

A Social Health Atlas of Australia: Volume 6, Western Australia

Errata 9 August 2000

Details of the following errors have been posted to the PHIDU web site, and the affected pages replaced in the PDF documents on the web site at <http://www.publichealth.gov.au>

Contents: Executive summary, page v

Percentages incorrect for Unskilled and semi-skilled workers.

Ch 3: Unemployed people, 1996

Users of the data on page 38 and (in particular) page 40 should be aware of the following additional information.

The 1996 Census unemployment figures are based on self-report information in the Census. As it is unclear how Indigenous people would record their involvement in CDEP schemes, it may be more appropriate to use the information provided for unemployment beneficiaries on pages 94 and 96.

Ch 3: ABS Index of Relative Socio-Economic Disadvantage, 1996

The two maps for the Index of Relative Socio-Economic Disadvantage have been mapped incorrectly, with the darkest tones in the high socioeconomic status areas, unlike in the legend where the darkest shade correctly shows the most disadvantaged index scores. The maps have been replaced.

Ch 4: Disability support pensioners, page 86-89

The data shown include details of the wife pension, thus inflating the proportions (although not the spatial patterns) shown in the tables and maps.

This data also affects:

Rates for females shown in Figure 4.2, page 80

Correlations, page 339-342

Table 9.1, page 359

Ch 8: Correlations, page 339-342

Correlation matrices affected by Disability Support Pension data.

Ch 9: Summary, page 359

Table 9.1 and associated text for Early school leavers, Unskilled and semi-skilled workers and Disability Support Pensioners.

Index, pages 403-408

This was omitted from the publication and the copy attached has been printed at a size to fit in the pocket inside the back cover

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Executive summary: Amended text/figures are highlighted

Introduction

The information in this atlas adds to a convincing body of evidence built up over a number of years in Australia as to the striking disparities in health that exist between groups in the population. People of low socioeconomic status (those who are relatively socially or economically deprived) experience worse health than those of higher socioeconomic status for almost every major cause of mortality and morbidity. The challenge for policy makers, health practitioners and governments is to find ways to address these health inequities.

Background

The primary aims of the first edition of *A Social Health Atlas of Australia* were to illustrate the spatial distribution of the socioeconomically disadvantaged population, and to compare this with patterns of distribution of major causes of illness and death and use of health services. The maps and correlation analysis highlighted associations between social and economic factors in relation to health and illness.

A number of new variables have been included in this second edition, together with many of the variables from the first edition. One of the additions is the presentation of data by the new Accessibility/Remoteness Index of Australia (ARIA). Also included is a cluster analysis, providing profiles at the Statistical Local Area (SLA) level of the socioeconomic status, health status and health service utilisation of the population.

The extent of change (between the editions) in the patterns of distribution in death rates by socioeconomic status is also highlighted.

Findings

Correlation analysis

There were correlations of significance at the SLA level between the measures of socioeconomic disadvantage and a number of the health status variables in **Perth**. The strongest of these were with the variables for people reporting their health as fair or poor (as opposed to those reporting their health as being excellent, very good, or good); the PCS (the Physical Component Summary, a measure of physical health); and premature death from, in particular, lung cancer and circulatory system diseases (**Table 8.1**). Similarly, strong associations were also evident in the correlation analysis with the health service use variables of GP services to males and females; and of admissions for circulatory and respiratory system diseases, admissions to a public hospital admissions for Caesarean section and admissions for hysterectomy.

There were fewer correlations of significance at the SLA level in the non-metropolitan areas of Western Australia than was the case in **Perth**. This is, in part, a result of the number of SLAs with relatively small numbers of cases (population, deaths, hospital admissions, etc.) which reduces the strength of the analysis.

However, a number of variables are highly correlated with each other: these are the variables for low income families, single

parent families, unemployed people, the Indigenous population and dwellings without a vehicle.

Various sub-sets of these are correlated with measures of health status and use of health services. The strongest correlations with the measures of socioeconomic disadvantage were with the variables for people reporting their health as fair or poor, and the PCS.

Although generally weaker, there was a consistent pattern between socioeconomic disadvantage and the variables for deaths of males and females; hospital admissions of males and females; and hospital admissions from accidents, poisonings and violence.

For the Indigenous population, there were correlations of meaningful significance at the SLA level with the variables for years of potential life lost (the summary measure of premature death), people reporting fair or poor health, people with a handicap, deaths of 15 to 64 year old males and females, admissions to a public hospital and admissions from the combined causes of accidents, poisonings and violence; and admissions for neuroses.

Changes in socioeconomic status

Marked variations were recorded between 1986 and 1996 for a majority of the socioeconomic status variables mapped for Western Australia (**Table 9.1**). For **Perth**, the largest increases were for the population of Aboriginal and Torres Strait Islander people (an increase of 70.5 per cent over this ten year period); the occupational grouping of managers and administrators, and professionals (55.5 per cent); low income families (41.6 per cent); people born overseas in predominantly non-English speaking countries: an increase of 39.6 per cent for those resident for five years or more, of 24.9 per cent for those resident for less than five years, and of 23.9 per cent for those with poor proficiency in English; people aged 65 years and over (35.5 per cent); single parent families (35.4 per cent); and housing authority rented dwellings (21.7 per cent). **The largest decrease recorded over this ten year period was for the variable for unemployment among 15 to 19 year olds (down by 17.9 per cent).**

Variations of this order were also recorded in the non-metropolitan areas of Western Australia. The major differences from the changes noted for **Perth** were the larger increases in the population of people aged 65 years and over and the number of dwellings without a motor vehicle; smaller increases for the Indigenous population, occupations of managers and administrators and professionals, low income families and single parent families; and decreases for each of the three variables for people born overseas in predominantly non-English speaking countries.

