

# Inequality in South Australia

**KEY DETERMINANTS OF WELLBEING**

**Volume 1 : The Evidence | 2004**

Hetzel D, Page A, Glover J, Tennant S



Government  
of South Australia

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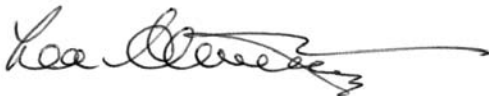
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# Foreword

The sustained economic growth created in recent years in Australia and other developed economies has provided increasing levels of wealth and material wellbeing for many people. However, the distribution of these benefits is not spread evenly across the community. There is an increasing awareness and concern in South Australia about how these benefits result in differences in levels of wellbeing. Of more concern, there is evidence that the gap in wellbeing between the well off and the worst off is widening.

*Inequality in South Australia – key determinants of wellbeing* has been developed as one initiative of the South Australian Government in response to these concerns. This report explains what the social determinants of health and wellbeing are, how differences in these determinants lead to inequality and provides detailed information of how these differences are distributed across South Australia. The relative impact of these social determinants of wellbeing on particular groups, especially on Indigenous South Australians, is described in detail where reliable information is available. In addition, information is provided showing the distribution of these determinants across metropolitan Adelaide and country South Australia.

This report aims to increase understanding of the social determinants of health and wellbeing and build our capacity to reduce inequalities. It will provide planners, community advocates and service providers with information on which to base their decisions and proposals. Addressing the social determinants of health and wellbeing requires action from a wide variety of government and non-government organisations, not just from health and community services agencies. It is an essential component of the South Australian Government's commitment to creating a fair and socially inclusive community. We encourage you to use this report as a key resource in working with your own community to achieve that goal.



**Hon Lea Stevens**  
**Minister for Health**  
**Minister Assisting the Premier in**  
**Social Inclusion**



**Hon Jay Weatherill**  
**Minister for Families and**  
**Communities**  
**Minister for Housing**  
**Minister for Ageing**  
**Minister for Disability**

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# Overview

The social and economic environment is a major determinant of population wellbeing in South Australia. Over the last fifteen years, numerous reports have highlighted substantial variations in the health and wellbeing of the South Australian population, and a widening of the gap between those who are 'well off' and those who are not.

The purpose of this report, *Inequality in South Australia – key determinants of wellbeing, Volume 1: The Evidence*, is to deepen our understanding of the impact that social, physical and economic factors have on health and wellbeing, and to describe the distribution of some of these factors across the South Australian population.

A number of indicators have been selected to describe different aspects of wellbeing of the population at the present time, and, by using them, to highlight the extent of some of the existing social and economic inequalities. The report contains detailed findings for each of the indicators.

It is intended that a companion volume be published later in 2004, containing examples of projects and programs that have been successful in addressing social inequality.

## Key findings

- Across the South Australian population as a whole, there are substantial inequalities in the distribution of aspects of health, wellbeing and education.
- The patterns of variation in the maps and graphs of the indicators of health and wellbeing are very similar to those shown for social and economic inequalities.
- Aboriginal people as a group fare worse on all indicators for which data are available – unemployment, labour force participation, education, life expectancy, health risks, and so on – than non-Aboriginal South Australians.
- The relatively poorer health and wellbeing outcomes for Aboriginal people are the result of a complex set of interacting factors, resulting from colonisation and the subsequent socioeconomic disadvantage experienced by them over more than two centuries.
- Across Adelaide, numerous dimensions of inequality are evident. Areas characterised by high proportions of low income families, high unemployment rates and relatively high proportions of Aboriginal people, are also the areas where rates of child abuse and neglect and

smoking during pregnancy are high. These areas have the lowest rates of participation in schooling at age 16 and low labour force participation rates as well.

- In the country areas of South Australia, there is also an association between the indicators of social inequality and those of health and wellbeing; however, this appears weaker than in Adelaide, in part because of the smaller populations in these areas.
- The most notable associations in the country are between areas characterised by high unemployment rates and high proportions of dwellings without a motor vehicle, and areas where rates of child abuse and neglect and smoking during pregnancy are high. Areas with low rates of participation in schooling at age 16 and areas with relatively high proportions of Indigenous population also have high rates of smoking during pregnancy.

These findings paint a concerning picture of social inequality in this State, especially for Aboriginal South Australians who are our most disadvantaged citizens. It is a situation that is both avoidable and unfair, but not inevitable.

There is now substantial evidence that wellbeing is the result of complex interactions of the social, economic, biological and ecological environments in which people live. A lack of enabling social and environmental conditions results in poor outcomes for people. However, if these environments are supportive, they provide a foundation for the development of competence and skills that underpin learning, behaviour, health and wellbeing throughout life.

The findings in this report highlight areas where further action is needed, and there is much that can be done. There is a growing body of knowledge that will provide direction for developing policies to reduce inequities across the population. The socioeconomic environment is a powerful and potentially modifiable factor and public policy is a key instrument to improve this environment, particularly in areas such as housing, taxation and social security, work environments, urban design, pollution control, educational achievement, and early childhood development.

A number of examples of how information about inequalities can underpin the planning and implementing of projects aimed at reducing existing inequities are included in Section 5 of this document.

There are many benefits of investing in a population-based approach: increased prosperity, because a well-functioning and healthy population is a major contributor to a vibrant economy; reduced expenditures on health, education, justice and social problems; and overall community stability and wellbeing for South Australians.

As a community, we need to understand better the complex interactions between individuals, their families, the pressures exerted by their environments and social structures over a lifetime, and how we can influence these factors to improve the wellbeing of current and future generations of South Australians.

## Action following on from this report

This report, *Inequality in South Australia – key determinants of wellbeing, Volume 1: The Evidence*, will be distributed widely to South Australian agencies and communities to assist in the development of an understanding of the extent and impact of social inequalities across the State; and to encourage the direction of greater resources to reduce these inequalities.

A second volume, containing examples of projects and programs that have been successful in addressing social inequality, will be published later in 2004. The projects and programs to be included in this companion volume will be identified through sector specific consultation workshops by an across government advisory group.

The Department of Health and Department for Families and Communities will use these two documents to redirect financial and human resources towards this end.

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Rose Bowey	Strategic Development and Communications, Attorney General's Department
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Clare Shuttleworth	Primary Health Planning, Metropolitan Health Division, Department of Human Services
David Waterford	Social Inclusion Unit, Department of the Premier and Cabinet
Carmel Williams	Health Promotion SA, Strategic Planning and Population Health Division, Department of Human Services

\*Note: Agency names reflect the relevant agencies at the time the project was undertaken.

## Terms of reference

The terms of reference for the Social Inequalities Reference Group were:

1. To contribute to the development of a resource document that would describe the extent of social inequalities in South Australia and their links to health and wellbeing.
2. To provide advice on the indicators that should be used and their presentation in the final report.
3. To review project plans and drafts of the resource document produced by PHIDU.

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# Section 1

## Context and purpose

### In this section ...

- Introduction
- Background
- Overview
- Aims
- Action following on from this report
- Sources of information

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## Introduction

Over the last fifteen years, numerous reports and studies have highlighted substantial variations in the health and wellbeing of the South Australian population, and a widening of the gap between those who are 'well off' and those who are not <sup>(1)</sup>. These differences are readily apparent within the metropolitan area of Adelaide and across the rest of the State.

There is mounting evidence of the impact of both economic and social inequalities on the wellbeing of various groups in society, and government concern about the need to address them.

The South Australian Government has identified the area of inequality as a State priority. In July 2002, the then Department of Human Services (DHS) initiated the development of this report, *Inequality in South Australia – key determinants of wellbeing, Volume 1: The Evidence*, to highlight the extent and significance of some of the inequalities in South Australia, particularly those associated with the social and economic determinants of health and wellbeing.

It is intended that a companion volume be published later in 2004, containing examples of projects and programs that have been successful in addressing social inequality.

## Background

The South Australian Government has a major focus on bringing together different sectors to find solutions to address the economic, social and environmental issues facing South Australia at the present time, and into the future.

To this end, a number of new initiatives have been established across government, and in partnership with local government, the non-government sector and private enterprise. For example, in March 2002, the Premier established the Government's Social Inclusion Initiative and appointed the Social Inclusion Board with the objective of 'recapturing South Australia's confidence and self esteem by tackling some of the most pressing social issues facing the State' <sup>(2)</sup>.

In November 2002, the newly formed Economic Development Board presented the *State of the State Report* <sup>(3)</sup>. This was a comprehensive examination of South Australia's current economic performance relative to other Australian States and Territories, and it identified that South Australia lags the nation in most key economic indicators.

*"Over the past 20 years, South Australia's average growth rate was around 2.6% per year, while the national average was 3.9%. Our population has been stagnating and ageing, our business sector as a whole has been struggling to become export competitive, our infrastructure is becoming older and less reliable and many of our brightest young people have been leaving the State to find work opportunities elsewhere."*

The follow up report, *A Framework for Economic Development in South Australia*, identified that South Australia needs robust economic growth to 'deliver the social outcomes that we all want: for example, protection of our natural environment and appropriate investment in schools, hospitals, police and key infrastructure that will maintain our high quality of life and well-being' <sup>(4)</sup>.

These initiatives highlight the need to link social and economic policy, and these initiatives, and others like them, set the context for this document.

## Overview

Our wellbeing is the product of many different factors. Some of these include individual characteristics such as the genes that we inherit from our parents, and aspects of our own beliefs, behaviours and coping abilities. Other significant effects operate within our families, neighbourhoods, communities, culture or kinship groups, and society as a whole. The social and economic environment is a major determinant of population wellbeing in South Australia.

The purpose of this first report is to deepen our understanding of the impact that social, physical and economic factors have on wellbeing, and to describe the distribution of these factors across the South Australian population.

Over the last two decades, there have been major social and economic changes in South Australia, especially in the areas of work, resources for families, community supports and the balance between them <sup>(1)</sup>. Some examples of these are:

- Marked alterations in the nature and amount of available work <sup>(5)</sup>, and in opportunities for the employment of young people;
- Greater challenges in balancing work and family responsibilities <sup>(6)</sup>;
- Reductions in affordable housing, particularly public housing;

- Significant economic hardship for many people, despite overall recent increases in rates of employment and a stronger economy <sup>(7)</sup>;
- Dramatic changes in rural and remote communities;
- A rise in those affected by addictions to alcohol, drugs and gambling <sup>(8)</sup>;
- A greater awareness of the effects of stress on children and young people as a result of serious family problems; and
- The persistence of significant disparities in educational, health, and other aspects of wellbeing across the population <sup>(1)</sup>.

These changes in society have been widespread and the ensuing disruptions experienced by individuals, families and communities, substantial. The rate of change has been rapid and without precedent in its scope and impact on different segments of the population <sup>(9)</sup>. We are witnessing greater inequalities in economic and social outcomes, as individuals, families and communities attempt to adapt. The transitions appear to be continuing, and the long-term impact of such a rapidly changing society is unknown <sup>(10)</sup>.

We need to understand better the complex interactions between individuals and their families, the pressures exerted by their environments and social structures over a lifetime, and how these factors influence the wellbeing of current and future generations of South Australians.

One way of doing this is to choose a number of indicators to describe the levels of different aspects of wellbeing of the population at the present time and, by using them, to highlight the extent of existing inequalities.

Indicators are useful for:

- Monitoring the level of wellbeing of a population to describe its current state and to identify change over time;
- Assessing progress toward targets or policy objectives; and
- Informing people about significant social issues.

The indicators used in this report have been selected because they represent areas of importance where considerable inequalities exist and because data are available for them. These indicators provide only a partial picture of the existing social and economic inequalities. However, it is hoped that this report will raise awareness of the extent of many social inequalities in South Australia and their impact on different sections of the population.

## Aims

This report has a number of specific aims:

- To describe some of the factors that have an important influence on the wellbeing of South Australians;
- To identify significant differences (or inequalities) in wellbeing and their determinants in South Australia, and to assess possible trends in inequalities over time;
- To map and describe changes in a selection of indicators chosen for this report;
- To provide information in a form that will support discussion and action by agencies at local, regional and state levels; and
- To raise awareness in the wider community about the extent to which South Australia is an unequal society and the impact of this on the wellbeing of the whole population.

The report has been prepared for use by all those wishing to know the extent of inequalities in South Australia, and wanting to do something about them.

It is hoped that people will draw on the report:

- To understand the extent of inequalities across South Australia;
- To identify trends in social inequalities over time;
- To develop activities that will reduce these inequalities; and
- To track emerging issues of concern to particular communities or groups in South Australia.

## Action following on from this report

This report, *Inequality in South Australia – key determinants of wellbeing, Volume 1: The Evidence*, will be distributed widely to South Australian agencies and communities to assist in the development of an understanding of the extent and impact of social inequalities across the State; and to encourage the direction of greater resources to reduce these inequalities.

A second volume, containing examples of projects and programs that have been successful in addressing social inequality, will be published later in 2004. The projects and programs to be included in this companion volume will be identified through sector specific consultation workshops by an across government advisory group.

The Department of Health and Department for Families and Communities will use these two documents to redirect financial and human resources towards this end.

## Sources of information

The following resources were used to underpin the information presented in this Section.

1. Tennant S, Hetzel D and Glover J. *A Social Health Atlas of Young South Australians (2<sup>nd</sup> edition)*. Adelaide: Openbook Print, 2003.
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## Section 2

### A focus on the determinants of health and wellbeing

#### **In this section ...**

- The notion of inequality
- The impact of social and economic inequalities
- What factors determine our wellbeing?
- Linking different aspects of wellbeing
- Key determinants of wellbeing
- Key determinants and social inequalities
- Sources of information

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## The notion of inequality

Overall, the level of wellbeing of the South Australian population is high when compared to the populations of many overseas countries. Examples include our life expectancy and overall infant mortality rates.

However, there are substantial differences in the wellbeing of specific groups within our population. For example, compared with other South Australians, Aboriginal people are disadvantaged across a broad range of social and economic factors, including education, health, employment, income and housing. This is the result of many underlying causes, including the intergenerational effects of forced separations from family and culture, and the lasting impacts of colonisation and discrimination. This has placed them at greater risk of poorer life outcomes, and there has been substantial evidence for decades, that, for example, the health of Aboriginal people is significantly worse than that of the non-Indigenous population <sup>(1)</sup>.

These and other disparities are referred to as 'inequalities', reflecting the fact that differences in wellbeing exist. The notion of 'inequality' implies a sense of two things being different, not the same. Numerous inequalities exist across the population and they tend to divide the community into different groupings.

There are many types of inequality – age, sex, ethnicity, social and economic position, disability, geographical area, remoteness, and so on. Some dimensions of inequality are unavoidable and not amenable to change, such as age. Other inequalities occur as a result of differences in access to educational opportunities, material resources, safe working conditions, effective services, living conditions in childhood, racism and discrimination, and so on. This lack of opportunity can also alter expectations of what life offers in the future.

Many inequalities are potentially avoidable and therefore, the fact that they occur implies a degree of unfairness, or inequity. Such inequities occur as a consequence of unjustifiable differences in opportunity, which result in unequal access to health services, nutritious food, adequate housing, safe transport and so on <sup>(2)</sup>.

## The impact of social and economic inequalities

Economic inequality is evident in the uneven distribution of wealth in society. It implies an unequal distribution of the ability to purchase 'goods' such as housing, education, recreation, health care and other opportunities, and the choice to do so <sup>(3)</sup>.

Social inequality is the expression of the lack of access to these opportunities and represents a degree of exclusion of people from full and equal participation in what we believe is worthwhile, valued and socially desirable <sup>(3)</sup>.

Thus, economic and social inequalities are inextricably linked, and their combined impact results in limited opportunities and life chances for many who are affected by them <sup>(4)</sup>. This is particularly the case for Aboriginal people. Such inequalities tend to stratify the community into hierarchies, with those who have the most resources, opportunities and power to choose, at the top; and those with increasingly less, in layers below them. The effect of these hierarchies is to entrench differences in wellbeing across the population.

Socioeconomic disadvantage takes many forms. For some, it is the inability to obtain the essentials of life such as shelter and adequate food; for others, it is a matter of low income; for others, a problem of discrimination and exclusion from opportunities in society <sup>(5)</sup>. Defining disadvantage only in terms of poverty or low income minimises the importance of access to appropriate services, safe environments, and the quality of housing or level of education that is available <sup>(6)</sup>. A complete definition needs to extend beyond a lack of economic resources to encompass many of the serious environmental, structural and social issues faced by individuals, their families and their communities <sup>(7, 8)</sup>. Examples of these are under- and unemployment, homelessness or transience, discrimination and racism, unsupported lone parenthood, educational under-achievement, admission into state care, violence and abuse, and behavioural and mental health problems.

For many disadvantaged groups within the population, the impact of social inequality limits their ability to influence change, and makes them more vulnerable to poor health and wellbeing. Some of these groups include people with disabilities; those for whom English is not their first language; young offenders; and refugees from a range of different cultures and ethnic backgrounds.

Increasing inequality is a matter for significant community concern because it tends to unravel the social fabric of society, through its adverse effects on individuals' life chances and their ability to participate as active citizens in all areas of community life. These effects may also be handed down from generation to generation. The 'hidden damage' from social and economic inequalities shapes every aspect of life: from the ability to learn and the foundations of health laid down in childhood, the safety of our neighbourhoods and the productivity of our enterprises, to our collective identity as a community.

## What factors determine our wellbeing?

Our wellbeing is influenced by many different factors. Those that are believed to have the most significant effects are known as ‘the determinants of health and wellbeing’. Figure 1 illustrates the determinants in terms of ‘layers of influence’, starting with individual factors and extending to aspects of the wider community<sup>(9)</sup>. While many human services make a direct contribution to the health and wellbeing of a population, **Figure 1** shows that many of the key determinants of wellbeing are found in sectors such as education, housing, employment, and the environment.

This model links influences from various areas – including society-wide factors (e.g., physical, environmental, socioeconomic), middle-level factors (e.g., health care and other services) and individual and small-group factors (e.g., tobacco use), to explain the origins of health and wellbeing<sup>(10)</sup>.

Other useful models have also been developed. In 1986, the Ottawa Charter for Health Promotion<sup>(11)</sup> recognised the fundamental conditions for health and wellbeing to be peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity.

