.0 for females, a rate ratio of 1.13 (Figure 9, Table 9).

Figure 9: Avoidable and amenable mortality by sex (0 to 74 years), Flinders and Far North DGP, country South Australia, South Australia and Australia, 1997 to 2001

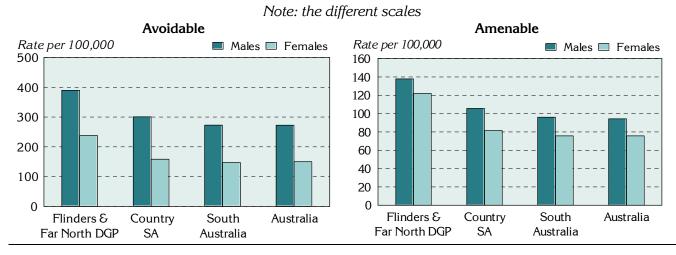


Table 9: Avoidable and amenable mortality (0 to 74 years) by sex, Flinders and Far North DGP, country South Australia, South Australia and Australia, 1997 to 2001

| Mortality category and sex  |     | Flinders and Far<br>North DGP |       | Country SA        |        | South Australia   |         | Australia         |  |
|-----------------------------|-----|-------------------------------|-------|-------------------|--------|-------------------|---------|-------------------|--|
|                             | No. | Rate <sup>1</sup>             | No.   | Rate <sup>1</sup> | No.    | Rate <sup>1</sup> | No.     | Rate <sup>1</sup> |  |
| Avoidable                   |     |                               |       |                   |        |                   |         |                   |  |
| Males                       | 244 | 389.7                         | 3,259 | 300.9             | 10,326 | 272.8             | 123,026 | 272.6             |  |
| Females                     | 119 | 238.0                         | 1,593 | 158.3             | 5,612  | 147.2             | 66,819  | 150.1             |  |
| Total                       | 363 | 312.8                         | 4,852 | 230.3             | 15,938 | 210.4             | 189,845 | 211.8             |  |
| Rate ratio-M:F <sup>2</sup> | ••  | 1.64**                        |       | 1.90**            | ••     | 1.85**            |         | 1.82**            |  |
| Amenable                    |     |                               |       |                   |        |                   |         |                   |  |
| Males                       | 85  | 137.9                         | 1,169 | 105.6             | 3,671  | 96.0              | 42,568  | 94.3              |  |
| Females                     | 62  | 122.0                         | 824   | 81.4              | 2,884  | 75.7              | 33,681  | 75.7              |  |
| Total                       | 147 | 129.4                         | 1,993 | 93.6              | 6,556  | 85.9              | 76,249  | 85.1              |  |
| Rate ratio-M:F <sup>2</sup> | ••  | 1.13                          | ••    | 1.30**            | ••     | 1.27**            | ••      | 1.25**            |  |

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

Another way of measuring premature mortality is to calculate the number of years of life lost (YLL), 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 Flinders and Far North DGP, country South Australia, South Australia and Australia over the observation period 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 77.3% of total YLL (0 to 74 years) for Flinders and Far North DGP, higher than the 72.9% for country South Australia. The proportion of YLL from amenable mortality of 30.5% for Flinders and Far North DGP was higher than the 28.9% for country South Australia.

Table 10: Years of life lost from avoidable mortality (0 to 74 years), Flinders and Far North DGP, country South Australia, South Australia and Australia, 1997 to 2001

| Mortality category | Flinders and Far<br>North DGP |        | Country   | Country SA |           | South Australia |             | Australia |  |
|--------------------|-------------------------------|--------|-----------|------------|-----------|-----------------|-------------|-----------|--|
|                    | No.                           | % of   | No.       | % of       | No.       | % of            | No.         | % of      |  |
|                    |                               | total  |           | total      |           | total           |             | total     |  |
| Avoidable          | 7,026                         | 77.3   | 83,705    | 72.9       | 273,135   | 71.8            | 3,327,375   | 71.9      |  |
| (Amenable)         | (2,767)                       | (30.5) | (33, 165) | (28.9)     | (108,777) | (28.6)          | (1,298,430) | (28.0)    |  |
| Unavoidable        | 2,058                         | 22.7   | 31,059    | 27.1       | 107,223   | 28.2            | 1,303,289   | 28.1      |  |
| Total              | 9,085                         | 100.0  | 114,764   | 100.0      | 380,358   | 100.0           | 4,630,664   | 100.0     |  |

<sup>&</sup>lt;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

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 1,607.2 deaths per 100,000 population in the Flinders and Far North 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 of 464.7 in the Flinders and Far North Division.