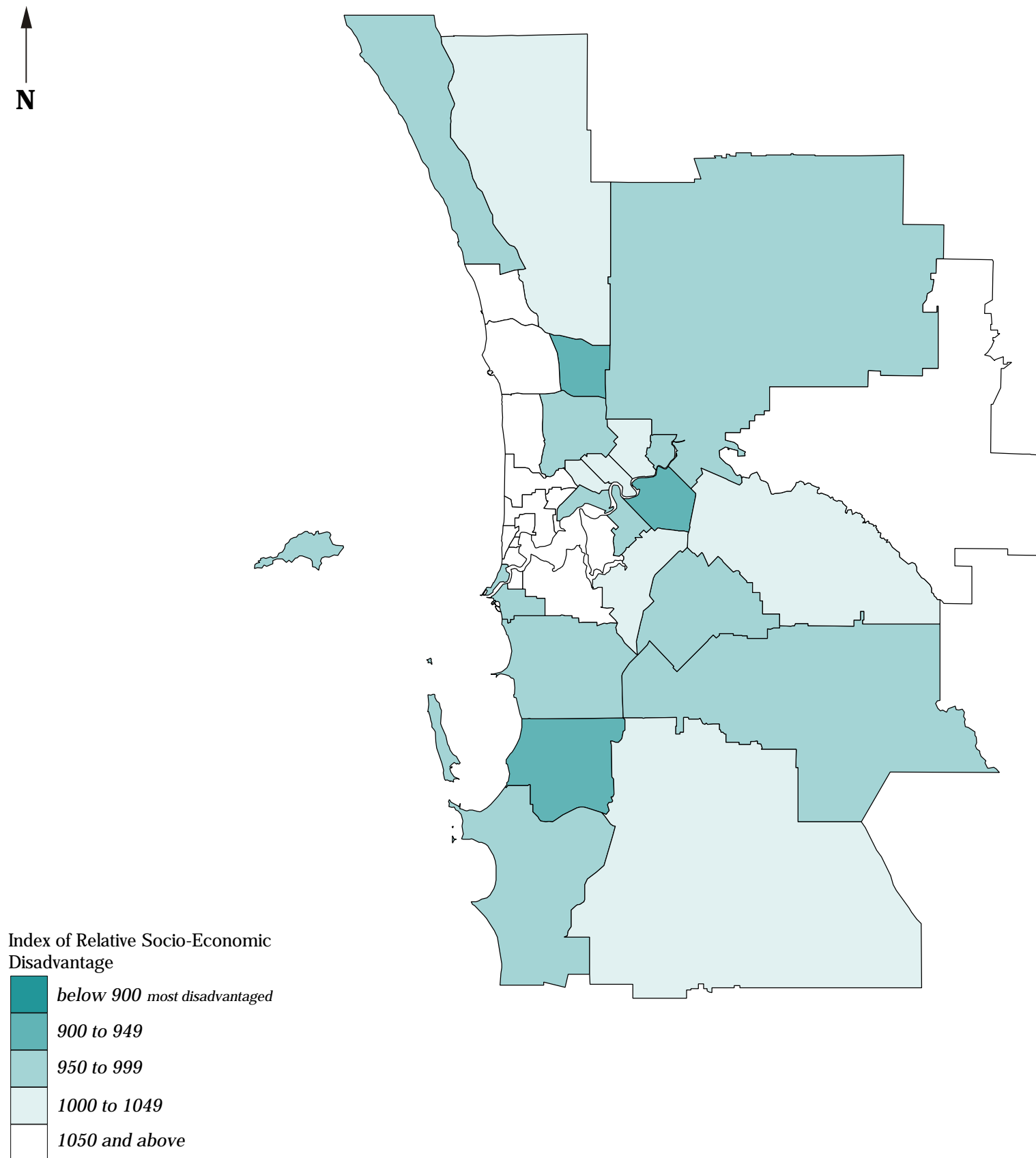
Substantial variations were recorded in income support payments to residents of **Perth** for all of the payment types analysed, other than the Age Pension, for which there was a small increase (an increase of 3.2 per cent). **The number of recipients for each of the other payment types increased substantially, with the number of unemployment beneficiaries more than doubling (an increase of 140.2 per cent) (Table 9.1).**