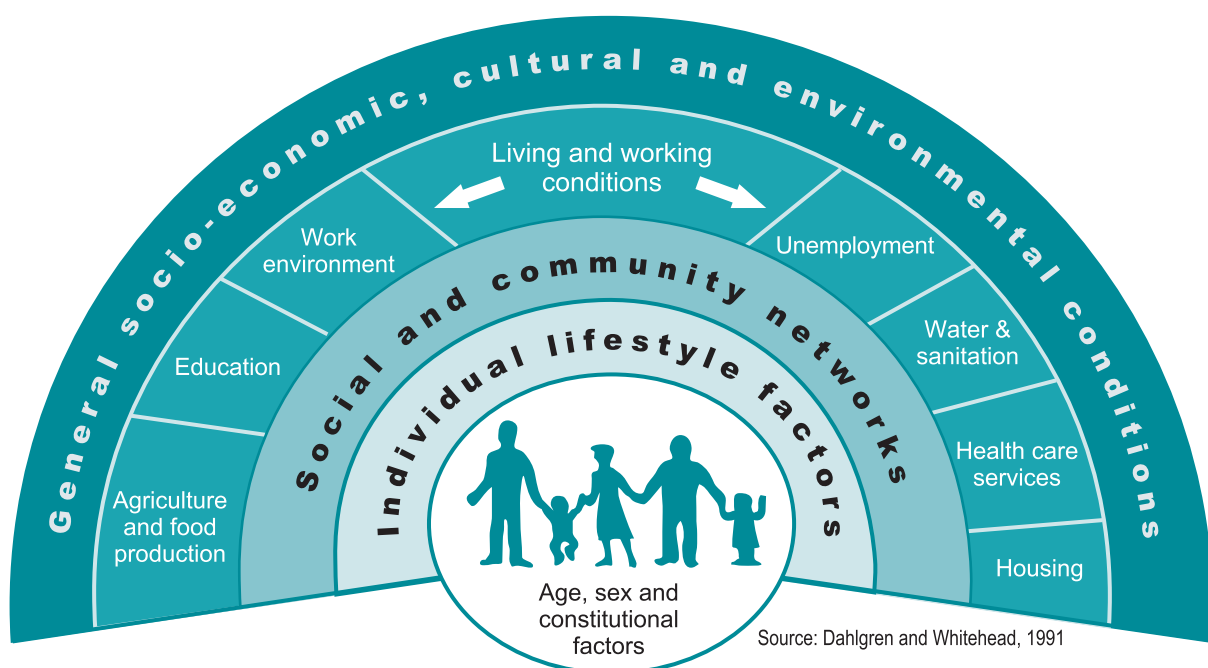
More recently, the World Health Organization<sup>(12)</sup> has published “The Solid Facts” which identifies

the following areas as important social determinants where action can be taken to reduce inequalities:

1. The social gradient
2. Stress
3. Early life
4. Social exclusion
5. Work
6. Unemployment
7. Social support
8. Addiction
9. Food
10. Transport.

Together, these models identify the important roles played by public policy, culture, aspects of environment, human services, community and social support, personal behaviours and skills, in addition to biological factors, as fundamental in determining our health and wellbeing.

Figure 1: The Key Determinants of Health and Wellbeing



Source: Dahlgren and Whitehead, 1991

## Linking different aspects of wellbeing

Wellbeing is “the state of being or doing well in life; happy, healthy, or prosperous condition; moral or physical welfare (of a person or community)”<sup>(13)</sup>. In the broadest sense, this describes an everyday resource – the capacity to adapt to, respond to, or control life’s challenges and changes<sup>(14)</sup>. Thus, health and wellbeing are inextricably woven together.

As shown in **Figure 1**, health and wellbeing are the result of multiple determinants that operate in combination, within genetic, biological, behavioural, social, cultural and economic contexts, that have differing influences at various points in our lives. For example, family environment has a greater effect on the wellbeing of infants and young children early in life, while neighbourhood and peer group factors and individual behaviours become more important as older children move towards adolescence and adulthood<sup>(10)</sup>.

The life pathways that result are the product of cumulative risk and protective factors and other influences in our social environments. A single risk factor (being obese or having experienced child abuse) may contribute to a wide range of problems, just as one protective factor (good nutrition or having a supportive family) may help to defend against many other problems<sup>(15)</sup>. Environmental risks and protective factors can occur independently, or may cluster together in socially patterned ways<sup>(16)</sup>.

### Cumulative effect of aspects of disadvantage

For example, a child living in an economically deprived community may be more likely to suffer a poor diet and be exposed to unsafe housing conditions and, at the same time, perhaps to witness interpersonal violence.

Over time, the same child may be less likely to attend pre-school, and have less access to books from an early age.

The effects of these experiences and environments may be compounded as the child continues along his or her life path, and can, in turn, ultimately affect school readiness, then school achievement, and workplace readiness and employment prospects<sup>(16)</sup>.

The path that leads to any particular outcome may be very different for different individuals and populations. The timing and sequence of biological, cognitive, psychological, emotional, cultural and historical events and experiences will all influence the development of health and wellbeing in both individuals and across populations.

## Key determinants of wellbeing

The following factors are described in more detail below and reflect many of the indicators included in Section 4.

### 1. Income and socioeconomic position

These are among the most important individual-level determinants, and one’s overall wellbeing tends to improve at each step up the economic and social hierarchy. Thus, people with a higher income generally enjoy better health and longer lives than people with a lower income<sup>(32, 35)</sup>. The rich are healthier than the middle classes, who are in turn healthier than the poor. This is known as ‘the social gradient’. Furthermore, this gradient exists for a wide range of other outcomes – from coping behaviours, to literacy and mathematical achievement<sup>(17)</sup>. The gradient is evident whether one looks at differences in current socioeconomic status or in that of family of origin. These effects seem to persist throughout the lifespan, from birth, through adulthood and into old age, and possibly to the next generation<sup>(18)</sup>.

For most people in South Australia, this variation in health and wellbeing is not due primarily to the lack of money for food, clothing or shelter. Thus, the important factors in explaining differences appear to be not only material conditions, but also the social advantages attached to those conditions. In modern societies, such as ours, these have become major influences on health and wellbeing.

### 2. Culture and kinship

The concept of culture reflects a shared identity based on factors such as common language, related values and attitudes, and similarities in beliefs, lived histories and experiences. For many people, the expression of these aspects of their culture is an enabling and protective factor for their wellbeing<sup>(28)</sup>. Culture, spirituality and kinship have overarching influences on beliefs and practices related to health, wellbeing and healing, including concepts of wellbeing and knowledge of the causes of health and illness and their remedy.

However, minority groups can face risks to their health and wellbeing because of dominant cultural values that contribute to their discrimination, loss or devaluation of language and culture, marginalisation, lack of access to culturally appropriate care and services, and lack of recognition of skills and training<sup>(29)</sup>. Racism and discrimination have direct impacts on health and wellbeing, and indirect effects mediated through various forms of social and economic inequality<sup>(29)</sup>.

### 3. Education and training

Education increases our opportunities for choice of occupation and for income and job security, and also equips us with the skills and ability to control many aspects of our lives – key factors that influence wellbeing throughout the life course. Participation in schooling and/or training is also a major protective factor across a range of risk factors including substance misuse and homelessness.

Evidence shows that health also improves with increasing levels of educational achievement <sup>(4, 18)</sup>. Educational attainment and participation are also steeply graded according to socioeconomic position <sup>(4, 18)</sup>.

### 4. Employment and working conditions

For employed people, those who have more control over their work circumstances and fewer stress-related demands in their jobs are likely to be healthier <sup>(16)</sup>. Workplace hazards and injuries are significant causes of disability and related health problems <sup>(20)</sup>. Furthermore, those who do not have access to secure and satisfying work are less likely to have an adequate income; and unemployment and under-employment are generally associated with reduced life opportunities and poorer health and wellbeing.

### 5. The physical environment

Another significant determinant of wellbeing is the safety, quality and sustainability of our physical environment, which provides the basic necessities for life, such as clean air, water and food; and raw materials for clothing, shelter and industry. Features of the natural and built environments also provide different opportunities for safe recreation and play, transportation, work and housing. For example, a lack of access to transport or adequate housing is a risk factor for poorer health and wellbeing of people and their communities, as is pollution of the air, water or soil.

### 6. Social support networks

Better health and wellbeing are associated with access to support from families, friends and communities. Aspects of these shape our daily experience, and include individual and neighbourhood socioeconomic characteristics, a sense of connectedness, community norms, and spiritual and cultural beliefs and practices. These sources of support help people to deal with crises and difficulties as they arise, to maintain a sense of control over their lives, and to feel able to contribute as members of a community <sup>(22, 33)</sup>.

### 7. Early life factors

Early life is a time when we are particularly vulnerable to risk and protective influences <sup>(18)</sup>. Experiences at the beginning of life may be reflected in health and wellbeing outcomes during the middle and end of life. There is strong evidence of the effect of early life experiences on cognitive function, growth, the ability to learn, physical and mental health, and resilience in later life <sup>(18)</sup>. A life course view highlights the sequencing of events across an entire lifetime. There is also evidence for intergenerational effects; for example, the socioeconomic status of a child's grandfather may predict the child's cognitive and emotional development at 14 years of age <sup>(26)</sup>.

### 8. Individual behaviours and lifestyle factors

Our personal behaviours and practices can promote or compromise health and wellbeing. Factors such as physical activity, tobacco smoking, use of drugs and alcohol, food habits, exposure to chronic stress and gambling have obvious impacts. However, many of these lifestyle behaviours reflect decisions that are socially patterned by people's economic and social circumstances. People with lower incomes have access to fewer alternatives to help reduce stress and cope with life's challenges. As a result, they may be more likely to take up readily available and more economically accessible options, such as tobacco use <sup>(19)</sup>. Not surprisingly therefore, smoking behaviour is steeply graded according to socioeconomic status, resulting in those who are the most disadvantaged having the poorest smoking-related health outcomes <sup>(21, 24)</sup>. Not only does prevalence of smoking increase with socioeconomic disadvantage, the average number of cigarettes smoked per week also increases with disadvantage <sup>(25)</sup>.

### 9. Access to effective human services

The use of effective and appropriate services is a determinant of health and wellbeing, particularly the accessibility of preventive and primary health care services that are universally available, of high quality and culturally relevant. For certain populations who are socially marginalised, access to and availability of appropriate services continue to be important influences on their health and wellbeing. This requires the targetting of resources and services specifically to address their greater need.



## 10. Biologic factors and genetic inheritance

Genetic inheritance, the functioning of individual body systems, gender and the processes of growth and ageing are powerful determinants of health and wellbeing. A person's genetic endowment was once thought to be pre-determined and not amenable to change. However, recent evidence indicates that the ways that genes are expressed are shaped by a person's particular physical, psychological and social environment, and social relationships and environments may influence the expression of DNA throughout one's lifetime <sup>(22)</sup>.

### Key determinants and social inequalities

The factors and conditions that research has shown influence health and wellbeing do not exist in isolation from each other, but rather, function in an intricate web. As is evident above, many of the determinants overlap and more remains to be learned about specific determinants and the ways they influence our wellbeing.

A population-based approach considers the interconnectedness of determinants and mediating factors and their influences on health and wellbeing. For this reason, using a population approach means establishing strong links across many sectors and working together to take action to contribute to the community's health and wellbeing.

#### Housing, nutrition and health

The consequences of poverty are often poor nutrition; damp and inadequately heated housing; increased risk of infection and greater difficulty achieving optimal safety and hygiene <sup>(34)</sup>. Poor housing may be cold, damp, difficult to maintain or keep clean, and may contain dusts and moulds – conditions that are associated with wheezing, breathlessness, coughing, respiratory infections and asthma, especially in young children and older people.

If nutrition is poor, the risk of suffering respiratory infections and asthma in these conditions is increased. This is particularly significant for many disadvantaged Aboriginal families with children who live in remote areas, where the daily temperature range is large, and housing is inadequately constructed or maintained. Inferior housing conditions can also lead to other health hazards, such as a risk of fire or accidental injury.

However, attention must be paid to the nature of any action that is taken to improve the community's wellbeing, to ensure that social and economic inequalities are not increased. Some programs, by their very success, can widen the gap between groups in the population; for example, they may be more attractive to those who are already healthier, or not as effective for certain groups with poorer health, less education or other aspects of disadvantage.

In one smoking cessation initiative, it was found that the prevalence of smoking decreased predominately in those adults with higher education, thus increasing the existing difference with those who were more disadvantaged <sup>(30)</sup>. While smoking prevalence in Australia has reduced considerably over the last 20 years, attributes such as lower education and occupational status, unemployment, rented housing, and living in disadvantaged areas reflect a higher probability of reporting tobacco expenditure <sup>(37)</sup>. As a result, the tax revenue from the sale of tobacco products is being disproportionately drawn from the poorest households and represents a greater proportion of their household budget <sup>(37)</sup>.

#### Smoking and disadvantage over a lifetime

A significantly increased risk of starting to smoke has been observed among people from lower socioeconomic backgrounds. Low socioeconomic background in childhood also increased the risk of progressing to regular smoking, and was associated with a reduced likelihood of smoking cessation. Progressing to regular smoking and smoking persistence were also associated with lower adult socioeconomic background <sup>(36)</sup>.

It is also evident that the ways in which systems such as education and health are delivered and structured can increase existing inequality. For example, schooling can be a way of addressing inequality and also a way of reproducing it. It has been suggested that there are two goals for a social justice program in education: to work to eliminate the contribution that the education system makes to the production over time of social inequality in general; and to maximise the positive contributions that the education system makes to reducing social inequality <sup>(31)</sup>.

Therefore, different approaches and mixes of policies and programs must be mounted to address social inequalities. These approaches may include more precise targeting, but also greater attention to

community-based dimensions of 'interdependence' between individual behaviours, key determinants, and community and institutional resources.

In summary, there is now substantial evidence that wellbeing is the result of complex interactions of the social, biological and ecological environments in which people live <sup>(23)</sup>. If these environments are supportive, they provide a foundation for the development of competence and skills that underpin learning, behaviour and health throughout life <sup>(23)</sup>. However, a lack of enabling social and environmental conditions results in poorer life outcomes for people <sup>(18)</sup>.

This situation, however, is not inevitable. There is a growing body of knowledge that can provide direction for developing policies to reduce inequities in modern societies. The socioeconomic environment is a powerful and potentially modifiable factor and public policy is a key instrument to improve this environment, particularly in areas such as housing, taxation and social security, work environments, urban design, pollution control, educational achievement, and early childhood development <sup>(10)</sup>.

This focus on the environmental context of life in no way implies that other factors such as genetics, lifestyles or use of services do not figure in determining wellbeing; rather, this highlights a greater understanding in recent years of the hidden social factors that underpin differences in the likelihood of having a healthy and fulfilling life. There are a number of benefits that investing in a population approach offers: increased prosperity, because a well-functioning and healthy population is a major contributor to a vibrant economy; reduced expenditures on health, education and social problems; and overall community stability and wellbeing for South Australians.



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## Section 3

# Indigenous health and wellbeing

### In this section ...

- Introduction
- Background
- A definition of Indigenous health and wellbeing
- Indigenous disadvantage and social inequality
- Conclusion
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## Introduction

In South Australia, the substantially poorer health and wellbeing of Aboriginal people is well documented <sup>(1, 10)</sup>. Key social and economic indicators such as poverty, employment, housing, education, imprisonment and health show that Aboriginal people are at significantly higher risk of disadvantage compared with non-Aboriginal South Australians <sup>(1)</sup>. Clearly, Aboriginal people represent the most disadvantaged group in our community.

In order to understand Aboriginal health and wellbeing today, the impact of dispossession, colonisation, genocide, lost and stolen generations of families and the attempted decimation of the innumerable cultures of the peoples inhabiting Australia before 1770, must be accepted <sup>(2, 3)</sup>. Therefore, from a social and political perspective, for there to be a start to improving Aboriginal health and wellbeing, a process of reconciliation, that acknowledges the past in the light of the present, needs to be embraced across all the sectors of society <sup>(5)</sup>.

## Background

There are over 25,000 Aboriginal people living in South Australia, in a total population of just over 1.5 million South Australians <sup>(10)</sup>. Over half of the State's Indigenous population lives in urban areas.

The Indigenous population is growing rapidly when compared with the non-Indigenous population <sup>(11)</sup>. At 30 June 2001, the Indigenous population of South Australia had a median age of 20.8 years, compared to the non-Indigenous population with a median age of 37.8 years <sup>(1)</sup>. Thus, the Indigenous population has a much younger age profile than the rest of the population in South Australia. This is the result of higher birth rates and earlier age at death.

The recognition of the extent of disadvantage experienced by the Indigenous population has framed a number of new approaches in South Australia. *Doing it right* is the South Australian Government's policy framework for action: the Government's commitment to Aboriginal families and communities in South Australia <sup>(7)</sup>.

The *Doing it Right* policy framework:

- *recognises and respects Indigenous people as the original owners of this land with continuing rights and responsibilities associated with traditional ownership and connection to land and waters;*

- *acknowledges the impact on Indigenous people of dispossession from the land and traditional culture and the need for this to be understood by all South Australians as a basis for genuine reconciliation;*
- *respects the unique culture and customs of the traditional owners of the land and supports efforts to protect and promote cultural heritage as a cornerstone of family and community life;*
- *recognises that Aboriginal people represent the most disadvantaged group in our community;*
- *acknowledges that the high levels of poverty, unemployment and poor physical and mental health experienced by Aboriginal Australians are unacceptable and must be redressed if Aboriginal families and communities are to participate fully in the life of our state; and*
- *respects the cultural, social, political and economic rights of Indigenous peoples and affirms equity with other South Australians in citizenship entitlements and participation.*

Within this framework, the following goals are outlined:

- *That Aboriginal South Australians will have the same choices as other South Australians and the same opportunities to share in the social and economic advantages of living in our state.*
- *That all South Australians will continue to be enriched by Indigenous culture and values, with respect by the wider community based on a new understanding and mutual esteem.*
- *That engagement and partnership with Aboriginal communities will be the platform for sustained improvement in the well being of Aboriginal families.*

## A definition of Indigenous health and wellbeing

In this document, an extension of the definition proposed by the National Aboriginal Health Strategy (NAHS) Working Party in 1989 is used <sup>(6)</sup>:

*Not just the physical wellbeing of the individual but the social, emotional and cultural wellbeing of the whole community. This is the whole-of-life view and it also includes the cyclical concept of life-death-life.*

The NAHS definition notes that achieving health and wellbeing is an attribute of communities as well as of the individuals within a community; and it identifies cultural wellbeing, along with physical, social and emotional wellbeing, as equally important <sup>(4)</sup>.

Culture and identity are central to Aboriginal perceptions of health, ill health and wellbeing. Aboriginal cultures are numerous and diverse, made up of many different kinship and language groups that have adapted to diverse living conditions throughout Australia over thousands of years. These cultures are dynamic and evolving <sup>(17)</sup>.