Table 11: Avoidable and amenable mortality by age, Flinders and Far North DGP, country South Australia, South Australia and Australia, 1997 to 2001

| Mortality category and age (years) | Flinders and Far<br>North DGP |                   | Count | ry SA             | South A | ustralia          | Aust    | ralia             |
|------------------------------------|-------------------------------|-------------------|-------|-------------------|---------|-------------------|---------|-------------------|
|                                    | No.                           | Rate <sup>1</sup> | No.   | Rate <sup>1</sup> | No.     | Rate <sup>1</sup> | No.     | Rate <sup>1</sup> |
| Avoidable                          |                               |                   |       |                   |         |                   |         |                   |
| 0-14                               | 21                            | 61.0              | 118   | 26.8              | 352     | 24.2              | 5,669   | 28.8              |
| 15-24                              | 13                            | 70.8              | 159   | 67.5              | 523     | 52.4              | 7,045   | 52.8              |
| 25-44                              | 77                            | 167.5             | 596   | 99.3              | 1,979   | 88.8              | 24,356  | 83.9              |
| 45-64                              | 135                           | 464.7             | 1,640 | 333.3             | 5,130   | 297.8             | 64,282  | 304.9             |
| 65-74                              | 117                           | 1,607.2           | 2,338 | 1439.0            | 7,954   | 1354.8            | 88,493  | 1,358.1           |
| Total                              | 363                           | 312.8             | 4,852 | 230.3             | 15,938  | 210.4             | 189,845 | 211.8             |
| Amenable                           |                               |                   |       |                   |         |                   |         |                   |
| 0-24                               | 15                            | 26.2              | 101   | 14.1              | 324     | 13.3              | 5,083   | 15.4              |
| 25-44                              | 22                            | 50.5              | 146   | 23.8              | 507     | 22.6              | 5,946   | 20.5              |
| 45-64                              | 56                            | 197.4             | 710   | 144.8             | 2,248   | 130.1             | 27,464  | 130.3             |
| 65-74                              | 54                            | 744.1             | 1,036 | 641.3             | 3,477   | 591.6             | 37,756  | 579.4             |
| Total                              | 147                           | 129.4             | 1,993 | 93.6              | 6,556   | 85.9              | 76,249  | 85.1              |

<sup>&</sup>lt;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 Flinders and Far North DGP were for cardiovascular diseases, a rate of 102.6 deaths per 100,000 population, and cancer, with a rate of 75.4 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 73.9 per 100,000 population and 27.2 per 100,000, respectively.

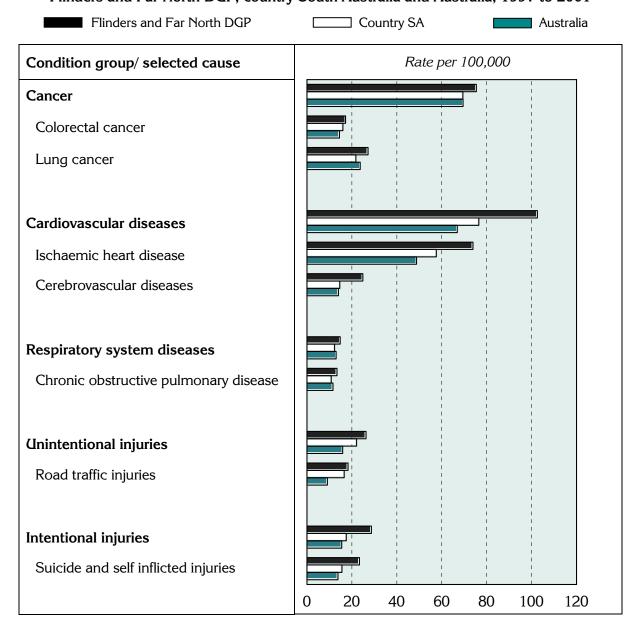
Table 12: Avoidable mortality (0 to 74 years) by major condition group and selected cause, Flinders and Far North DGP, country South Australia, South Australia and Australia, 1997 to 2001