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Map 3.28

ABS Index of Relative Socio-Economic Disadvantage, Perth, 1996

IRSD index number for each Statistical Local Area



Source: Calculated on data from ABS 1996 Census

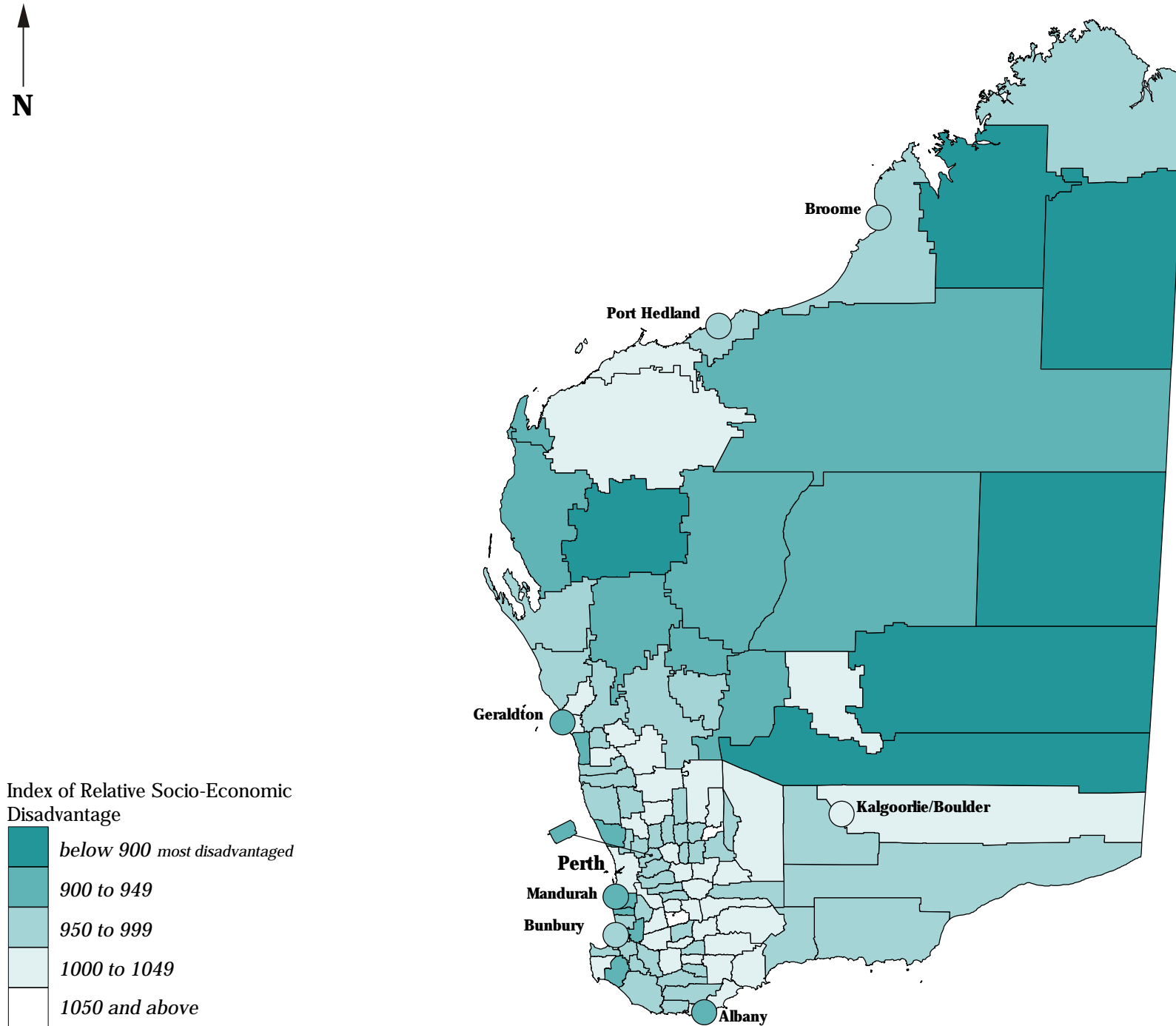
Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

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Map 3.29

ABS Index of Relative Socio-Economic Disadvantage, Western Australia, 1996

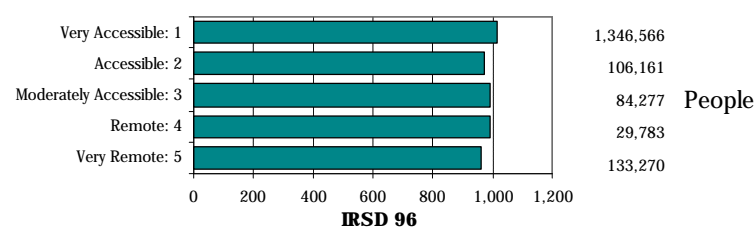
IRSD index number for each Statistical Local Area



Source: Calculated on data from ABS 1996 Census

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



When calculated by ARIA category, the ABS Index of Relative Socio-Economic Disadvantage scores in Western Australia cover a narrower range than the other States with areas in all five ARIA categories. The highest index score (indicating the most advantaged areas) is in the Very Accessible ARIA category (1014) and the lowest scores are in the Very Remote (963) and Accessible (970) categories, respectively. Both of the other categories have an index score of 991.

Source: Calculated on ARIA classification, DHAC
National Social Health Atlas Project, 1999

Chapter 4: The amended data in this chapter has not been highlighted as the majority of figures (other than for 1989) have been amended

The postcode data were converted to Statistical Local Areas (SLAs) for mapping using a converter produced by the Australian Bureau of Statistics (ABS). This process is described in Appendix 1.2. In some instances, the number of people in receipt of a pension or benefit in a postcode exceeds the population in that postcode: this is particularly a problem with the Age Pension data. This is the case even when the pensioner/beneficiary data are compared with the population data by five year age group, separately for males and females. As a result, the calculation of the proportion of the population in receipt of a particular pension or benefit type can produce percentages of greater than 100 per cent. Other percentages of less than 100 per cent may also be overstated.