The draft *Cultural respect framework for Aboriginal and Torres Strait Islander health 2003-2008* is an important framework for culturally effective mechanisms to strengthen relationships between the Australian health care system setting and Aboriginal and Torres Strait Islander peoples across Australia <sup>(17)</sup>. Together, the NAHS definition and the draft framework emphasise a holistic approach, and highlight the importance of many of the determinants also identified in the previous section of this document.

## Indigenous disadvantage and social inequality

In South Australia, inequalities exist for Aboriginal people at all ages and in all settings, and are the cumulative result of events experienced throughout a lifetime <sup>(1, 22)</sup>. These disparities are also interdependent, and have resulted in life-long disadvantage, inequity and discrimination.

It is clear that the effects of social inequality and dispossession have been profound for Aboriginal people in South Australia. The legacy of colonisation produced rapid and pervasive social and cultural change. The impact of this change has resulted in complex effects on health and wellbeing, some of which have been cumulative over generations <sup>(8, 9)</sup>. The resulting trauma, loss and disempowerment have contributed to the further erosion of culture and community, and undermined the holistic nature of Indigenous health and wellbeing as previously defined. Aboriginal and non-Aboriginal practitioners and scholars have long identified social inequality, racism and oppression as the key issues in Aboriginal wellbeing, including health <sup>(2, 4, 9)</sup>.

## Key indicators of Indigenous disadvantage

In April 2002, the Council of Australian Governments (COAG) agreed to commission the Steering Committee for the Review of Commonwealth/State Service Provision to produce a regular report against key indicators of Indigenous disadvantage. The Framework for reporting on Indigenous disadvantage was released in November 2003 <sup>(23)</sup>.

The Framework has three elements:

- priority outcomes;
- headline indicators; and
- strategic areas for action.

The Framework is expected to form a basis for the identification and reporting on Indigenous disadvantage across all government agencies.

The three priority outcomes provide a vision for a better life for Aboriginal and Torres Strait Islander people. They are not isolated outcomes, but interdependent upon each other. The first, 'Positive child development and prevention of violence, crime and self harm' are key determinants in the achievement of the second one, 'Safe, healthy and supportive family environments with strong communities and cultural identity'. Without these conditions in place, the potential to achieve the third, 'Improved wealth creation and economic sustainability' is impaired.

The following determinants of Aboriginal health and wellbeing have been included in this document. There is a strong thread of interdependence between them. For example, post-secondary educational attainment is linked to year 10 and 12 retention and attainment. These, in turn, are related to household income and employment, and so forth. None of these in isolation will achieve the priority outcomes mentioned above, but they have the capacity to impact positively on the existing cycle of Indigenous disadvantage.

### 1. Education and training

A range of issues affect participation in education and training by Aboriginal South Australians, including access to educational institutions, socioeconomic factors, and community expectations <sup>(1)</sup>. Government policies have been developed to address some of these issues.

In South Australia, Indigenous educational disparity is evident in lower school attendance rates, lower apparent retention rates in secondary school, lower completion rates in the Vocational Education and Training (VET) sector, and lower rates of participation in higher education <sup>(1)</sup>. It is recognised that, while there has been considerable progress to date to improve Indigenous educational achievements in South Australia, the level of educational disadvantage that Aboriginal people continue to experience is still too high <sup>(13)</sup>.

Cultural diversity and knowledge need to be valued more highly and made explicit in all educational settings <sup>(12)</sup>. This would encourage greater involvement of Aboriginal parents, caregivers and



community members in the education of their children <sup>(12)</sup>.

There are shortcomings with current models for monitoring educational outcomes, as they cannot capture all of the dimensions of schooling and are generally confined to that which is quantifiable. The recent shift to reporting on student outcomes through the national literacy and numeracy benchmarks, have highlighted the difficulties that many Aboriginal children continue to experience in achieving national standards, especially in the early years of schooling <sup>(12)</sup>.

Aboriginal students are much less likely to continue their education to the end of the compulsory years, and beyond. While apparent retention rates for Aboriginal students have improved since the 1980s, Aboriginal students were still less likely than all students to stay at school beyond the compulsory years in 2001 <sup>(1)</sup>.

Aboriginal people are also less likely to have completed higher levels of education and training. While Indigenous participation in the VET sector has increased in recent years, lower pass rates and higher withdrawal rates indicate that Aboriginal students have been less likely to be able to achieve successful VET outcomes, because of their relative disadvantage compared with their non-Aboriginal peers. In the higher education system, there has been a decline in the number of Aboriginal students who commenced higher education since 1998, and a decline in the total number of Aboriginal higher education students since 1999 <sup>(1)</sup>.

## 2. Income and socioeconomic position

Aboriginal people are widely recognised as belonging to a financially disadvantaged group. They have comparatively lower levels of income, which is a strong indicator that they are relatively disadvantaged in areas such as educational attainment, labour force activity, housing and health care.

As a group, the levels of income available to Indigenous people tend to be lower than those of non-Aboriginal people in comparable circumstances. In 2001, the median weekly personal income for Aboriginal people was \$214, compared to \$350 for non-Aboriginal people <sup>(18)</sup>.

Those who live in remote areas often have limited access to social services taken for granted by people living in urban areas. Many have to rely on government allowances as their major source of income, in the absence of employment opportunities <sup>(1)</sup>.

## 3. Labour force participation and employment

The economic wellbeing of an individual and their family is largely determined by their access to employment. Employment is also an important factor in the social status and privilege that an individual and their family enjoy in a community.

Aboriginal people in South Australia suffer significant economic disadvantage overall. When compared with the non-Indigenous population, Indigenous people have substantially lower levels of labour force participation and substantially higher levels of unemployment <sup>(1)</sup>. For example, in 2001, the Indigenous unemployment rate for the Adelaide metropolitan area was 22.2% – compared with 7.4% for the non-Indigenous population <sup>(18)</sup>. Youth unemployment levels are also considerably higher for Aboriginal people aged 15 to 24 years than for their non-Aboriginal counterparts.

## 4. Housing

While most people in South Australia live in single-family households, Aboriginal people are more likely than non-Aboriginal people to live in multiple family households, particularly in rural areas and Aboriginal communities where the properties are owned or managed by the community. Consequently, and particularly in these areas, Aboriginal households are more likely to contain a greater number of people.

Aboriginal people are less likely than other South Australians to own their homes. They are more likely to access their accommodation in the public rental sector, while non-Aboriginal people are more likely to own or be purchasing their home. This again reflects their greater economic disadvantage, and also highlights the presence of racial discrimination in sections of the private rental market <sup>(18)</sup>. A significant proportion of Aboriginal people rely on the South Australian Housing Trust, the Aboriginal Housing Authority and Aboriginal community or cooperative housing groups for their accommodation <sup>(1)</sup>.

Many Aboriginal people, especially those living in remote communities, do not have adequate quality housing, reliable supplies of water and electricity or adequate sewerage and drainage systems, all of which are relevant to health and wellbeing <sup>(10)</sup>.

## 5. Justice

Aboriginal people's involvement in the criminal justice system both contributes to, and is fuelled by economic and social disadvantage <sup>(18)</sup>. Aboriginal people have a higher rate of contact with the criminal justice system than non-Aboriginal people, both as offenders and victims, and they are also over-represented in the prison system <sup>(1)</sup>. Although

Aboriginal people represent 1.49% of the total adult population in South Australia, approximately 17% of the prison population is Aboriginal; and 95% of those Aboriginal people coming into prison have been previously involved in the juvenile justice system <sup>(21)</sup>.

Over the last decade, imprisonment rates in South Australia have been at least 15 times greater for the Aboriginal population than the non-Aboriginal population <sup>(11)</sup>. In 2000, a quarter of all SA 'prison receptions' - for remand, fine default or after sentencing - were Aboriginal people (self-identified). Of these, 527 were male and 75 were female. The majority was aged between 20 and 34 years <sup>(20)</sup>. However, in the last 12 months, there has been a slight reduction (2.0%) in the number of Aboriginal people going to prison in the State <sup>(11)</sup>.

There are complex reasons for these high rates of contact with the criminal justice system, reflecting the history and life experiences of South Australia's Aboriginal people, as well as policing and judicial practices <sup>(1)</sup>. Factors that increase the likelihood of offending behaviour include low income, high unemployment, low educational achievement, racism and discrimination and other social issues.

## 6. Health

There are considerable differences between the health of Aboriginal and non-Aboriginal South Australians. Aboriginal people do not live as long, and their life expectancy at birth is about 20 years less than for other South Australians <sup>(1)</sup>. Aboriginal people also experience a greater burden of ill health when compared with non-Aboriginal Australians <sup>(10, 22)</sup>.

Aboriginal people are more likely to die at younger ages than other South Australians, and the death rates for Aboriginal people are estimated to be more than three times those for non-Aboriginal people <sup>(1)</sup>.

Over the last decade, the Indigenous infant mortality rate has been well above that of the total South Australian population. Babies of Aboriginal mothers are also more than two and a half times as likely to be of low birthweight than babies born to non-Aboriginal mothers.

In the South Australian Indigenous population, there is a significantly higher prevalence of diseases such as diabetes, hypertension, and a range of communicable diseases <sup>(14)</sup>. Rates of non-fatal self-harm, mental illness and substance use are also higher <sup>(15)</sup>.

Aboriginal people also experience higher levels of interpersonal violence. For example, rates of hospitalisation in 2000–01 for injury or poisoning were 1.9 times higher for Aboriginal males and 2.4 times higher for Aboriginal females, compared with non-Aboriginal males and females respectively <sup>(10)</sup>. Aboriginal children are more likely than non-Aboriginal children to be notified for child abuse and neglect. The reasons for this are complex but reflect, in part, the legacy of colonisation and the stolen generations, and the greater socioeconomic disadvantage suffered by Aboriginal families.

The health and wellbeing of Aboriginal South Australians is also more likely to be affected by exposure to environmental risk factors such as poor housing and inadequate environmental infrastructure <sup>(22)</sup>. Many Aboriginal people in remote communities do not have access to the same range and cost options for healthy food as non-Aboriginal South Australians <sup>(10)</sup>. The ability to store and prepare fresh food is also limited by the lack of adequate facilities and infrastructure such as kitchens, storage facilities, and a reliable source of electricity <sup>(10, 22)</sup>. Thus, there is an urgent need to improve standards of environmental health, including housing and essential services, in these Aboriginal communities <sup>(22)</sup>.

## 7. Early life factors

As indicated previously, early life factors and experiences influence cognitive function, growth, the ability to learn, physical and mental health, and resilience in later life, and may also have intergenerational effects.

The extent of social disadvantage experienced by Aboriginal communities and by individual families impacts significantly on their youngest and most vulnerable members. Factors such as low birthweight, failure to thrive and the effects of emotional and physical neglect and abuse can have serious consequences for children's development and wellbeing <sup>(22)</sup>. Parents in communities experiencing such adversity may suffer high rates of emotional distress that can also impact significantly on their children <sup>(22)</sup>.

Many of these factors highlight the extent of social disadvantage experienced by Aboriginal families, and the longer-term consequences for their children's health and wellbeing.



## Conclusion

Compared with the majority of non-Aboriginal South Australians, Aboriginal people are substantially disadvantaged.

The relatively poorer health and wellbeing outcomes for Aboriginal people are the result of a complex set of interacting factors, one of the most important of which is colonisation. Social factors such as income, education and employment combine with risk factors such as poor living environments, poor nutrition, excessive alcohol consumption, smoking and lack of physical activity. Other factors include the pervasiveness of loss and grief, and the impact of racism and discrimination.

Aboriginal South Australians experience lower incomes than the non-Aboriginal population, higher rates of unemployment, poorer educational outcomes and lower rates of home ownership, all of which impact upon a person's health and sense of wellbeing. There is also evidence that Indigenous populations suffer a disproportionate impact from both increased exposures to environmental hazards and decreased access to environmental health services <sup>(22)</sup>. Aboriginal people are more likely to live in conditions considered to be unacceptable by general Australian standards. This includes overcrowding, poorly maintained buildings, high housing costs relative to income <sup>(16, 18)</sup>, and a lack of basic environmental health infrastructure, such as adequate sanitation, water supplies and appropriate housing.

This situation is clearly inequitable, and there is an urgent need to decrease the profound inequalities experienced by Aboriginal South Australians.

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## Section 4

### Indicators of health and wellbeing

**In this section ...**

- Introduction
- The value of indicators
- List of indicators
- Indicators – in detail

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## Introduction

Information is presented in the following section to describe the social determinants of the health and wellbeing of the South Australian population. In particular, the aim is to identify inequalities that exist between different population groups and areas of Adelaide and the rest of the State.

The information, presented as a series of indicators of inequality, highlights these inequalities and draws attention to the influence of social, economic and environmental factors on health and wellbeing. The ensuing picture is one of significant differences across the population.

## The value of indicators

One way to gauge the impact of social, economic and environmental factors on health and wellbeing is to track selected indicators over time. The tracking of indicators of inequality and the dissemination of information about them can support progress towards a shared goal of reducing inequalities.

The indicators are therefore important for:

- informing people about health and social issues;
- monitoring the health and level of wellbeing of the population, to describe its current state and to identify change, both between groups in the population, and over time;
- assessing progress toward goals or achievement of policy objectives.

These purposes suggest that indicators need to:

- reflect the values and goals of those who will use and apply them;
- be accessible and reliably measured in all of the populations of interest;
- be easily understood, particularly by those people who are expected to act in response to the information;

- be measures over which we have some control, individually or collectively, and are able to change; and
- move people and communities to action.

## Quality and availability of indicators

The indicators presented in this document are those for which reliable data are available, in particular data which can be mapped to show variations by area, across Adelaide and South Australia.

In some cases, data are not available to show trends over time, or variations between population groups, for some aspects of the social, economic and environmental factors that we wish to show. In others, the data are not what we would choose to present, but are the best available.

For example, the second indicator is low income families. Ideally, the income would be adjusted (equivalised) for family size and composition because, on the whole, an older couple with no dependent children will have lower living costs than a young couple or single parent with dependent children. We would also like to have an indicator of wealth, as income is only one, albeit an important, measure of economic wellbeing. However, neither wealth nor equivalised income data are available in a form suitable for showing variations between population groups (for which we need small area data).

Despite these limitations, the income data that are available provide a useful and reliable guide to variations between groups in the population. This is the case for many data items that have limitations when used as measures for individuals, but can prove to be reliable indicators when aggregated for groups in the population.

We would have liked similar information on a range of factors that impact on health and wellbeing, some examples of which are given in **Table 1**. At this stage, there are no small area datasets that reliably describe these factors.

**Table 1: Examples of potential indicators, for which suitable data were not available**

Topic	Potential indicators and their relevance
Physical environment	Air quality; levels of noise, dust (including from industry)
Refugees	Language competency; emotional and health issues
Social support, social networks	Ability to borrow money in a crisis; levels of trust among individuals or within specific neighbourhoods
Interpersonal violence	Levels of domestic and other forms of violence; impact on quality of life
Levels of adult literacy	Reading/writing levels: ability to read instructions, labels
Disability	Levels of different forms of disability; impact on quality of life
Financial stress	Levels of personal and household debt
Smoking, alcohol, other drugs	Levels of use indicating health risk; impact on personal finances
Housing quality	Availability of electricity, running water; insulation in houses
Work environment	Sickness absence from work; sense of control over work; extent of effort-reward balance or imbalance; job security

## Presentation of the indicators

In the remainder of this section, for each indicator, there is an introductory statement of the relevance of the indicator to health and wellbeing. This is followed by a discussion under the following headings, as the data allows:

- Key points
- Trend
- Geographic variations
- Socioeconomic status
- Indigenous profile

Variations in the data by sex, age, Indigenous status and socioeconomic status are included as appropriate and where data are available. Comparisons are also made with data for Australia as a whole.

**Note:** For ease of reading, the area of the State outside of Adelaide is referred to as 'country South Australia', or 'the country'. The authors acknowledge that this general term includes a wide range of areas, from towns as large as Mount Gambier and Whyalla, with more than 20,000 people, and as small as the settlements of Iron Knob and Spalding, with just over 200 people; as well as the rural, remote and very remote parts of the State.

Readers should also note that the map for South Australia has been reduced in size. Part of the northern and western area has been cut off – truncated – to allow the remainder of the State, where there are more separate areas to map, to be shown more clearly. See the notes pages in the Appendix for details of the area truncated.

## Explanatory information and data sources

The indicators presented here are supported by explanatory information in the Appendix. This additional information is generally too extensive to include under each topic. However, it is relevant to an understanding of the limitations of the data. The Appendix also includes details of the source(s) of the data presented.

### How best to read the data and maps

#### How can I best find out about the population in the area where I live/ work?

Some readers will want to identify a particular area, e.g., where they live or work, to see how it compares with other areas across the indicators.

The key map at the end of the report allows one to find a geographic area of interest. Although the maps are small, the areas are large enough to follow from page to page, noting the location and size of the variations.

#### What are the predominant patterns in the data across Adelaide or country areas?

Other readers will want to get an overview of the distribution of the population across all indicators, or across a particular range of indicators.

The distribution of the population in Adelaide is such that this is easy, with many of the maps showing a distinctive pattern. For country areas, it may be helpful to identify the names of the towns mapped as circles to assist in understanding the overall patterns. Again, the key maps at the end of the report will be useful.

## List of indicators

Topic	Indicator	Page
<b>Disadvantage:</b>	Summary measure of socioeconomic disadvantage	31
<b>Income:</b>	Low income families	33
	Children living in low income families	35
<b>Education:</b>	School retention and participation	37
<b>Labour force:</b>	Participation	41
	Unemployment	43
<b>Transport:</b>	Dwellings without a motor vehicle	45
<b>Housing costs:</b>	Rent assistance	47
<b>Crime:</b>	Offences involving apprehension	51
<b>Gambling:</b>	Expenditure and losses	53
<b>Health and wellbeing:</b>	Self reported health status	55
	Life expectancy	57
	Smoking during pregnancy	59
	Low birthweight babies	61
	Child abuse and neglect	63
	Overweight and obesity in childhood	67
<b>Access to services:</b>	Outside school hours care	69
	Booking lists for non-urgent surgery	71
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	Consumption of fruit and vegetables	73

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# Disadvantage: Summary measure of socioeconomic disadvantage

The ABS Index of Relative Socio-Economic Disadvantage is a useful summary indicator of disadvantage for population groups across the State. This summary measure provides an overview of many of the indicators of social inequality, which appear on subsequent pages.