| Condition group/<br>selected cause    |     | Flinders and Far<br>North DGP |       | y SA              | South A | ustralia          | Austr  | alia              |
|---------------------------------------|-----|-------------------------------|-------|-------------------|---------|-------------------|--------|-------------------|
|                                       | No. | Rate <sup>1</sup>             | No.   | Rate <sup>1</sup> | No.     | Rate <sup>1</sup> | No.    | Rate <sup>1</sup> |
| Cancer                                | 84  | 75.4                          | 1,489 | 69.4              | 5,209   | 67.8              | 62,338 | 69.5              |
| Colorectal cancer                     | 19  | 17.2                          | 346   | 16.0              | 1,142   | 14.8              | 13,008 | 14.5              |
| Lung cancer                           | 31  | 27.2                          | 477   | 21.8              | 1,728   | 22.3              | 21,208 | 23.7              |
| Cardiovascular diseases               | 114 | 102.6                         | 1,669 | 76.5              | 5,324   | 68.5              | 59,945 | 66.9              |
| Ischaemic heart disease               | 83  | 73.9                          | 1,260 | 57.6              | 3,918   | 50.5              | 43,712 | 48.8              |
| Cerebrovascular diseases              | 27  | 24.9                          | 316   | 14.6              | 1,086   | 13.9              | 12,558 | 14.0              |
| Respiratory system diseases           | 16  | 14.8                          | 270   | 12.3              | 897     | 11.4              | 11,612 | 13.0              |
| Chronic obstructive pulmonary disease | 14  | 13.4                          | 239   | 10.8              | 783     | 9.9               | 10,395 | 11.6              |
| Unintentional injuries                | 35  | 26.3                          | 412   | 22.1              | 1,085   | 15.5              | 14,224 | 15.9              |
| Road traffic injuries                 | 24  | 18.3                          | 307   | 16.6              | 687     | 9.9               | 8,138  | 9.1               |
| Intentional injuries                  | 38  | 28.7                          | 329   | 17.5              | 1,138   | 16.3              | 13,891 | 15.5              |
| Suicide and self inflicted injuries   | 31  | 23.4                          | 293   | 15.6              | 1,018   | 14.5              | 12,393 | 13.8              |

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

Rates in the Division were above those for Australia for all condition groups and selected causes (Figure 10).

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



### Notes on the data

### Data sources and limitations

### General

References to 'country South Australia' relate to South Australia excluding the Adelaide 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) <sup>1</sup>  |  |  |  |
| 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;<br>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;<br>Figures 9 and 10   | ABS Deaths 1997-2001; data produced in HealthWIZ by Prometheus Information (not available in public release dataset)  |  |  |  |

<sup>&</sup>lt;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 (<a href="https://www.publichealth.gov.au">www.publichealth.gov.au</a>).

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

### **Mapping**

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

### Statistical geography of the Flinders and Far North DGP

For information on the postcodes in the Division, please refer the Department of Health and Ageing website <a href="http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-divisions-divspc.htm">http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-programs-divisions-divspc.htm</a>; 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, SLAs are the same as local government areas (LGAs). Unincorporated areas of the State are also SLAs. The Flinders and Far North Division contains all of the SLAs listed in Table 14.

Table 14: SLAs and population in Flinders and Far North DGP, 2005 on 2001 boundaries

| SLA<br>code | SLA name                 | Per cent of the SLA's<br>population in the<br>Division <sup>*</sup> | Estimate of the SLA's<br>2005 population in<br>the Division |
|-------------|--------------------------|---|---|
| 41330       | Coober Pedy(DC)          | 100.0   | 2,091   |
| 41830       | Flinders Ranges(DC)      | 100.0   | 1,692   |
| 44830       | Mount Remarkable(DC)     | 10.7  | 303   |
| 46090       | Port Augusta(C)          | 100.0   | 13,735  |
| 46970       | Roxby Downs(M)           | 100.0   | 3,571   |
| 49179       | Unincorp Lincoln         | 68.7  | #   |
| 49249       | Unincorp West Coast      | 0.3   | #   |
| 49389       | Unincorp Whyalla         | 20.2  | #   |
| 49529       | Unincorp Flinders Ranges | 100.0   | 1,192   |
| 49589       | Unincorp Far North       | 63.9  | 3,332   |

<sup>\*</sup> 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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<sup>#</sup> Not shown as the total population is less than 100