The reason for this is not clear. It is unlikely to be the result of people claiming both a DFACS Age and a DVA Service Pension (Age), as checks are made each year to ensure that such events do not occur. While it is likely in part to be a result of faults in the process of allocating pensions data, and it would have been possible to scale all the percentages back to 100, or less than 100, this would have concealed the problem and would not have represented the data for the areas as estimated. Percentages in excess of 100 per cent are noted separately in the text. Although

the other pension or benefit types analysed only rarely have such high proportions, it is not possible to say to what extent they may also be overstated.

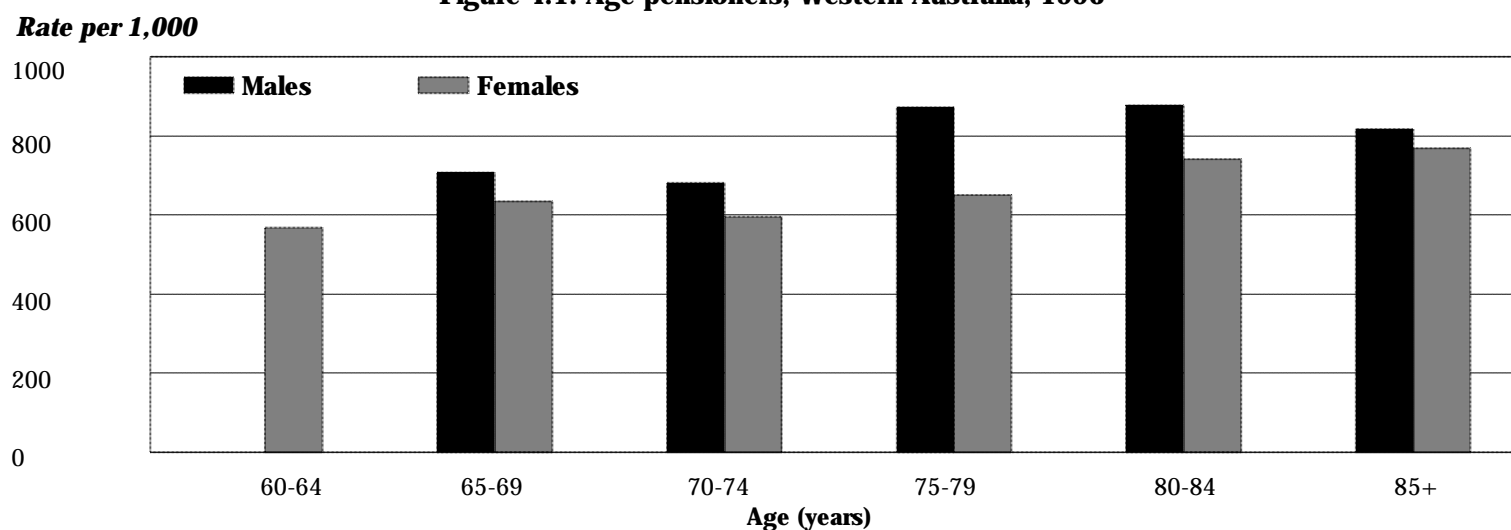
Details of age and sex of recipients

The age and sex profiles of recipients of the Age and Disability Support Pensions and unemployment benefits and the age profiles of female sole parent pensioners are shown in the following charts.

Females can receive the Age Pension from age 60 years and males from age 65 years (**Figure 4.1**). Although the numbers of females receiving this pension are higher from 65 years of age, their rates are lower in all age groups. Rates for both males and females follow a pattern of a decline in the 70 to 74 year age group, then increasing over the next two age groups before declining for men and slowing for women.

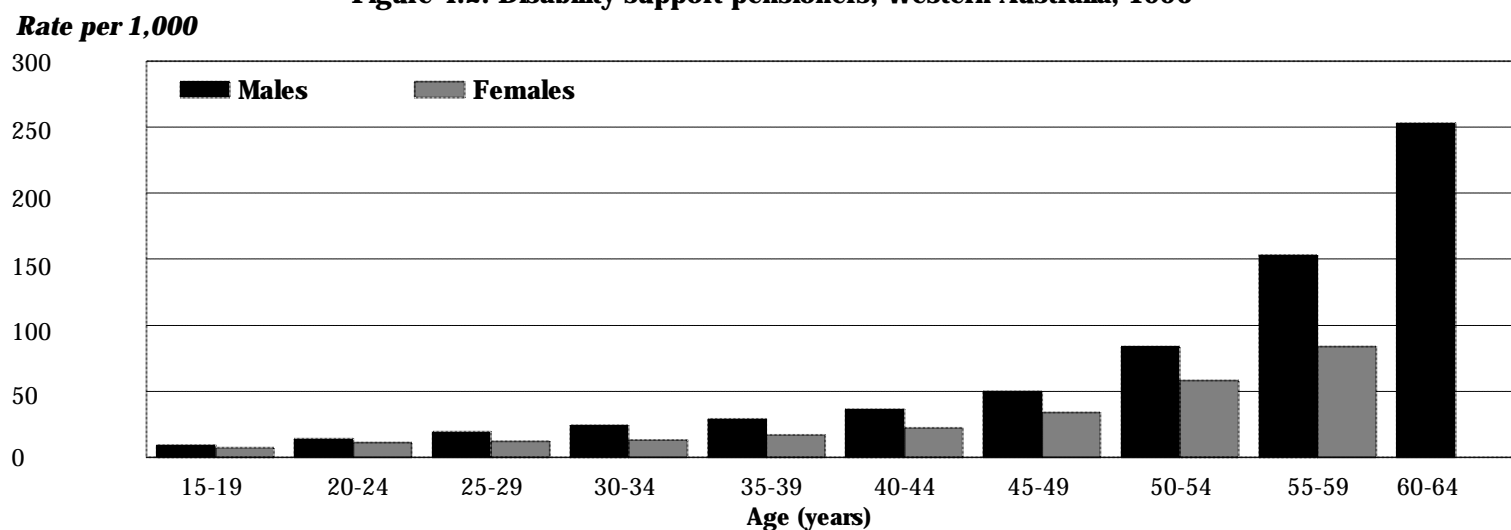
Male rates are marginally higher in each age group under 40 years for those receiving the Disability Support Pension, with substantially higher rates at older ages (**Figure 4.2**). From age 60 years, females eligible for this pension are transferred to the Age Pension. The rates for both males and females grow steadily across the ages, most markedly from around 50 years of age.