## Key points

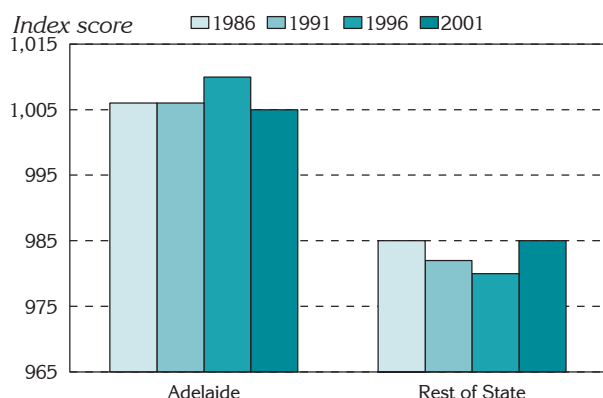
- The map of the Index of Relative Socio-Economic Disadvantage scores clearly shows the marked difference between areas in Adelaide with the highest, and those with the lowest, socioeconomic status.
- The index values also show the relatively greater levels of disadvantage in country areas compared with Adelaide.

The 2001 Index of Relative Socio-Economic Disadvantage (IRSD) includes all variables collected in the 2001 Population Census that either reflect or measure disadvantage. These include low income, low educational attainment, high unemployment, jobs in relatively unskilled occupations and variables that reflect disadvantage, rather than measure specific aspects of disadvantage (e.g., Indigenous status and separated/divorced).

## Trend

Index scores in Adelaide are considerably higher than those in country South Australia. Scores in Adelaide were the same over the first two Censuses (1986, 1991), with a small increase in 1996 before returning to its previous level (Figure 2). For country South Australia, the IRSD score declined marginally between 1986 and 1996, before returning to the 1986 level of 985.

**Figure 2: Index of Relative Socio-Economic Disadvantage, 1986 to 2001**



The index score for South Australia revealed a marginally higher level of socioeconomic disadvantage relative to the Australian average.

## Geographic variation

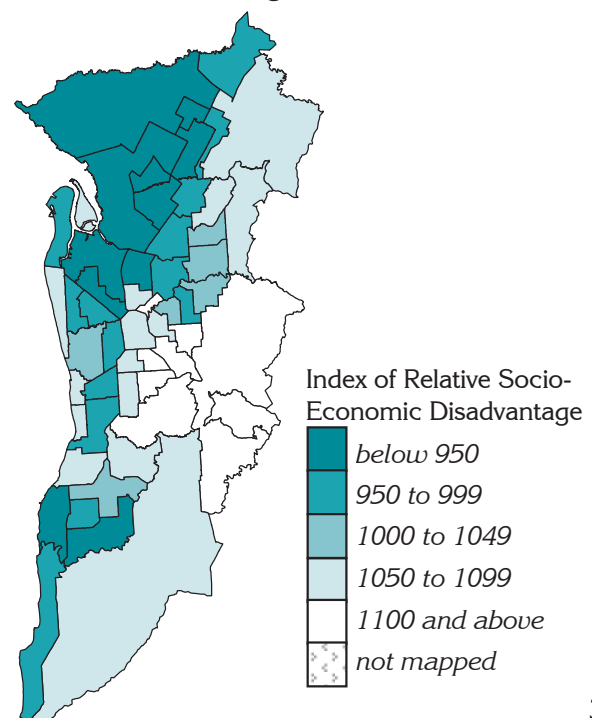
### Adelaide

The overall pattern of distribution of index scores within Adelaide shows the least disadvantaged areas in 2001 were situated to the east and south of the city, while the most disadvantaged areas were to the north-west, north and in the outer south (Map 1). This is a pattern seen throughout this report.

The highest index scores (indicating the least disadvantaged areas) are in Burnside - South-West (1122), Adelaide Hills - Ranges (1120), Adelaide Hills - Central (1118), Burnside - North-East (1117) and Mitcham - North-East (1116).

Relatively low scores, indicating the most disadvantaged areas, are in Playford - West Central (762), Port Adelaide Enfield - Port (799), Playford - Elizabeth (807), Port Adelaide Enfield - Inner (886), Salisbury - Inner North (891) and Salisbury - Central (897).

**Map 1: Index of Relative Socio-Economic Disadvantage, Adelaide, 2001**

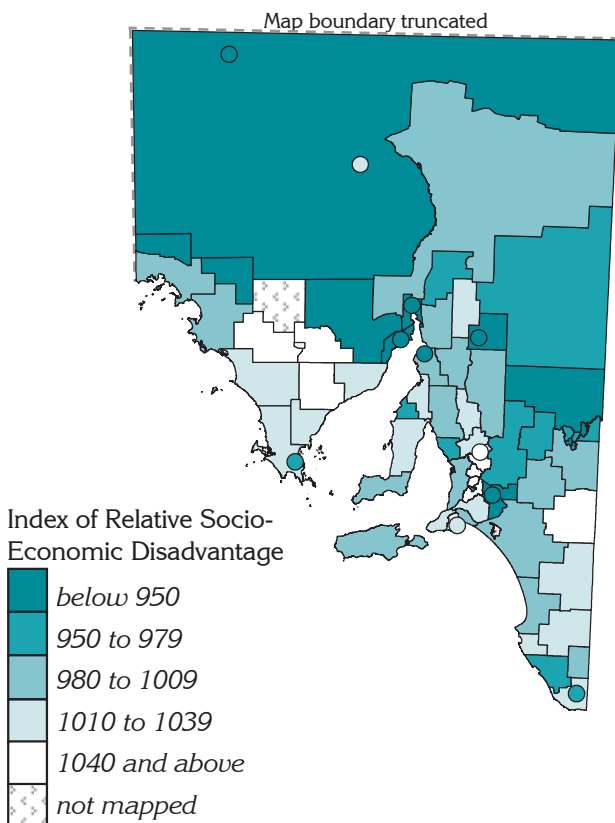


## Country South Australia

Outside of Adelaide, the most disadvantaged areas are located in the north of the State (**Map 2**), with scores of below 900 recorded in Unincorporated Riverland (680), Unincorporated Whyalla (809), Unincorporated Far North (816), Unincorporated West Coast (881) and Peterborough (895).

The least disadvantaged areas (highest index scores) are located on the urban fringe in Adelaide Hills - North (1079), Mount Barker Balance (1057) and Adelaide Hills Balance (1052) and Barossa - Barossa (1046); and in Kimba (1049).

**Map 2: Index of Relative Socio-Economic Disadvantage, South Australia, 2001**

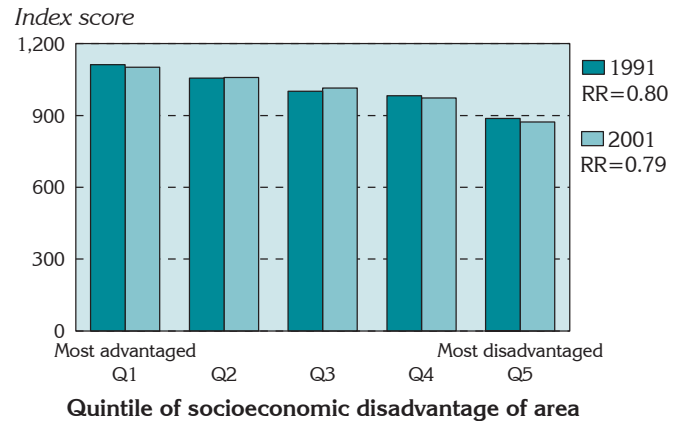


## Socioeconomic status

### Adelaide

The average score in 2001 for the most advantage areas (Quintile 1) was 1102, decreasing for each quintile to a score of 873 in the most disadvantaged areas, a drop of 21% (**Figure 3**). Since 1991, the index scores have changed marginally across the quintiles, resulting in a minor drop in the ratio of scores between the most disadvantaged and most well off areas, from 0.80 to 0.79.

**Figure 3: Index of Relative Socio-Economic Disadvantage, Adelaide, 1991 and 2001**

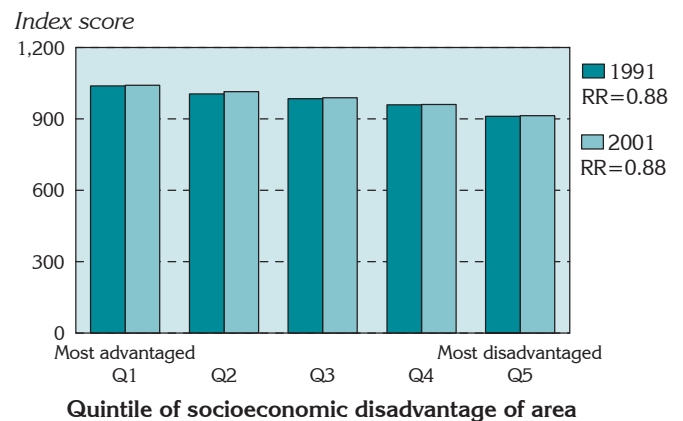


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Country South Australia

The Index of Relative Socio-Economic Disadvantage show less variation in country South Australia, from a score of 1041 in the most advantaged areas to 914 in the most disadvantaged areas, a drop of 12% (**Figure 4**). Since 1991, the index scores have increased marginally, although the ratio of rates between the most disadvantaged and most well off areas, remains unchanged.

**Figure 4: Index of Relative Socio-Economic Disadvantage, country South Australia, 1991 and 2001**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

# Income: Low income families

*Income is among the most important individual-level determinants of wellbeing. People with a higher income generally enjoy better health and longer lives than people with a lower income.*

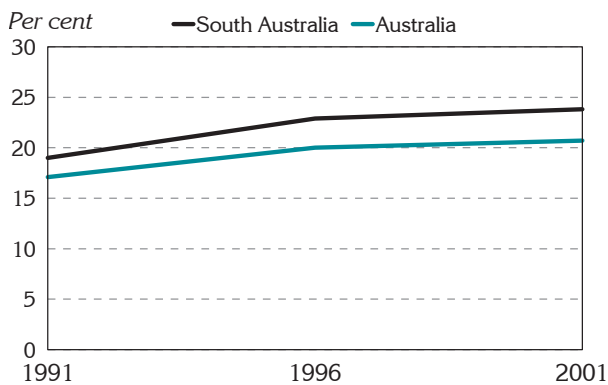
## Key points

- Almost one quarter of families at the 2001 ABS Census had incomes of below \$26,000 per year (\$500 per week). This is an increase from under one fifth in 1991.
- There are more low income families in the country than in Adelaide.
- The distribution of low income families varies strikingly within Adelaide and across the State.
- The proportion of low income families in South Australia is above the Australian average.

## Trend

Over the last ten years, the proportion of low income families in South Australia has increased steadily, from 19.0% of all families in 1991, through 22.9% in 1996, to 23.8% in 2001 (**Figure 5**)<sup>1</sup>. The proportion of low income families in Australia is lower, but has also increased, from 17.1% in 1991 to 20.7% in 2001.

**Figure 5: Low income families, South Australia**



## Geographic variation

### Adelaide

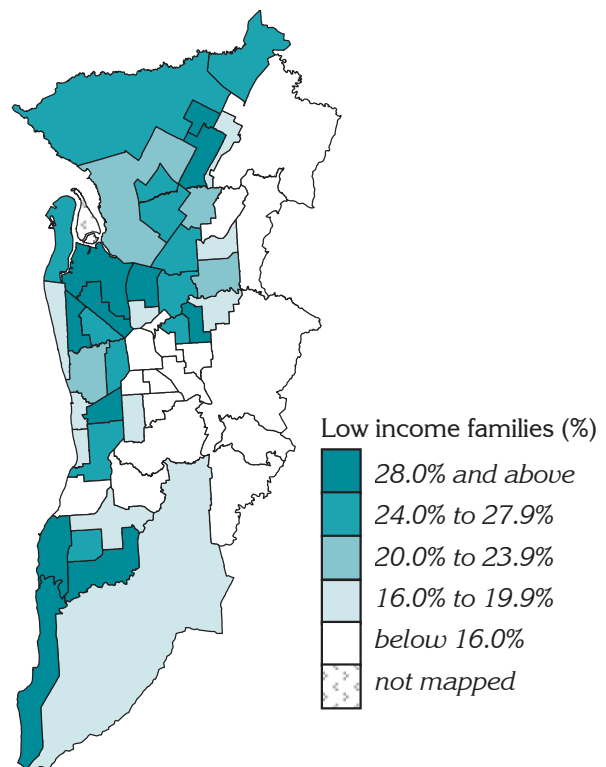
In 2001, high proportions of low income families were largely found in the city's inner northern and north-western suburbs, as well as in the outer north and south (**Map 3**): this distinctive pattern of distribution is seen in many of the following maps.

More than 30% of families living in Playford - Elizabeth, Playford - Central West, Port Adelaide Enfield - Port, Port Adelaide Enfield - Inner and Onkaparinga - North Coast were receiving an income of below \$26,000 per year. Some of these areas are at some distance from centrally-located

specialist services (in health, education, etc.), with transport costs placing an additional burden on already low incomes.

Areas with relatively low proportions of low income families are predominantly in the inner, eastern, south-eastern and north-eastern parts of Adelaide, with Burnside - South-West, Adelaide Hills - Central, Adelaide Hills - Ranges and Onkaparinga - Reservoir all with proportions of below 13.0%.

**Map 3: Low income families, Adelaide, 2001**



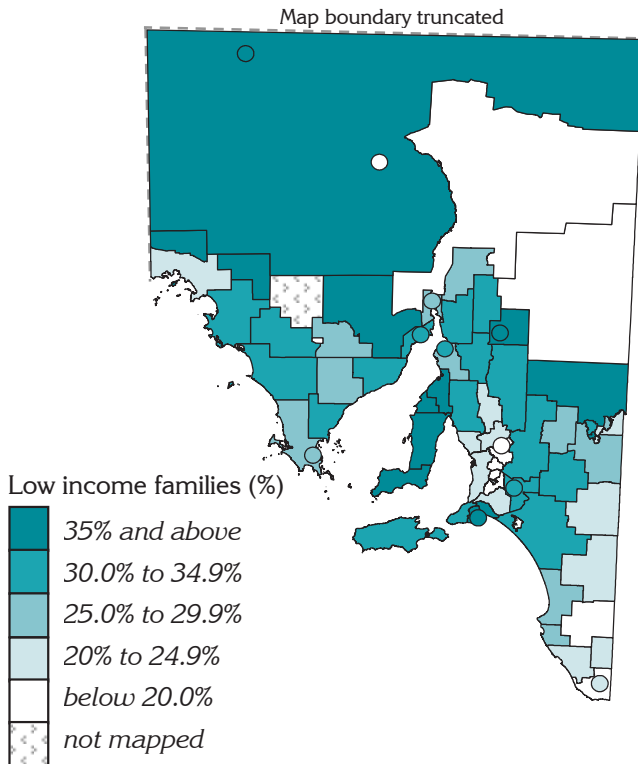
### Country South Australia

Relatively high proportions of low income families are found on Yorke Peninsula, and in the State's far north and mid north regions (**Map 4**). The highest proportions were recorded in the Unincorporated Whyalla (with 50.0%), Peterborough (45.2%), Yorke Peninsula - South (44.3%) and Unincorporated Riverland (40.6%).

<sup>1</sup> The income level used varies over time: see the Appendix for details.

Low proportions of low income families were recorded in areas surrounding Adelaide, in the north-east of the State and in the south-east. The lowest proportion, of 3.2%, was recorded for families in the mining centre of Roxby Downs.

**Map 4: Low income families, South Australia, 2001**



## Socioeconomic status

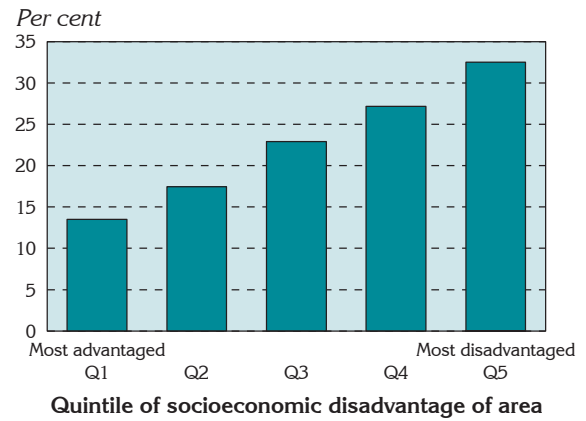
### Adelaide

The proportion of low income families in Adelaide increases by socioeconomic status of area<sup>2</sup>. The lowest proportions are in the most advantaged areas (Quintile 1, with 13.1% of families receiving a low income) and highest in the most disadvantaged areas (Quintile 5, with 32.5%) (Figure 6).

For example, there were two and a half times more low income families in the most disadvantaged areas in Adelaide when compared with the most well off areas.

<sup>2</sup> Areas in Adelaide have been ranked by socio-economic status and allocated to one of five groups (quintiles). A similar grouping has been produced for country South Australia. See the Appendix for more details.

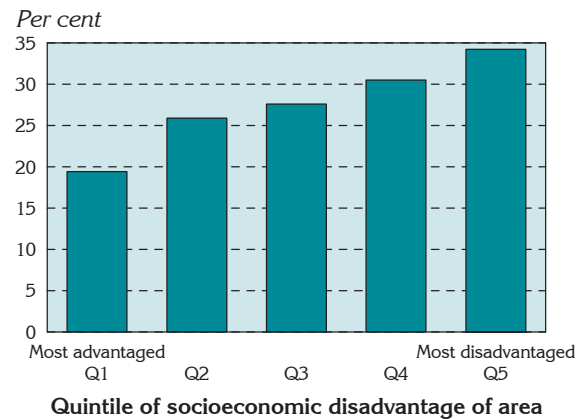
**Figure 6: Low income families, Adelaide, 2001**



### Country South Australia

A strong socioeconomic gradient (see footnote 2, above) is also evident across the State, from the lowest rate of 19.4% in the most advantaged areas to a high of 34.2% in the most disadvantaged areas (Figure 7). This is 1.8 times higher than in the most disadvantaged areas.

**Figure 7: Low income families, country South Australia, 2001**



Low income families living in the country can be particularly disadvantaged by the costs of transport and accommodation when accessing specialist services only available in Adelaide.

### Indigenous people

At the 2001 Census, the median weekly personal income of Indigenous people in South Australia was \$214. This is substantially (38.9%) less than the median weekly income of non-Indigenous South Australians (\$350). It is also falling further behind, having increased by 25.1% since 1991, compared with an increase of 41.7% for non-Indigenous people.