Figure 4.1: Age pensioners, Western Australia, 1996



Source: Calculated on data supplied by DFACS (Age Pension) and DVA (Service Pension (Age))

Figure 4.2: Disability support pensioners, Western Australia, 1996



Source: Calculated on data supplied by DFACS (Disability Support Pension) and DVA (Service Pension (Permanently Incapacitated))

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Disability support pensioners, 30 June 1996

Capital city comparison

People eligible for a Disability Support Pension, paid by the Department of Family and Community Services (DFACS), must be aged 16 years or over and have not reached age-pensionable age; be permanently blind or have a physical, intellectual or psychiatric impairment level of 20 per cent or more and a continuing inability to work. Details of males under 65 years of age and females under 60 years of age receiving the DVA service pension (permanently incapacitated) have been combined with the Disability Support Pension data: details on people above these ages were included in the data for age pensioners.

The proportion of the population in the capital cities in receipt of the Disability Support Pension has increased considerably since 1989, rising from 2.6 per cent in 1989 to 3.9 per cent in 1996. High levels of unemployment have impacted significantly on the increase in the number of disability support pensioners (Centrelink 1997). This increase was evident in all capital cities, with the largest increases recorded in **Hobart**, **Adelaide**, **Sydney** and **Brisbane**. In both 1989 and 1996, **Hobart** and **Adelaide** had the largest proportions of disability support pensioners, while **Canberra** and **Darwin** had the lowest.

Table 4.4: Disability support pensioners, capital cities

	<i>Per cent</i>								
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra¹	All Capitals
1996	3.8	3.7	4.1	5.1	3.9	5.6	3.1	2.2	3.9
1989	2.3	2.6	2.7	3.5	3.0	3.6	2.1	1.2	2.6

¹Includes Queanbeyan (C)

Source: See Data sources, Appendix 1.3

Perth

In 1989, there were 23,054 people receiving a Disability Support Pension, 3.0 per cent of the eligible population. By 1996, the number had increased by 36.8 per cent, to 31,548 pensioners, and the proportion had increased to 3.9 per cent of the eligible population.

The highest proportions of disability support pensioners were almost exclusively in the newer SLAs on the fringe of **Perth**, and those older SLAs to the east of the city (**Map 4.3**). Lower proportions were recorded in coastal areas and adjacent to the Swan River, east of the city.

The highest proportions of disability support pensioners were in industrialised Kwinana (7.6 per cent), as well as in Bassendean (8.2 per cent), Fremantle (6.7 per cent), Belmont (6.0 per cent), Mosman Park, Stirling: Central and Stirling: South-Eastern (each with 5.8 per cent), Wanneroo: South-East (5.5 per cent), Perth and Victoria Park (both 5.4 per cent).

The lowest proportions were found in the high socioeconomic status SLAs of Cottesloe (1.4 per cent), Peppermint Grove (1.6 per cent) and Nedlands (1.8 per cent). Low proportions were also recorded in the north coast SLAs of Wanneroo: Central Coastal (1.5 per cent) and Wanneroo: South-West (1.9 per cent).

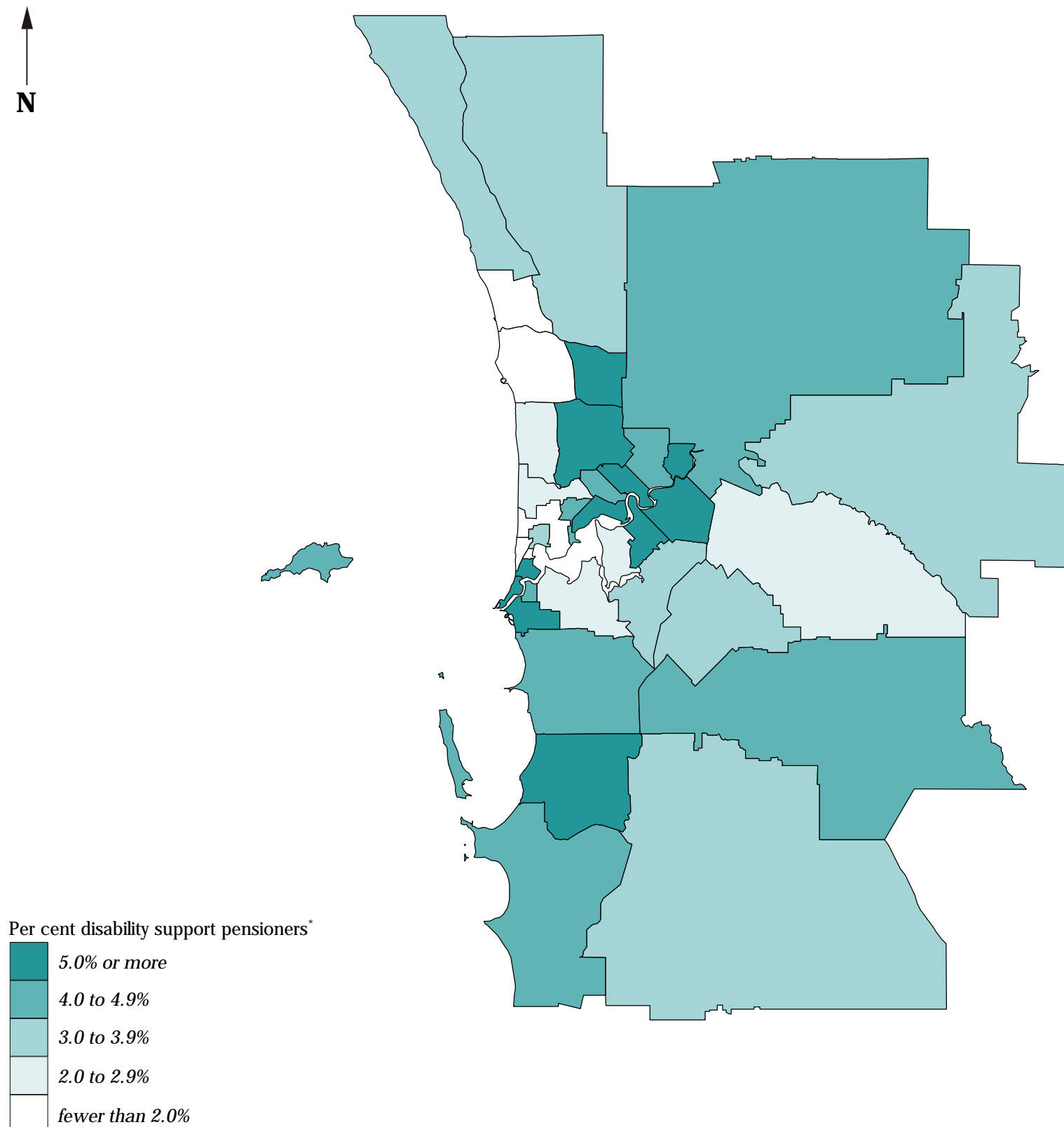
Stirling: Central had the largest number of people receiving a Disability Support Pension (3,553 people) in **Perth** in 1996. Relatively high numbers were also recorded in Swan (1,911 people), Gosnells (1,823) and Rockingham (1,708).

There were correlations of significance with most indicators of socioeconomic disadvantage; the strongest of these were with the variables for low income families (0.87) and unemployed people (0.86). There were inverse correlations with the variables of advantage, mapped in Chapter 3. The inverse correlation of substantial significance with the IRSD (-0.77), indicates a positive association at the SLA level between high proportions of disability support pensioners and socioeconomic disadvantage.

Map 4.3

Disability support pensioners*, Perth, 1996

as a percentage of males ages 15 to 64 years and females aged 15 to 59 years in each Statistical Local Area



*Includes the Disability Support Pension paid by the Department of Family and Community Services and the Service Pension (Permanently Incapacitated) paid by the Department of Veterans' Affairs

Source: Calculated on data from ABS 1996 Census

Details of map boundaries are in Appendix 1.2
National Social Health Atlas Project, 1999

Disability support pensioners, 30 June 1996

State/Territory comparison

In 1996, the proportions of people in receipt of the Disability Support Pension (see previous text page for details of those included) were generally higher in the non-metropolitan areas than in the capital cities, with the exception of South Australia, Western Australia and Northern Territory. The average for the *Rest of State/Territory* areas was 5.0 per cent, with similar proportions recorded in Queensland (4.6 per cent), Victoria (4.9 per cent) and South Australia (5.0 per cent). The highest proportion was in Tasmania (6.2 per cent) and the lowest in the Northern Territory (2.7 per cent). Comparisons between 1989 and 1996 show an increase in the proportions across all States and Territories, with the largest increases evident in Tasmania, South Australia and New South Wales.

Table 4.5: Disability support pensioners, State/Territory
Per cent

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total ¹
1996									
Capital city	3.8	3.7	4.1	5.1	3.9	5.6	3.1	2.2 ²	3.9
Other major urban centres ³	6.1	4.7	3.9	5.1
Rest of State/Territory	5.7	4.9	4.6	5.0	3.7	6.2	2.7	— ⁴	5.0
Whole of State/Territory	4.5	4.0	4.2	5.1	3.8	6.0	2.8	2.1	4.3
1989									
Rest of State/Territory	3.9	3.3	3.1	3.3	3.1	3.7	2.2	— ⁴	3.4

¹Total for *Whole of State/Territory* includes 'Other Territories' (Jervis Bay, Christmas Island and Cocos Islands)

²Includes Queanbeyan (C)

³Includes Newcastle and Wollongong (NSW); Geelong (Vic); and Gold Coast-Tweed Heads and Townsville-Thuringowa (Qld)

⁴Data unreliable: included with ACT total

Source: See Data sources, Appendix 1.3

Rest of State

In 1989, there were 8,620 people in the non-metropolitan areas of Western Australia receiving a Disability Support Pension, 3.1 per cent of the eligible population. By 1996, the number had increased by 30.5 per cent to 11,249 disability support pensioners, 3.7 per cent of the eligible population.