Indigenous households (as distinct from individuals) in South Australia recorded a median weekly income of \$555 compared with a median of \$676 for all other households. These lower levels of income are indicative of the limited resources available to many Indigenous people.

## Income: Children living in low income families

*Children living in families either solely or largely dependent on government for their income have the least access to income and other resources, and are more likely to face lower achievements in education and to have poorer health outcomes.*

### Key points

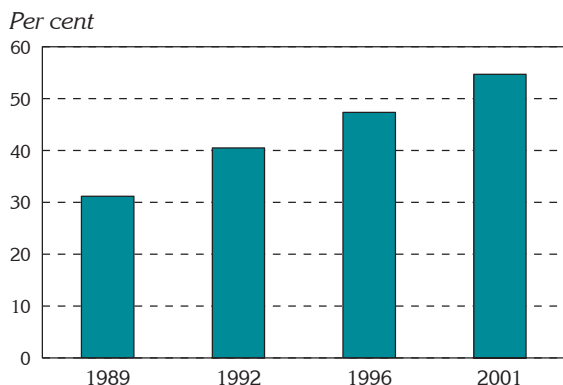
- In 2001, more than half of the children in South Australia aged under 16 years were living in families receiving government income support, with a higher proportion in country areas than in Adelaide.
- This is almost one third (29.1%) higher than in 1992.
- The distribution of children in these low income families across Adelaide and country South Australia is consistent with that for other indicators of disadvantage.

### Trend

Both the number and proportion of children aged under 16 years in South Australia living in families receiving an income support benefit or payment<sup>3</sup> have increased substantially since 1989 (Figure 8).

While the proportion rose from 31.2% in 1989 to 51.9% in 2001, the numbers have also increased, from 99,076 children to 167,674 children.

**Figure 8: Children living in low income families, South Australia**

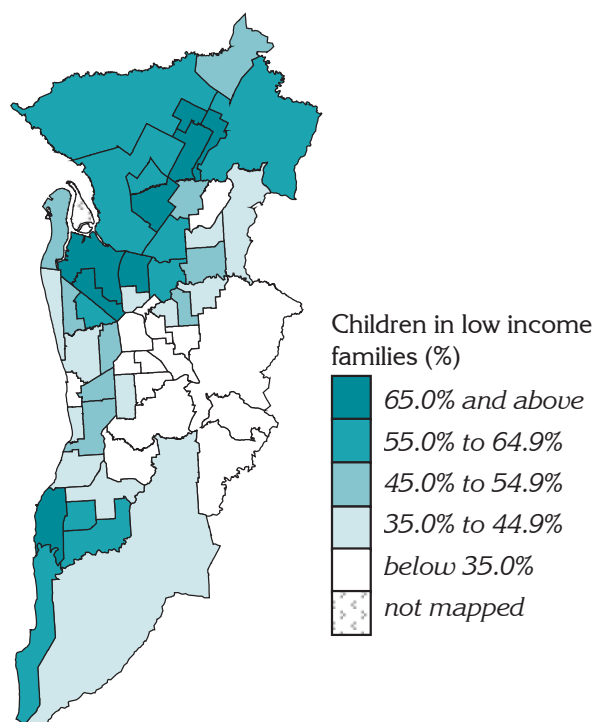


### Geographic variation

#### Adelaide

The highest concentrations of children under 16 years of age living in low income families are in areas located in the outer north and outer south of Adelaide, as well as in the north-western suburbs (Map 5). The highest proportions are in the northern areas of Playford - Elizabeth (with 77.2%) and Playford - West Central (73.6%); in the southern areas of Onkaparinga - North Coast (74.3%); and in the north-west in Port Adelaide Enfield - Port (73.4%) and Port Adelaide Enfield - Inner (70.2%).

**Map 5: Children living in low income families, Adelaide, 2001**



#### Country South Australia

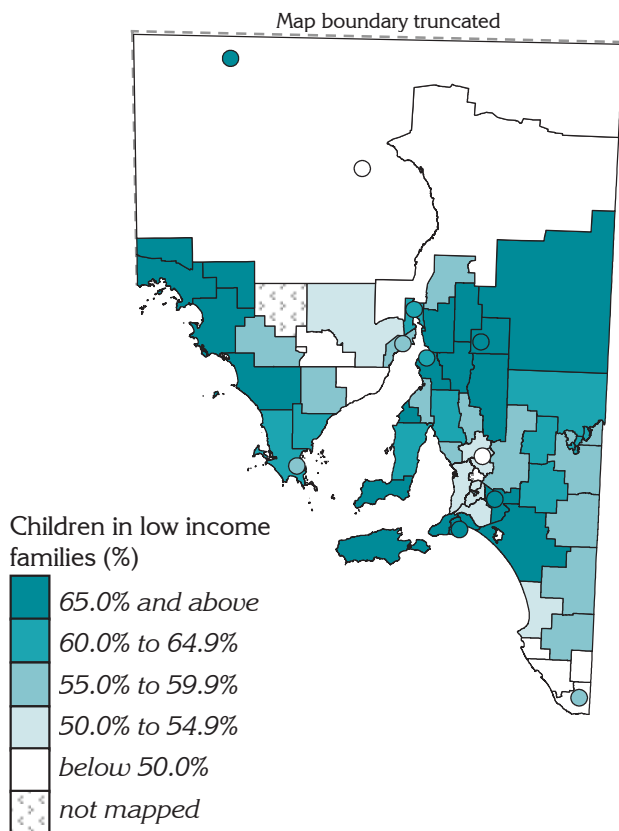
Outside of Adelaide, the highest proportions of children in families receiving an income support payment are in Orroroo/ Carrieton (85.9%), Peterborough (M) (80.1%), Coober Pedy (79.1%), Ceduna (78.7%), Unincorporated West Coast (78.6%), Yorke Peninsula - South (75.6%) and The Coorong (75.2%). These are exceptionally high proportions and, as for Adelaide, indicate particularly high levels of disadvantage in these communities.

The lowest proportions of children under 16 years of age living in families receiving an income support payment in 2001 were generally located in the south-east or far northern and western areas of the State (Map 6). Areas in the far north and west include Roxby Downs (9.2%), Kimba (42.6%), Unincorporated Far North (47.2%) and Franklin Harbor (48.6%).

<sup>3</sup> The income support payments are the Sole Parent or Disability Support Pension; unemployment, sickness or special benefits; or the Family Tax Benefit B.

Note that the details of the number of children in families receiving benefits under the Community Development Employment Project scheme (the employment scheme for Indigenous people) are not available. Their exclusion substantially reduces the rates in the most remote areas of the State.

**Map 6: Children living in low income families, South Australia, 2001**

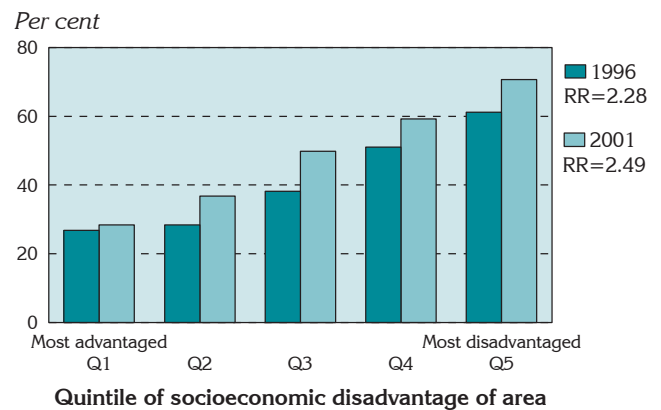


## Socioeconomic status

### Adelaide

In 2001, almost three quarters of children aged under 16 years in the most disadvantaged areas (Quintile 5, comprising one fifth of Adelaide's children at these ages) of Adelaide were living in families receiving income support (70.7%), compared with just over a quarter in the most advantaged areas (Quintile 1, 28.4%). That is, there were almost two and a half times more children in low income families in the most disadvantaged areas (Figure 9). This is a larger gap than in 1996.

**Figure 9: Children living in low income families, Adelaide, 1996 and 2001**

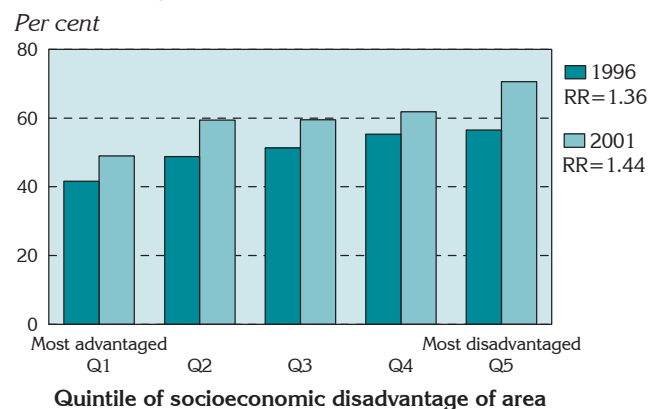


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

### Country South Australia

There is a smaller difference in the proportions of children in the most disadvantaged and advantaged areas in the country than in Adelaide (Figure 10). As is the case in Adelaide, the gap between the most advantaged and disadvantaged areas has widened, to 44%, up from 36% in 1996.

**Figure 10: Children living in low income families, country South Australia, 1996 and 2001**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.



## Education: School retention and participation

*Education increases opportunities for choice of occupation and for income and job security, and also equips people with the skills and ability to control many aspects of their lives – key factors that influence wellbeing throughout the life course. Participation in schooling is also a major protective factor across a range of risk factors including substance misuse and homelessness.*

### Key points

- Participation in full-time secondary school education drops markedly from age 15, with a more substantial decline among students living in the most disadvantaged areas; students living in these areas also have lower participation rates at age 16.
- Fewer than three quarters of students in Year 10 stay on to Year 12.
- Young people completing Year 12 are more likely to make a successful initial transition to further education, training and work than early school leavers.

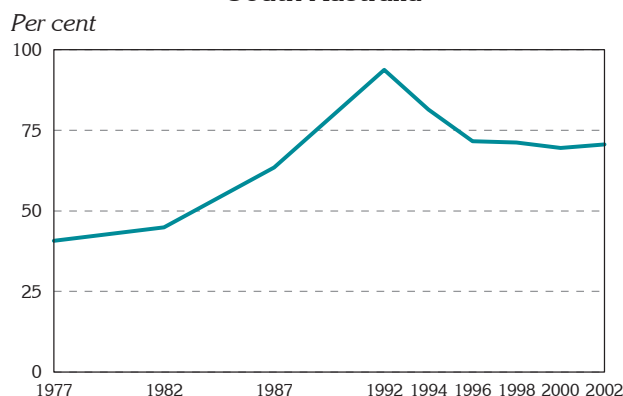
## Trend

### School retention rates

The estimated proportion of full-time Year 10 students who stay on to Year 12 (the apparent retention rate: see 'Notes on the indicators' in the Appendix) increased from 40.7% in 1977 to 93.8% in 1992, before dropping to 81.5% in 1994 and to 71.6% in 1996. Since 1996, the rate has remained near the 2002 figure of 70.6% (the comparable Australian rate is 77.0%) (Figure 11).

The two major reasons influencing low retention rates are: firstly, that young people leave in response to a fear of failing at school. Secondly, they leave school early when there is the possibility of gaining any form of employment, particularly in marginal regional economies and at times when the job market is less certain. Longitudinal research suggests that those who leave school early to enter full-time work that is satisfying and offers a career pathway have better labour market outcomes than those early school leavers who do not find full-time employment quickly or become unemployed.

**Figure 11: Apparent school retention rates, Year 10 to Year 12 full-time students, South Australia**



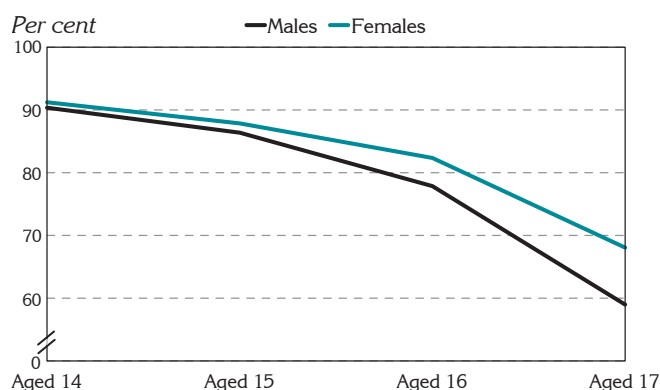
Young people completing Year 12 are more likely to make a successful initial transition to further education, training and work than early school leavers.

### School participation rates

The participation of males and females in full-time secondary education decreases with age (Figure 12).

At age 14, both male and female rates are similar (90.3% and 91.2%, respectively). However, the rates decline (more steeply for males than for females) to 77.9% for males and 82.3% for females at age 16: by age 17 the rates are 59.0% and 68.1%, respectively.

**Figure 12: Full-time participation in secondary school education, by age and sex, South Australia, 2001**



However, the higher participation of girls in secondary school education does not result in better labour market outcomes for all females. Males are more likely than females to be in training schemes leading to full-time work (e.g., apprenticeships), or in full-time work, and are less likely than females to be permanently in part-time employment or to be out of the labour force altogether. They are also more likely to be registered in the official unemployed category.



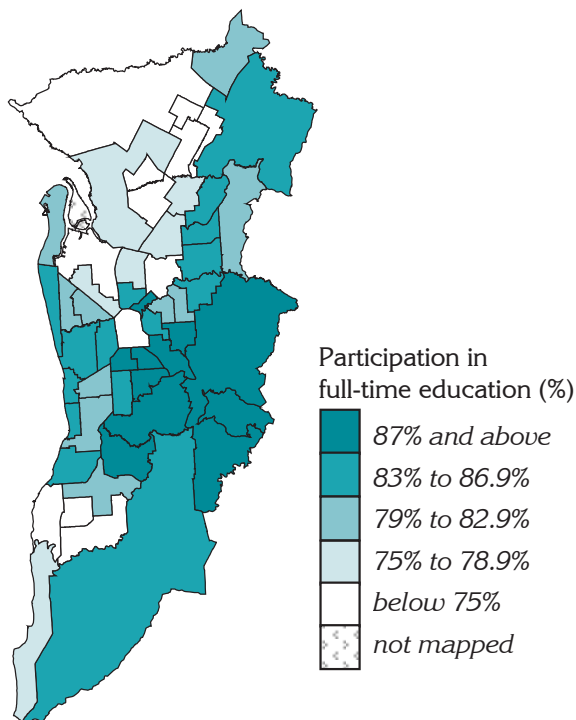
## Geographic variation: school participation rates

### Adelaide

The areas with the lowest full-time secondary school participation rates at age 16 are those commonly seen as among the most disadvantaged in Adelaide (**Map 7**). They include Playford - Elizabeth (60.6%), Playford - West Central (62.1%), City of Adelaide (65.5%), Salisbury - Inner North (71.6%) and Salisbury - Central (72.6%).

Areas with the highest levels of full-time participation at age 16 are Unley - West (91.9%), Burnside - South-West (91.1%), Mitcham - North East (91.1%), Burnside - North-East (90.8%) and Adelaide Hills - Ranges (90.2%).

**Map 7: Full-time participation in secondary school education at age 16, Adelaide, 2001**



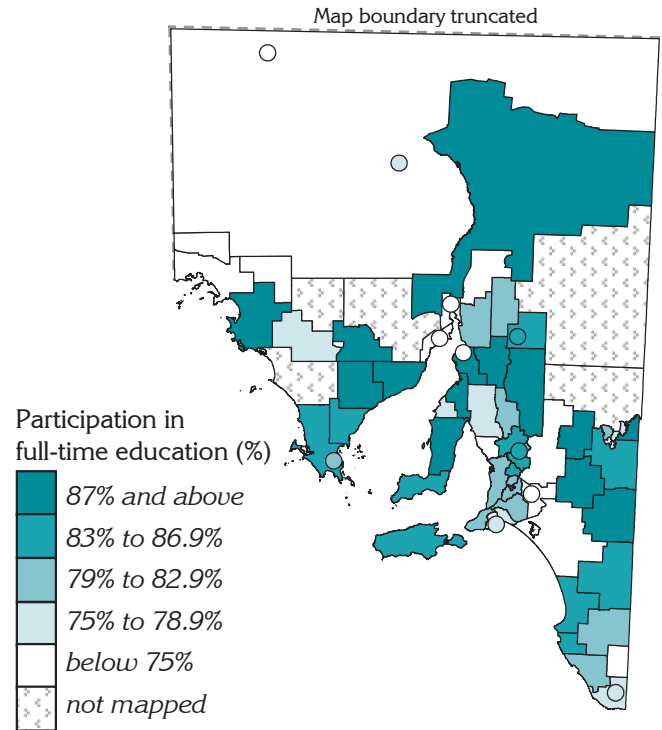
Many of the areas with the lowest full-time participation rates are also areas of high unemployment, and low access to further education and training, and to tertiary education. This also applies to those areas with the lowest participation rates in country.

### Country South Australia

Areas outside of Adelaide (with more than 20 students aged 16) with the lowest full-time secondary school participation rates at age 16 are Unincorporated Far North (27.5%), Coober Pedy (53.1%), Ceduna (58.5%), Wattle Range - East (68.6%), The Coorong (69.6%) and Port Augusta (70.3%) (**Map 8**).

In areas with more than 20 students aged 16, the highest full-time participation rates were in Barunga West (93.8%), Port Pirie Balance (91.9%), Northern Areas (89.9%), Loxton Waikerie - West (89.3%) and Goyder (89.1%).

**Map 8: Full-time participation in secondary school education at age 16, South Australia, 2001**

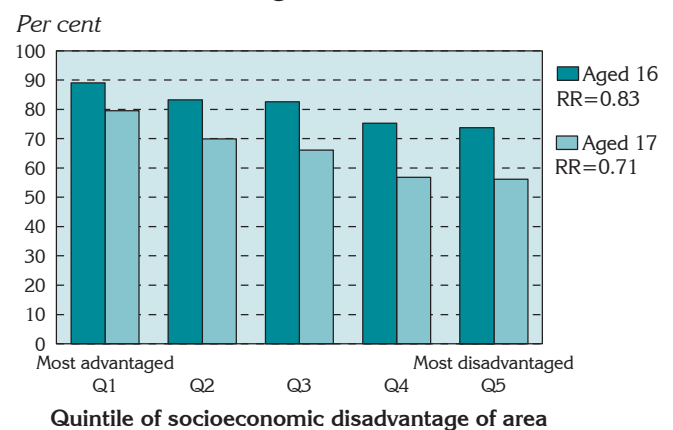


## Socioeconomic status

### Adelaide

The highest rates of full-time participation in education at ages 16 and 17 were recorded in the most advantaged areas of Adelaide (89.1% and 79.5%, respectively) and the lowest in the most disadvantaged areas (73.7% and 56.2%, respectively) (**Figure 13**).