The distribution of disability support pensioners is highly concentrated in the State's south-west, as well as in SLAs extending along the coastal strip north of **Perth** to Shark Bay (**Map 4.4**). Although the proportions in the more remote areas were generally fairly low, there were some SLAs with higher proportions in the far north of the State.

In Mandurah, seven per cent of the eligible population received a Disability Support Pension. The next highest proportions were recorded in Murray and Kellerberrin (both 6.9 per cent), Carnarvon (6.2 per cent), Beverley and Denmark (both 6.0 per cent), Gingin and Wyalkatchem (both 5.8 per cent), Albany (5.6 per cent), Cuballing and Koorda (both 5.5 per cent).

Of the major towns in Western Australia, the highest proportions of disability support pensioners were in Mandurah (as noted, at 7.0 per cent), Albany (5.6 per cent), Busselton and Geraldton (both 3.9 per cent), Broome (3.8 per cent) and Bunbury (3.6 per cent).

SLAs with low proportions of disability support pensioners were generally those located in the remote regions of the State. Excluding SLAs with 20 or fewer recipients, the lowest proportions were in Ashburton (0.6 per cent), Coolgardie and Leonora (both with 1.0 per cent) and Wiluna (1.2 per cent).

Mandurah also had the largest number of disability support pensioners, with 1,509, more than twice the number in next ranked Bunbury (609). There were 494 disability support

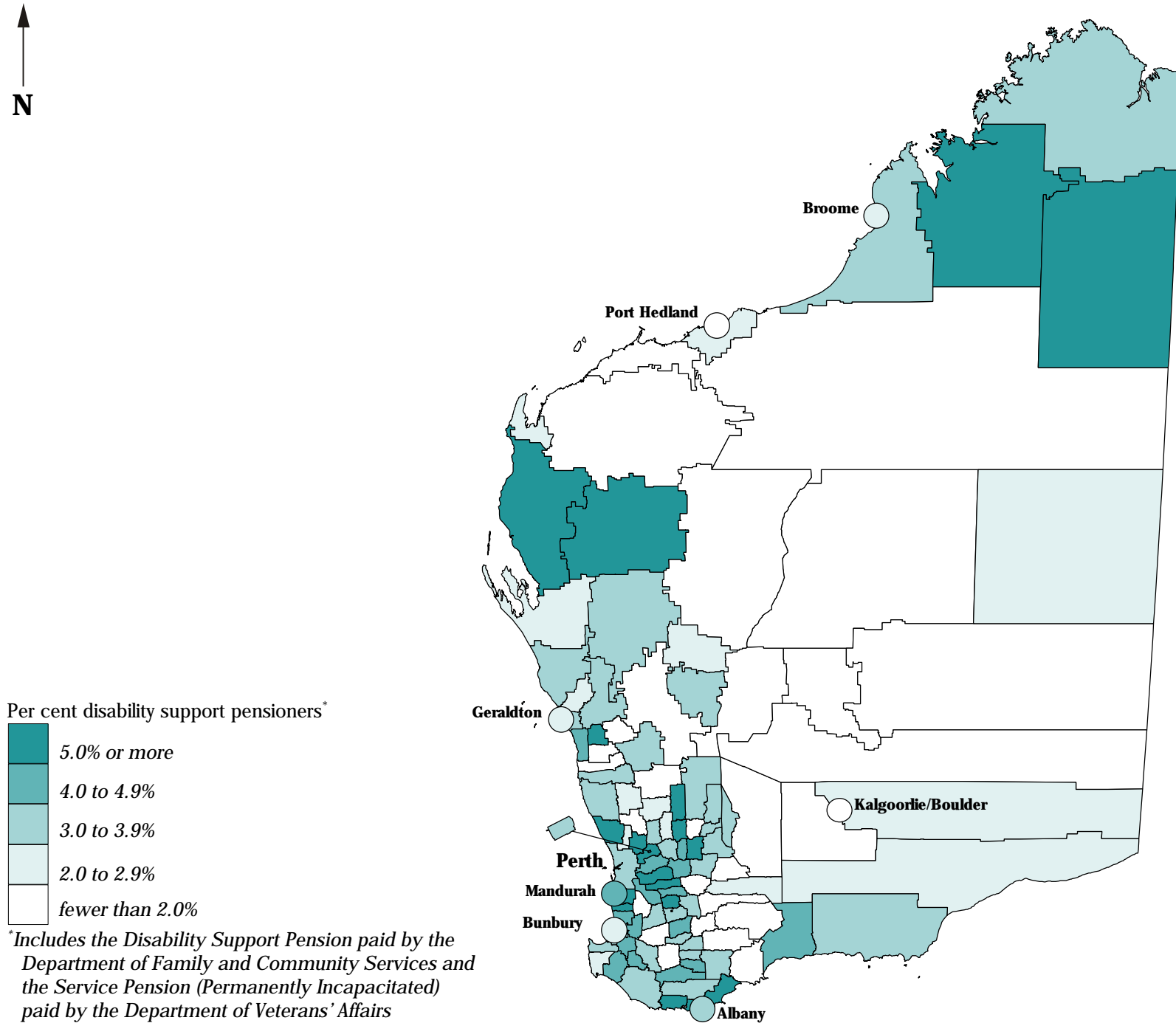
pensioners resident in Kalgoorlie/Boulder, 482 in Geraldton and 477 in the town of Albany.

The correlation analysis revealed an association at the SLA level with the indicators of socioeconomic disadvantage, the strongest being correlations of meaningful significance with the variables for low income families (0.52) and unemployment (0.51). These results, and the weak inverse correlation with the IRSD (-0.28), indicate an association at the SLA level between high proportions of disability support pensioners and socioeconomic disadvantage.

Map 4.4

Disability support pensioners*, Western Australia, 1996

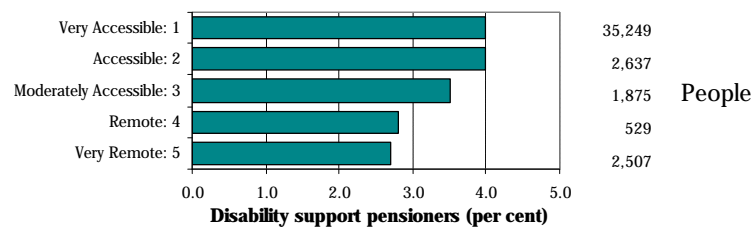
as a percentage of males aged 15 to 64 years and females aged 15 to 59 years in each Statistical Local Area



Source: See Data sources, Appendix 1.3

Details of map boundaries are in Appendix 1.2

Accessibility/Remoteness Index of Australia



Access to services is of particular importance to people with a disability and is reflected in the graph adjacent. The proportion of the eligible population receiving a Disability Support Pension is highest in the Very Accessible (4.0 per cent), Accessible (4.0 per cent) and Moderately Accessible (3.5 per cent) categories. The Very Remote (2.7 per cent) and Remote (2.8 per cent) categories have the lowest proportions.

Source: Calculated on ARIA classification, DHAC
National Social Health Atlas Project, 1999

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9 Summary: The variables highlighted in table 9.1 have been amended: references to these variables in the text have also been changed but have not been highlighted

Introduction

This chapter presents details of the major changes noted in the data between this and the first edition, as well as some summary measures of the health differentials calculated from the health status and health service utilisation data mapped in Chapters 5 and 6.

Changes in data rates between editions

The reference period for the data in the first and this second edition varies according to the dataset. In general, the Census data in this edition are ten years on from the first edition (Chapter 3: 1986 Census and 1996 Census); and the income support (Chapter 4: 1989 and 1996) and health status (Chapter 5: 1985-89 and 1992-95) datasets are seven years later. The data for hospital admissions (see *Differences in data treatment between editions*, Chapter 6) and services and facilities are not discussed in this chapter because of difficulties in comparing the available series over time.

Readers should note that some variables are not discussed below because the data were available only for the latest period.

Changes in socioeconomic status variables

Marked variations were recorded between 1986 and 1996 for a majority of the socioeconomic status variables mapped for Western Australia (Table 9.1). For **Perth**, the largest increases

were for the population of Aboriginal and Torres Strait Islander people (an increase of 70.5 per cent over this ten year period); the occupational grouping of managers and administrators, and professionals (55.5 per cent); low income families (41.6 per cent); people born overseas in predominantly non-English speaking countries: an increase of 39.6 per cent for those resident for five years or more, of 24.9 per cent for those resident for less than five years, and of 23.9 per cent for those with poor proficiency in English; people aged 65 years and over (35.5 per cent); single parent families (35.4 per cent); and housing authority rented dwellings (21.7 per cent). The largest decrease recorded over this ten year period was for the variable for unemployment among 15 to 19 year olds (down by 17.9 per cent).

Variations of this order were also recorded in the non-metropolitan areas of Western Australia. The major differences from the changes noted for **Perth** were the larger increases in the population of people aged 65 years and over and the number of dwellings without a motor vehicle; smaller increases for the Indigenous population, occupations of managers and administrators and professionals, low income families and single parent families; and decreases for each of the three variables for people born overseas in predominantly non-English speaking countries.

Table 9.1: Changes in demographic and socioeconomic status variables, by Section of State, Western Australia
Per cent change

Variable	Perth	Rest of State	Whole State
1986 to 1996			
0 to 4 year olds	12.0	1.3	8.4
65 years & over	35.5	47.2	38.3
Single parent families	35.4	26.1	33.0
Low income families	41.6	20.4	34.7
Unemployed people	12.2	-2.4	8.1
Unemployed people aged 15 to 19 years	-17.9	-37.9	-23.9
Female labour force participation (20 to 54 years)	9.8	13.7	10.8
Early school leavers	-3.2	2.4	-1.5
Unskilled & semi-skilled workers	1.0	2.7	1.6
Managers & administrators, & Professionals	55.5	15.9	41.9
Aboriginal & Torres Strait Islander people	70.5	21.3	34.4
People ¹ born overseas & resident for less than 5 years	24.9	-44.5	16.0
People ¹ born overseas & resident for 5 years or more	39.6	-0.7	33.3
People ¹ born overseas: speaks English not well/not at all	23.9	-42.0	16.4
Housing authority rented dwellings	16.3	0.5	10.9
Dwellings without a motor vehicle	21.7	26.9	22.8
1989 to 1996			
Age pensioners	3.2	1.2	2.7
Disability support pensioners	36.8	30.5	35.1
Female sole parent pensioners	41.5	52.2	44.4
Unemployment beneficiaries	140.2	138.4	139.6
Dependent children of selected pensioners & beneficiaries	65.3	54.3	61.5

¹Includes people who were born in a predominantly non-English speaking country

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