**Figure 13: Full-time participation in secondary school education at ages 16 and 17, Adelaide, 2001**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

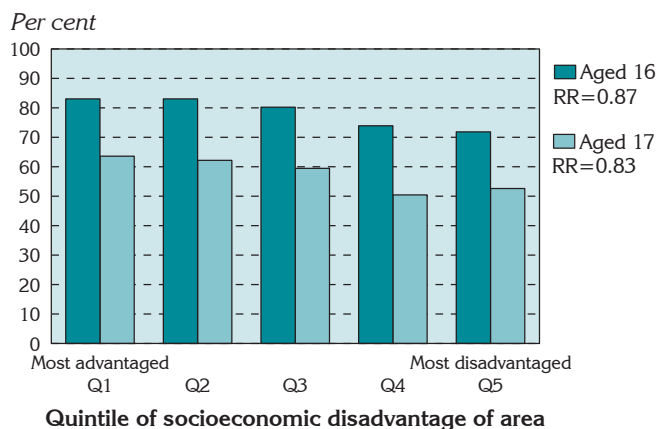
The effect of these differences is that there are 17% fewer 16 year old children in full-time schooling in the most disadvantaged areas and 29% fewer 17 year olds.

Students living in the most advantaged areas of Adelaide are also more likely to be registered for the South Australian Certificate of Education (corresponding to Year 11 and Year 12), with 32.2% more of the 15 to 19 year old population registered than in the most disadvantaged areas (Quintile 5).

### Country South Australia

Outside of Adelaide, the highest rates of full-time participation in education at age 16 were recorded in the most advantaged areas (Quintiles 1 and 2, both with a rate of 83.1%), with the lowest rate recorded in the most disadvantaged areas (71.9%). At age 17, the highest rate was recorded in the most advantaged areas (63.6%), with the lowest rate (50.5%) recorded in Quintile 4 areas and the second lowest rate (52.6%) in the most disadvantaged areas (Quintile 5) (Figure 14).

**Figure 14: Full-time participation in secondary school education at ages 16 and 17, country South Australia, 2001**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

The effect of these differences is that there are 13% fewer 16 year old children in full-time schooling in the most disadvantaged areas and 17% fewer 17 year olds.

### Indigenous students

While apparent retention rates for Indigenous students have improved since the 1980s, in 2001 Indigenous students were still less likely than all students to stay at school beyond the compulsory years.

In 2001, the proportion of Indigenous secondary students continuing to Year 10 in South Australia was 77.1% compared with 92.6% of non-Indigenous students. For Indigenous secondary students continuing their studies to Year 12, the apparent

retention rate was less than half that of non-Indigenous students (31.7% compared with 70.2%).

While the numbers of Indigenous students in higher education have long been influenced by low Year 12 completion rates, Indigenous participation in Vocational Education and Training (where completion of Year 12 is not necessarily a prerequisite) has increased markedly in recent years. Results from the Census of Population and Housing indicate there was a 118% increase in the number of Indigenous VET students from 1991 to 2001. In comparison, participation levels for the non-Indigenous population increased by 2.6% between 1991 and 2001.

However, low pass rates and high withdrawal rates have resulted in Indigenous students achieving significantly less successful VET outcomes than non-Indigenous students. A major issue around participation of Aboriginal people in vocational education and training is the poor level of employment outcomes arising from that participation. This is, in part, because of the type and level of courses undertaken (which tend to be lower level certificate level VET, with poor take up in traineeships). It is also a reflection of the particular disadvantages faced by Aboriginal people in rural/remote areas where there are not many employment opportunities and where choice of training is limited.

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## Labour force: Participation

*In modern societies, the economic wellbeing of an individual and their family is largely determined by their employment. Those who have access to secure and satisfying work are more likely to have an adequate income and to face increased life opportunities and better health and wellbeing than those who are less secure (e.g., in casual work), or are under-employed or unemployed.*

### Key points

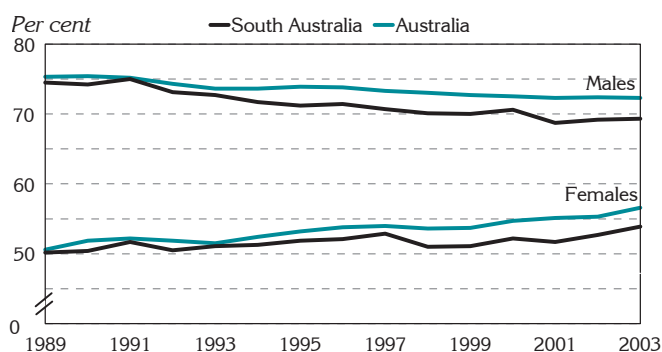
- Male labour force participation rates have declined over the years from 1989 to 2003; although participation rates for females have increased, they remain well below the rates for males.
- Females are more likely to be in part-time employment than are males, with 47.1% of females in the labour force in part-time jobs compared with 13.0% of males.
- People in high socioeconomic status areas are more likely to be in the labour force than are those in the most disadvantaged areas.

Labour force participation is calculated as the proportion of the civilian population aged 15 years and over who were either employed or unemployed.

### Trend

From 1989 to 2003, labour force participation rates were higher in Australia than in South Australia and male rates were higher than those for females (**Figure 15**). The trends in South Australia are for a more marked decline in male labour force participation and a less marked increase for females than in Australia as a whole. In 2003, the South Australian labour force participation rate for males was 69.3% compared to 53.9% for females.

**Figure 15: Labour force participation by sex, South Australia and Australia**



### Geographic variation

#### Adelaide

The labour force participation rate in Adelaide in March 2003 was 75.7%.

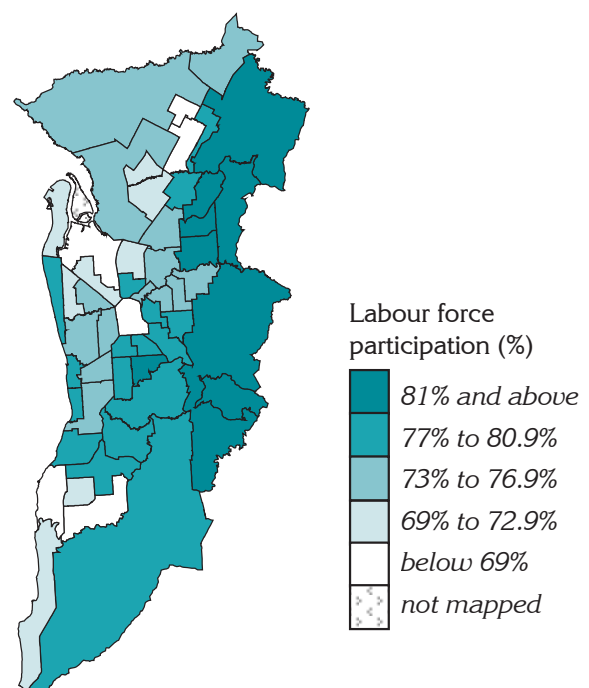
Labour force participation rates form a distinctive pattern across Adelaide (**Map 9**), with a marked separation between areas with moderate to high rates and those with lower rates. The pattern is the reverse of that shown for both low income families and children in low income families, above.

The highest participation rates are in the areas of Tea Tree Gully - Central (84.0%), Tea Tree Gully - Hills (83.5%), Tea Tree Gully - North (83.3%) and Adelaide Hills - Central (81.8%).

The lowest rates are in Playford - West Central (60%), Playford - Elizabeth (60.4%), Port Adelaide Enfield - Port (61.6%) and Onkaparinga - North Coast (64.6%).

Low labour force participation rates in these areas, together with high rates of unemployment (see next indicator), are indicative of the lack of financial resources in these communities, with the potential for poorer outcomes for health and wellbeing.

**Map 9: Labour force participation, Adelaide, March 2003**



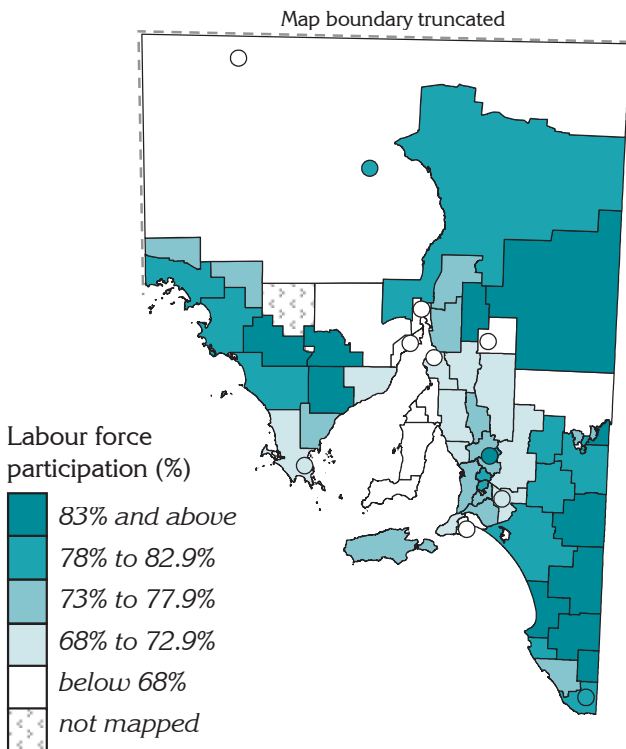
## Country South Australia

The labour force participation rate in country South Australia in March 2003 was 73.7%. Labour force participation rates vary considerably across the State (**Map 10**). The towns and areas with the lowest participation rates are Unincorporated Riverland (49.0%), Unincorporated Far North (49.8%), Peterborough (57.1%), Coober Pedy (59.0%), Copper Coast (60.9%), Unincorporated Whyalla (62.2%) and Yorke Peninsula - South (62.9%).

The highest labour force participation rates are in Unincorporated Pirie (90.7%), Kimba (90.6%), Orroroo/Carrieton (88.6%), Southern Mallee (88.2%), Tatiara (87.1%) and Wattle Range - East (86.6%). Of the towns mapped, Barossa - Tanunda and Roxby Downs had the highest rates, of 85.0% and 80.7%, respectively.

Note: Details of the number of people employed under the Community Development Employment Project scheme (the employment scheme for Indigenous people) are not included in labour force estimates.

**Map 10: Labour force participation, South Australia, March 2003**

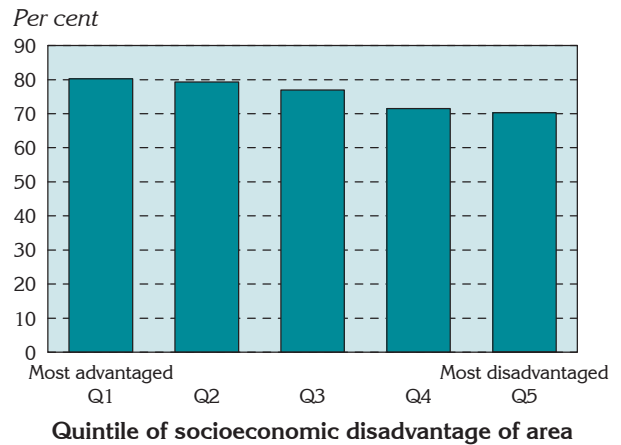


## Socioeconomic status

### Adelaide

The highest labour force participation rates were recorded in the most advantaged areas of Adelaide (80.2%) and the lowest in the most disadvantaged areas (70.3%) (**Figure 16**).

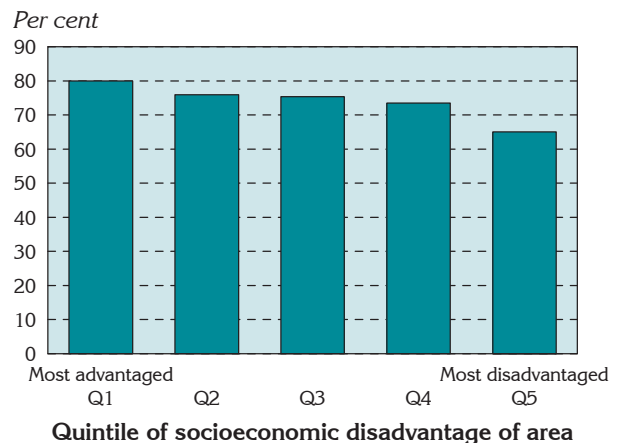
**Figure 16: Labour force participation, Adelaide, March 2003**



## Country South Australia

Labour force participation rates in the country range from 80% for the one fifth of the population living in the most advantaged areas, to 65% for the one fifth of the population living in the most disadvantaged areas (**Figure 17**).

**Figure 17: Labour force participation, country South Australia, March 2003**



## Indigenous people

When compared with the non-Indigenous population, Indigenous people have substantially lower levels of labour force participation. Data from the 2001 Census show the labour force participation rate at that time was 47.9%, compared with 60.3% for non-Indigenous people. The participation rate of Indigenous people has declined since the 1991 Census, when it was 54.4%.

In 2001, Indigenous males recorded higher participation rates than females; 54.4% compared with 41.8%. These rates were much lower than the corresponding levels for non-Indigenous South Australians, at 68.3% and 52.8% respectively.

# Labour force: Unemployment

*Unemployment affects a person's income, health and sense of wellbeing.*

## Key points

- South Australia has the highest unemployment rate after Tasmania.
- When adjusted for hidden unemployment and under-employment, the unemployment rate is considerably (around three times) higher, and has not shown the improvement evident in the official estimates.
- The distribution of unemployment rates across Adelaide and country South Australia is consistent with that for other indicators of disadvantage.

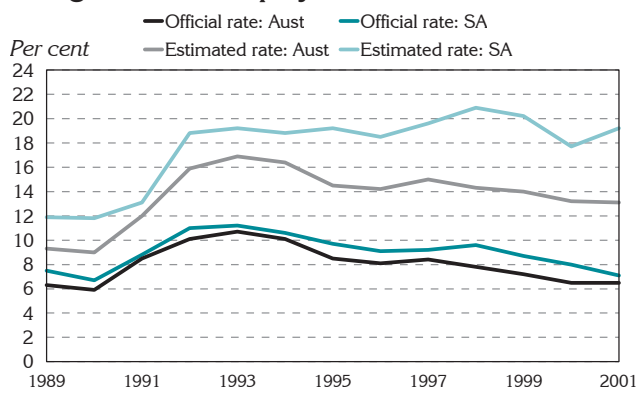
## Trend

In June 2003 the unemployment rate<sup>4</sup> in South Australia was 6.5%; unemployment at ages 15 to 19 years was over three times higher, at 23.8%. The equivalent rates for Australia were lower, at 5.9% and 19.2%.

The official unemployment data (**Figure 18**) show that the South Australian labour force has recovered from the recession of the early 1990s, when unemployment was above 10%. However, this official measure of unemployment does not take account of hidden unemployment (caused by changes in the labour force participation rate) or under-employment (resulting from the loss of full-time jobs and the creation of part-time jobs).

The alternative labour force indicator (shown in the graph as 'estimated' unemployment) addresses these deficiencies. This measure suggests the real level of unemployment in recent years has not shown such improvement, and has increased to some three times the official rate. For Australia, the estimated rate is around two times the official rate, with both the official and estimated Australian rates lower than the equivalent South Australian rates. See the Appendix for more details.

**Figure 18: Unemployment, South Australia**



\*See Notes on the Indicators in Section 6 for a description of the rates graphed

<sup>4</sup> The unemployment rate is the proportion of the civilian labour force unemployed and looking for full-time work.

Readers should note that in 2001 more South Australians were receiving a Disability Support Pension than an unemployment allowance. See page 86 for additional information about the movement between these two types of benefit.

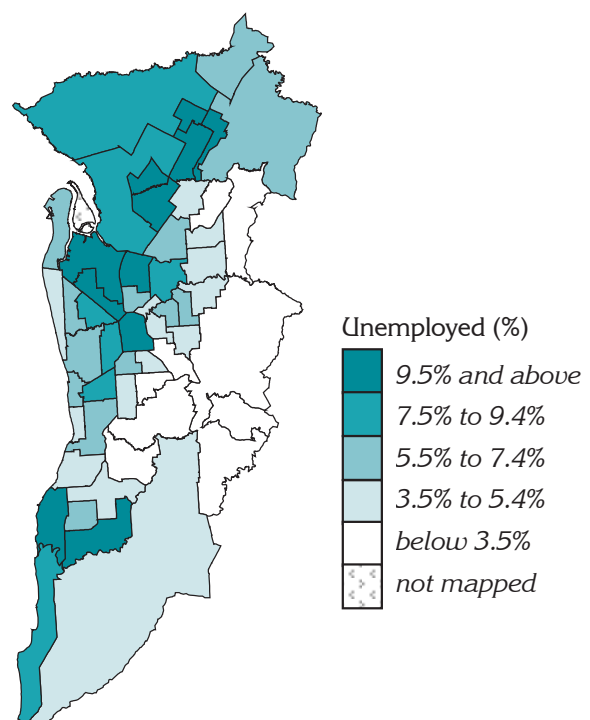
## Geographic variation

### Adelaide

The following analysis is based on the official unemployment data, as the estimates in the graph above have not been made at a small area level.

The distribution of unemployed people across Adelaide (**Map 11**) is the opposite of that for labour force participation. The highest unemployment rates are in areas of low labour force participation, in Playford - Elizabeth (21.1%), Playford - West Central (17.3), Port Adelaide Enfield - Port (14.3%) and Onkaparinga - North Coast (13.9%). In contrast, the lowest unemployment rates are generally found in the eastern, south-eastern and north-eastern suburbs.

**Map 11: Unemployment, Adelaide, March 2003**





The levels of unemployment and under-employment evident here are likely to contribute to reduced life opportunities and poorer health and wellbeing.

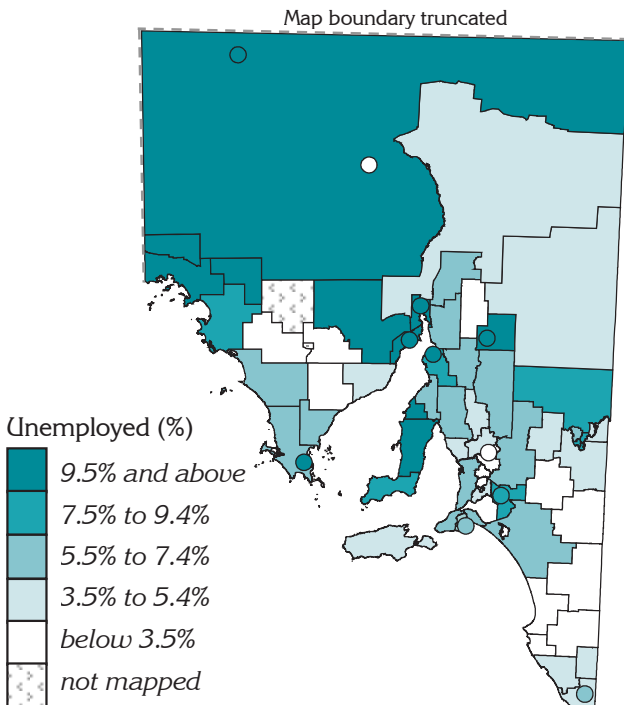
The lowest unemployment rates are in the high socioeconomic status areas of Mitcham - North-East and Tea Tree Gully - North (both 2.8%), Tea Tree Gully - Hills (2.9%), Adelaide Hills - Central (3.0%), Burnside - South-West (3.1%) and Mitcham - Hills (3.2%).

### Country South Australia

Unemployment rates vary considerably across the State (Map 12). Below average unemployment rates are found in a number of areas scattered throughout the north and north-west, with the largest concentration in a broad area from the east of Adelaide through to the south-east of the State. The lowest were recorded in Kimba (0.8%), Roxby Downs (1.0%), Tatiara (1.5%) and Cleve (2.0%).

Areas in the far and mid north are generally characterised by above average levels of unemployment, with the highest rates in Unincorporated Far North (50.3%), Unincorporated West Coast (38.9%), Ceduna (31.2%), Port Augusta (18.7%) and Peterborough (17.4%). These rates have been adjusted to include people receiving unemployment benefits through the CDEP program.

**Map 12: Unemployment, South Australia, March 2003**



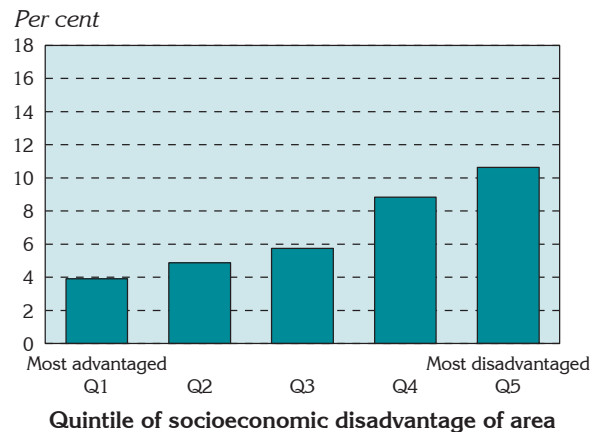
### Socioeconomic status

#### Adelaide

In March 2003, the unemployment rate in the most disadvantaged areas of Adelaide was 10.6%, almost

three times (2.7 times higher) that in the most advantaged areas (3.9%) (Figure 19).

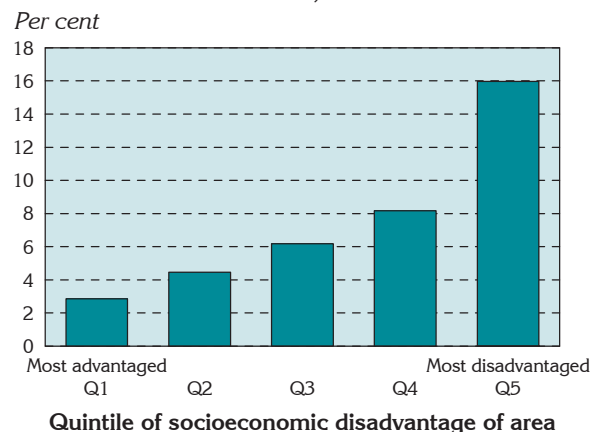
**Figure 19: Unemployment, Adelaide, March 2003**



### Country South Australia

Unemployment rates in the country range from 2.9% in the most advantaged areas (Quintile 1) to five times higher, at 16.0%, in the most disadvantaged areas (Figure 20).

**Figure 20: Unemployment, country South Australia, March 2003**



### Indigenous people

At the 2001 Census, the unemployment rate for Indigenous South Australians (20.3%) was almost three times that of non-Indigenous people (7.5%). Whilst the unemployment rate for both groups has declined since 1991, participation rates have also dropped (with a drop also recorded in the percentage of Indigenous people in employment since 1991).

Some Aboriginal people receiving unemployment benefits do so under the Community Development Employment Project scheme, the Indigenous employment program. The number of people receiving benefits under each project was provided by the Aboriginal and Torres Strait Islander Service, and has been included in the estimates presented here.

## Transport: Dwellings without a motor vehicle

People living in households without cars face many disadvantages in gaining access to jobs, services and recreation, especially if they are in low-density outer suburbia, or outside of Adelaide in rural and remote areas, or in a country town.

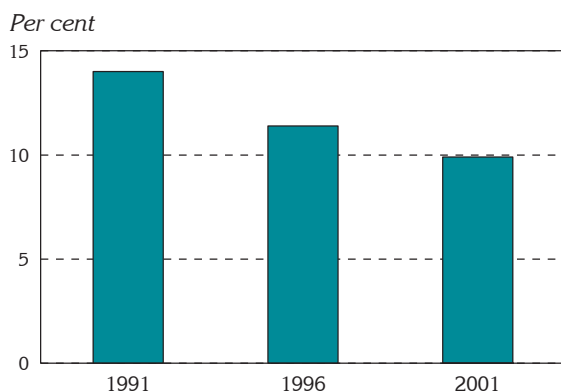
### Key points

- In 2001, ten per cent of occupied dwellings in South Australia had no motor vehicle parked or garaged overnight.
- There is high car ownership in country South Australia relative to Adelaide.
- Variations across Adelaide in the location of dwellings without a car are similar to the patterns evident in the earlier indicators of disadvantage: however in the country, dwellings without a car are confined to the more remote areas of the State (areas with relatively high proportions of Indigenous population), and to the towns of Peterborough, Port Augusta, Whyalla and Port Pirie.

### Trend

The proportion of dwellings without a motor vehicle has declined notably over the past ten years, dropping from 14.0% in 1991 and 11.4% in 1996 to the current level of 9.9% (Figure 21).

**Figure 21: Dwellings without a motor vehicle, South Australia**



### Geographic variation

#### Adelaide

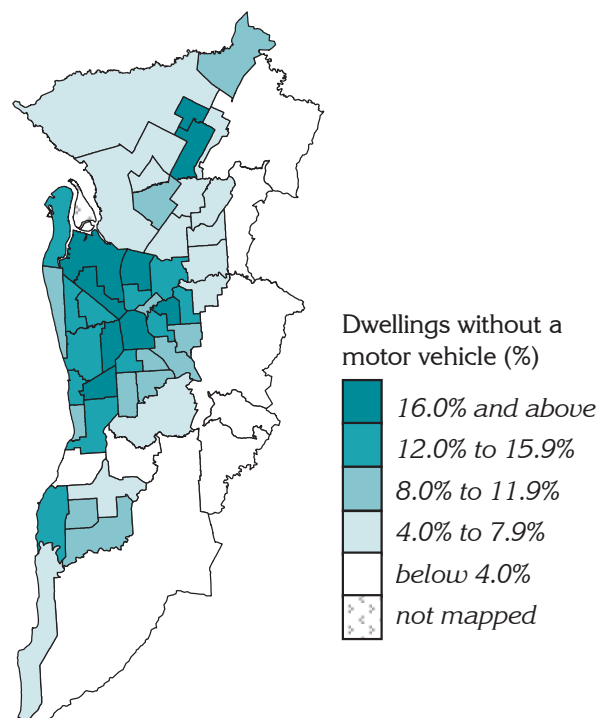
With increasing distance from the city centre, vehicle ownership becomes more important. Consequently, in the suburbs and urban fringe areas of the metropolitan area, the proportion of dwellings without motor vehicles is generally low (Map 13). The lowest proportions were recorded in Playford - Hills (1.1%), Adelaide Hills - Ranges (1.4%), Marion - South (2.0%) and Onkaparinga - Reservoir (2.5%).

The highest proportions of dwellings without vehicles were in the inner city and western areas, including the City of Adelaide (21.9%), Port Adelaide Enfield - Port (20.6%) and Port Adelaide Enfield - Inner (18.5%).

However the outer northern areas of Playford - Elizabeth and Playford - West Central also had very high proportions of dwellings without access to a vehicle (19.8% and 16.3%, respectively).

People without private motor vehicles are generally heavily reliant on public transport: when they live in the outer suburbs, public transport becomes even more important for access to local services and to those located in the city centre. Relatively high proportions of people living in areas such as Gawler, in the north, and Onkaparinga - North Coast, in the south, also face these difficulties.

**Map 13: Dwellings without a motor vehicle, Adelaide, 2001**



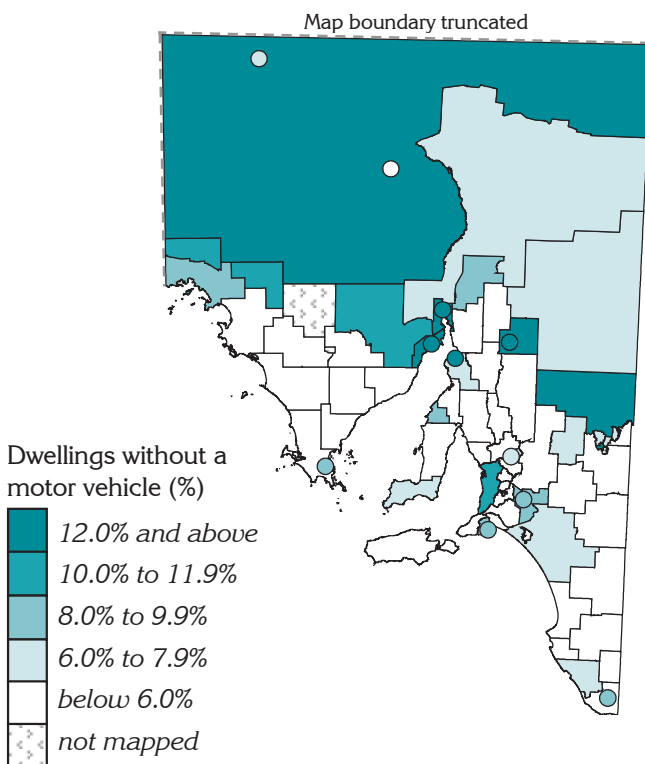


## Country South Australia

High levels of car ownership are to be expected outside of Adelaide, given the long distances many people must travel for social interaction, to gain access to services and facilities, and in connection with employment.

Throughout most of country South Australia, fewer than 6% of households were without cars (**Map 14**). Proportions above 12% were generally recorded in the towns (Whyalla, with 15.3%; Peterborough and Port Pirie, both 13.2%; and Port Augusta, 12.8%) and remote areas with significant Indigenous populations (Unincorporated Far North, with 22.9%; and Unincorporated Riverland, 17.2%).

**Map 14: Dwellings without a motor vehicle, South Australia, 2001**

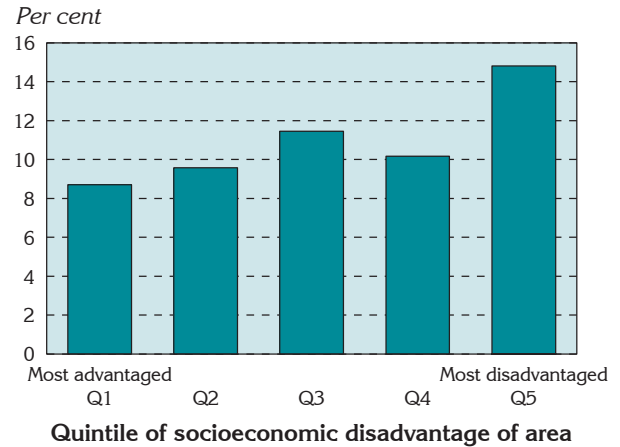


## Socioeconomic status

### Adelaide

The proportion of dwellings without a motor vehicle in Adelaide varies from a low of 8.7% in the most advantaged areas (Quintile 1) to 14.8% in the most disadvantaged areas (Quintile 5) (**Figure 22**).

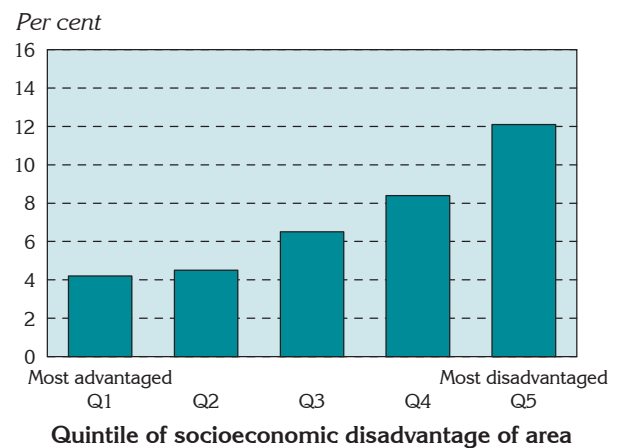
**Figure 22: Dwellings without a motor vehicle, Adelaide, 2001**



### Country South Australia

There is also a clear gradient across country South Australia, with 4.2% of dwellings without a motor vehicle in the most advantaged areas and 12.1% in the most disadvantaged areas (**Figure 23**).

**Figure 23: Dwellings without a motor vehicle, country South Australia, 2001**



## Housing costs: Rent assistance

*Affordable, secure and safe housing is fundamental to one's health and wellbeing, employment, education and other life opportunities. Housing affordability has worsened in the last 12 months. The Australian Council of Social Service (ACOSS) has estimated that more than one in three households cannot afford to buy a house in Sydney, Melbourne or Adelaide; the poorest 40 per cent of households cannot afford housing in those cities; and over 200,000 people are recorded on waiting lists for public housing across Australia.*

### Key points

- Affordable public housing stock has declined in 2003; at the same time, the stock of community and Aboriginal housing has increased.
- Net reductions in the social housing stock have meant that more low income households are reliant on the private rental market.
- Households can face problems in acquiring or accessing suitable private rental accommodation because of cost, discrimination, availability or adequacy.

### Trend

The total social housing stock (public, community and Aboriginal housing) has declined from 64,491 dwellings in 1992 to 54,103 dwellings at 30 June 2003. This overall decline in social housing stock is due to a reduction in South Australian Housing Trust (SAHT) dwellings (down from 60,068 dwellings in 1992 to 48,271 dwellings in 2001). However, at the same time, the number of Aboriginal Housing Association dwellings has increased from 1,485 to 1,810 dwellings and the number of South Australian Community Housing Association dwellings has increased from 1,469 to 4,022 dwellings.

Public housing investment in this State has helped protect people from poverty. However, significant reductions in grant funding under the Commonwealth State Housing Agreement have reduced the capacity of the SAHT to replace housing stock that is sold or transferred to other social housing agencies.

The net loss of public housing dwellings means that more low income people are reliant on the private rental market, where they may face problems in acquiring or accessing suitable private rental accommodation because of cost, discrimination, availability or adequacy. Further, stock may not be available in the private rental market for households with special accommodation needs.

At the 2001 Census, 68.4 % of dwellings in South Australia were owned or being purchased (66.2% for Australia), 17.0 % were rented in the private sector (21.8%), 7.7 % were public rental accommodation (4.5%), with 6.9 % being other tenure types (2.8%).

Despite this decline, State Government intervention in the housing market is still significant. However, support for large numbers of low income households is increasingly limited to rent assistance

provided to private renters as income support by the Australian Government. The data mapped are of people receiving rent assistance, referred to as renters.

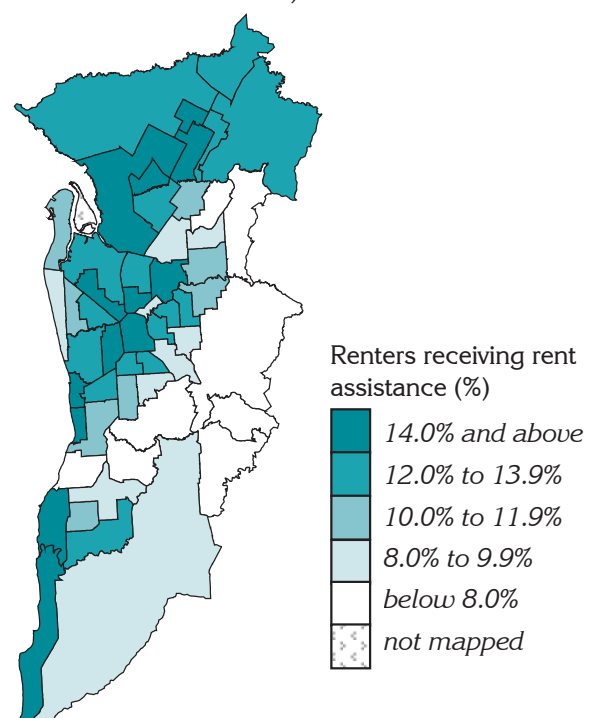
### Geographic variation

#### Adelaide

Over the four years 1999-2002, an average 50,226 renters (12.0 per cent of households) in Adelaide received rent assistance from the Department of Family and Community Services, through Centrelink.

The lowest proportions of households receiving rent assistance are located in the more affluent eastern, north-eastern and inner southern areas of Adelaide, and the highest in and around the city centre, and in the outer north and south (**Map 15**).

**Map 15: Renters receiving rent assistance, Adelaide, 1999-2002**



More than 15% of households in the City of Adelaide (with 22.8%), West Torrens - East (17.3%), Port Adelaide Enfield - East (16.3%), Salisbury - Inner North (15.3%) and Charles Sturt - North-East, Playford - West Central and Playford - Elizabeth (all 15.1%) received rent assistance.

At the other end of the scale, the lowest proportions of households receiving rent assistance are in Tea Tree Gully - North (5.4%), Adelaide Hills - Central (6.2%) and Tea Tree Gully - Hills (6.4%).

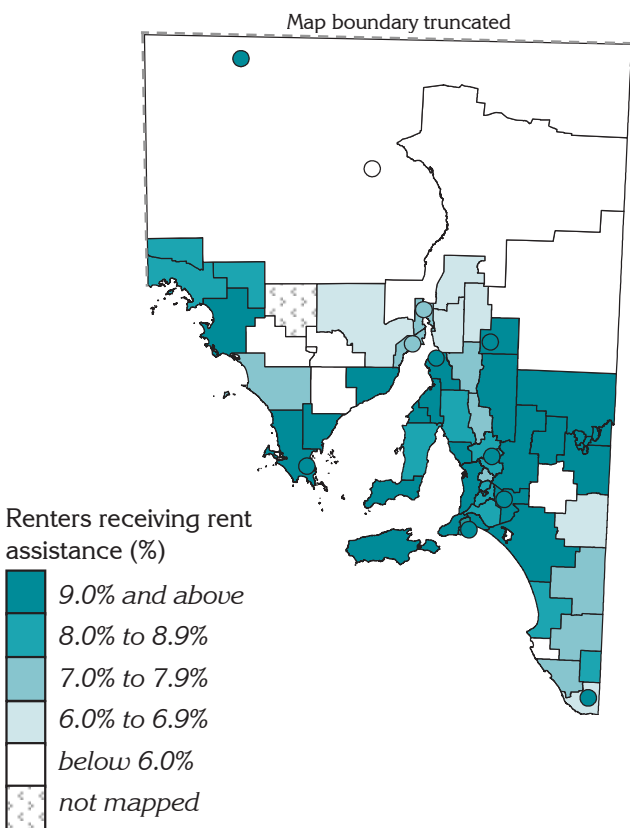
### Country South Australia

The proportion of households receiving rent assistance in country South Australia was lower than that recorded in Adelaide, at 9.8% of households over the years 1995 to 2002 (14,337 renters).

The highest proportions of these households are in Victor Harbor (with 16.7%), Alexandrina - Coastal (15.7%), Renmark Paringa - Renmark (13.9%) and Coober Pedy (13.7%) (Map 16).

Fewer than 5.5% of households in Roxby Downs (3.4%), Unincorporated Flinders Ranges (3.7%), Unincorporated Far North (5.2%) and Cleve (5.3%) received rent assistance.

**Map 16: Renters receiving rent assistance, South Australia, 1999-2002**



## Socioeconomic status

### Adelaide

There is a clear gradient in the proportion of households receiving rent assistance in Adelaide, from a low 8.1% in the most advantaged areas (Quintile 1) to 14.3% in the most disadvantaged areas (Quintile 5) (Figure 24).

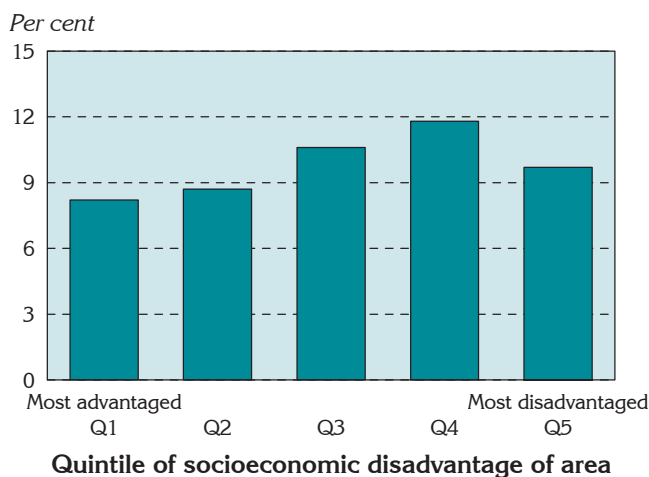
**Figure 24: Renters receiving rent assistance, Adelaide, 1999-2002**



### Country South Australia

The proportion of households receiving rent assistance in country South Australia increases from 8.2% in the most advantaged areas (Quintile 1) to 11.8% in Quintile 4, before declining to 9.4% in the most disadvantaged areas (Quintile 5) (Figure 25).

**Figure 25: Renters receiving rent assistance, country South Australia, 1999-2002**



## Indigenous housing

A tradition and culture of sharing resources throughout the extended family results in Indigenous people being more likely than non-Indigenous people to live in multiple family households. This is particularly so in Aboriginal communities, where the properties are owned or managed by the community and where family and kinship groups hold cultural ties to the land.

Indigenous people are also more likely to rent their accommodation, while non-indigenous people are more likely to own or be purchasing their home. Factors contributing to this include lack of credit history, lower income compared to the non-Indigenous people, higher living expenses, and inability to meet loan requirements.

The level of weekly rent paid by Indigenous people is generally less than that paid by non-Indigenous renters. Often, some Indigenous renters are only able to access low demand areas and accommodation of a lesser standard.

A significant proportion of Indigenous people rely on the South Australian Housing Trust, the Aboriginal Housing Authority and Indigenous Community Housing Organisations for accommodation.

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## Crime: Offences involving apprehension

*Offending behaviour is a product of interactions between individual, contextual, situational and neighbourhood factors. Some of these include factors such as addiction; parental criminality; serious family conflict; gang membership; poverty; and community or cultural disorganisation. The distribution of offence rates (where the offender is apprehended) across Adelaide and country South Australia follows a similar pattern to that of low educational participation, socioeconomic disadvantage, unemployment and poorer health.*

### Key points

- In 2002/03, there were 116,955 offences (where the offender was apprehended) in South Australia, a rate of 87.8 offences per 1,000 population aged 10 years and over.
- The highest rates are found in lower socioeconomic status areas.

The data shown are the number of offences recorded on apprehension reports during 2002/03. An apprehension report is completed when an alleged offender is apprehended. It should be noted that there can be multiple offences on an apprehension report. In addition, some people will have been apprehended on more than one occasion, increasing the number of apprehension reports. The data include minor traffic offences and non-offence matters such as restraint order applications, but exclude offences dealt with by way of infringement or expiation notices, or other means.

It should be noted that an apprehension does not prove the guilt of a suspect; and that many apprehensions do not proceed to arrest or a court hearing. Those included are people aged 10 years and over (in South Australia, the minimum age of criminal responsibility is 10 years).

### Trend

In 2002/03, there were 116,955 offences involving apprehension and 48,548 arrests. Over this same period 290,752 total offences<sup>5</sup> were reported, which includes offences which may or may not have resulted in apprehension or arrest.

For the remainder of the discussion and analysis on this indicator, the term offences refers to offences where the offender was apprehended.

### Geographic variation

#### Adelaide

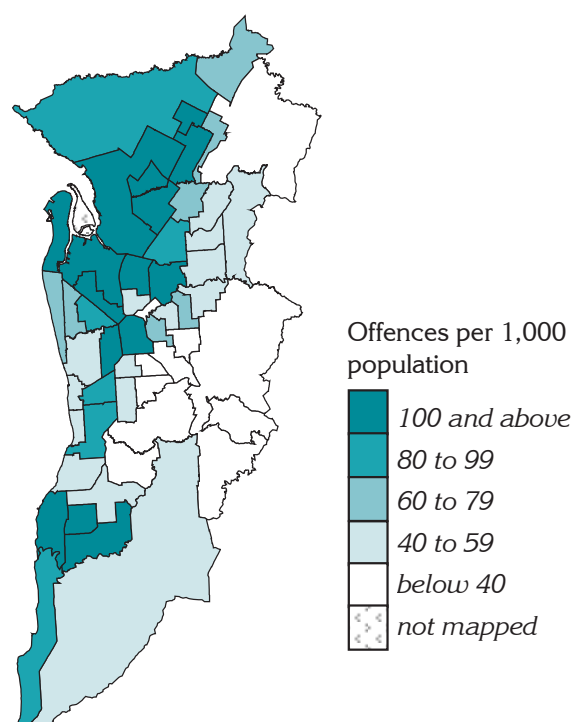
Offences involving apprehension are mapped by the area of usual address of the alleged offender. This will usually be where they live, but could include a prison address, or other place where they were detained. The highest rates are concentrated in the city and in areas to the north-west, north and

outer north of Adelaide, and in the outer south (Map 17). These areas have the highest rates of disadvantaged populations.

Playford - West Central, with 262.1 offences involving apprehension per 1,000 population aged 10 years and over, had the highest rate. Relatively high rates were also recorded in Port Adelaide Enfield - Port (with a rate of 235.5 offences per 1,000 population), Playford - Elizabeth (213.4 per 1,000) and the city of Adelaide (202.1 per 1,000).

Areas with the lowest rate of offences involving apprehension lie to the east and south-east of the city. The areas of Mitcham - North-East (22.9 offences per 1,000), Playford - Hills (30.6 per 1,000), Burnside - South-West (30.8 per 1,000), Burnside - North-East (31.8 per 1,000) and Mitcham - Hills (31.9 per 1,000) had the lowest rates.

**Map 17: Offences involving apprehension by usual address of alleged offender, Adelaide, 2002/03**



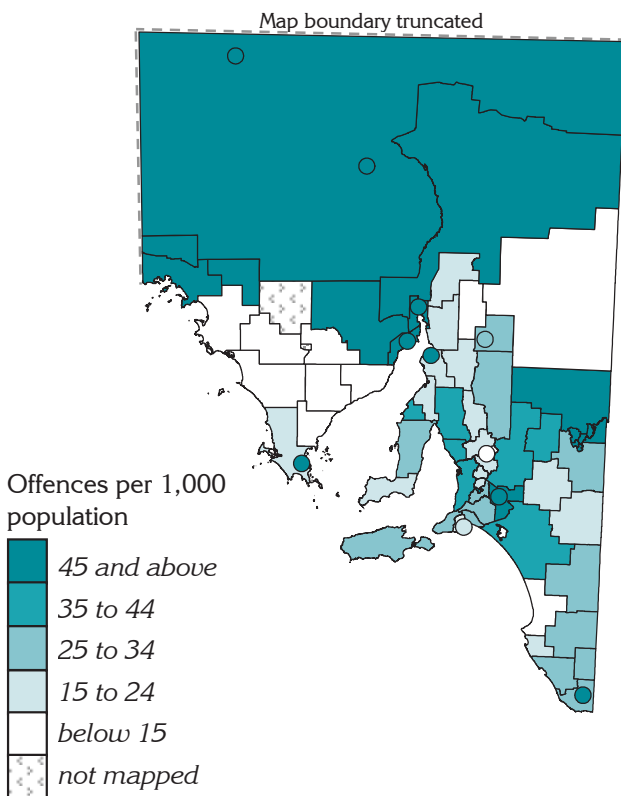
<sup>5</sup> See notes on page 87 for a definition of offences and a description of their distribution across Adelaide.

## Country South Australia

The highest rates of offences involving apprehension of country South Australians were recorded for people living in the far north, Riverland and in a number of the towns for which data were available (**Map 18**). These areas included Unincorporated West Coast (with 925.0 offences per 1,000 population), Unincorporated Far North (460.3 per 1,000), Coober Pedy (383.5 per 1,000) and Port Augusta (210.4 per 1,000).

The lowest rates (in areas where there were more than five offences involving apprehension) were recorded in Kimba (14.3 offences per 1,000 population), Orroroo/Carrieton (16.8 per 1,000 population) and Cleve (24.3 per 1,000).

**Map 18: Offences involving apprehension by usual address of alleged offender, South Australia, 2002/03**

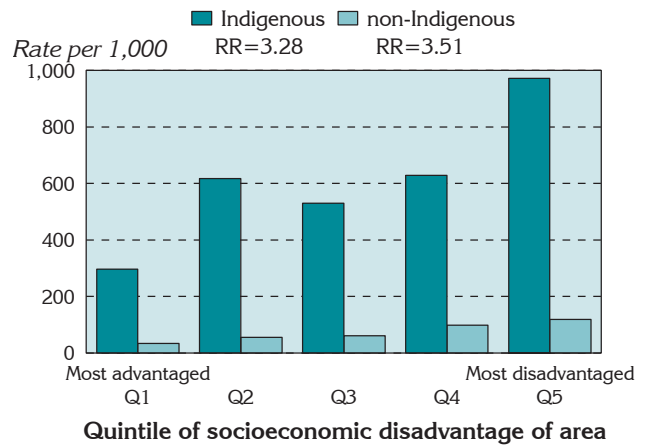


## Socioeconomic status

### Adelaide

The rate of offences involving apprehension among Indigenous people is substantially higher across all quintiles than those recorded for the non-Indigenous population. However the difference between the most advantaged (Quintile 1) and most disadvantaged areas of Adelaide (Quintile 5) is similar, with rates just over three times higher in the Indigenous population and three and a half times higher in the non-Indigenous population (**Figure 26**).

**Figure 26: Offences involving apprehension, Adelaide, 2002/03**

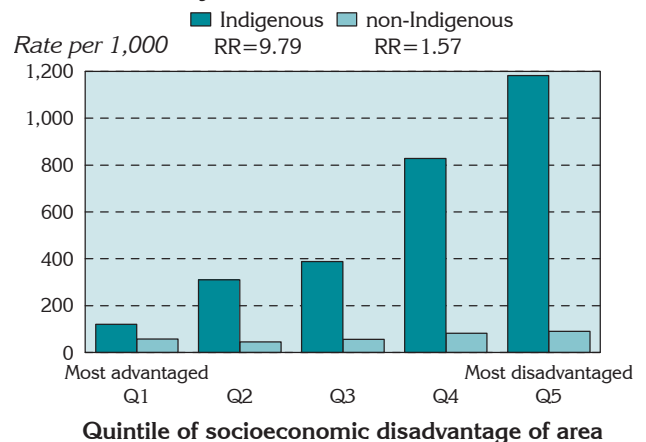


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Country South Australia

There is a clear gradient in rates of offences involving apprehension in the country areas of South Australia among Indigenous people, with rates increasing to be almost ten times higher in the most disadvantaged areas (**Figure 27**). For the non-Indigenous population the difference is still notable, at over one and a half times.

**Figure 27: Offences involving apprehension, country South Australia, 2002/03**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Indigenous people

Detailed analysis of offence rates involving apprehension is a complex issue, however, it is clear from the available data that Indigenous South Australians are far more likely to be apprehended than non-Indigenous South Australians.

Males are more highly represented than females in all aspects of the criminal justice system. This applies to non-Indigenous people and, to a lesser extent, to Indigenous people. In 2001, 82% of all non-Indigenous charges related to males, whereas in the Indigenous population, males represented a lower 70% of all charges.



# Gambling: Expenditure and losses

*For sociological and psychological reasons, certain groups within the population may be at greater risk of developing gambling problems. A further proportion may experience impaired control over their behaviour, leading to severe personal and family distress including depression, suicide, unemployment and family and relationship breakdown.*

## Key points

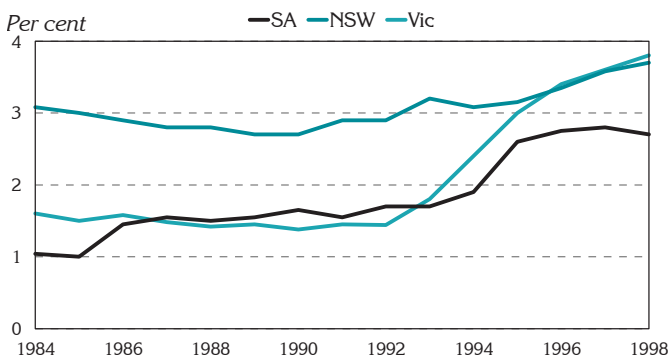
- The average gambling loss on electronic gaming machines per head of population in Adelaide was \$584.
- The distribution of gambling losses across Adelaide closely follows the pattern of socioeconomic disadvantage described in the earlier indicators. That is, the poorest sections of Adelaide’s population are among those losing the most money in this way.

### Trend

In recent years South Australians have seen legislative changes, resulting in the expansion of new and existing forms of gambling. The impact of these changes, in particular the widespread availability of electronic gaming machines, is evident in **Figure 28**.

For example, the proportion of household expenditure in South Australia going towards gambling has increased, from 1% of household expenditure to 2.8%. This figure is below the levels in New South Wales and Victoria, which also have increased.

**Figure 28: Household expenditure on electronic gaming machines, 1984 to 1998**



### Geographic variation

In the following text, gambling losses are expressed per adult (aged 18 years and over) for 2002 and relate only to losses from electronic gaming machines. The data mapped are of losses where the machines are located. Variation in the number of electronic gaming machines in an area is frequently cited as the most significant factor affecting gambling losses from these machines.

Losses have not been shown in these data for the City of Adelaide because of the very large expenditure associated with the presence of the Adelaide/Sky City Casino. This reduces the total expenditure in Adelaide by \$52 per head.

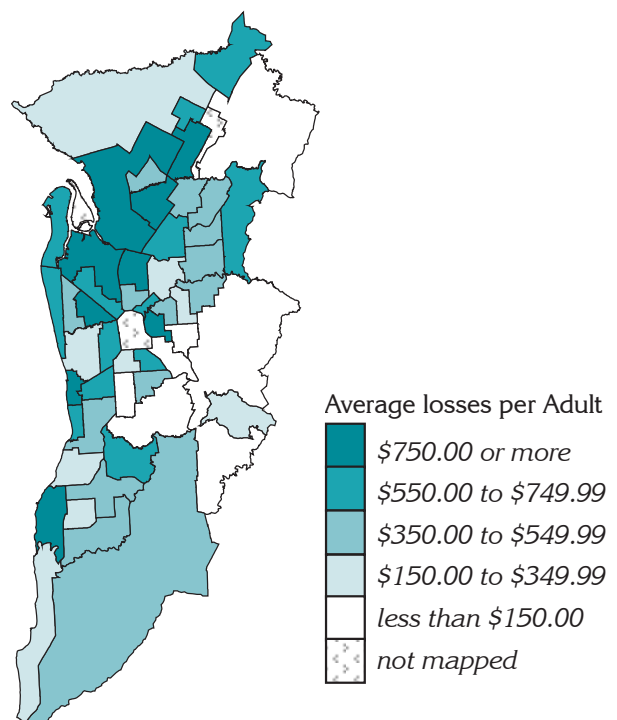
### Adelaide (excluding Adelaide city centre)

The average gambling loss on electronic gaming machines per head of population in Adelaide was \$532. The highest gambling losses were recorded for adults in Salisbury Balance (\$1,786), Norwood Payneham St Peters - West (\$1,338), Onkaparinga - North Coast (\$1,203), Holdfast Bay - North (\$1,033) and Port Adelaide Enfield - Inner (\$967) (**Map 19**).

These average losses are substantial. Although, the losses are greatest in areas with the highest rates of electronic gaming machines, there is also an association between areas with high average losses and socioeconomic disadvantage.

The lowest losses per adult were recorded in Burnside - South West (\$14), Adelaide Hills - Ranges (\$21), Playford - Hills (\$54), Mitcham - West (\$82) and Burnside - North-East (\$113) and Mitcham - Hills (\$139).

**Map 19: Gambling losses per adult from electronic gaming machines, Adelaide, 2002**



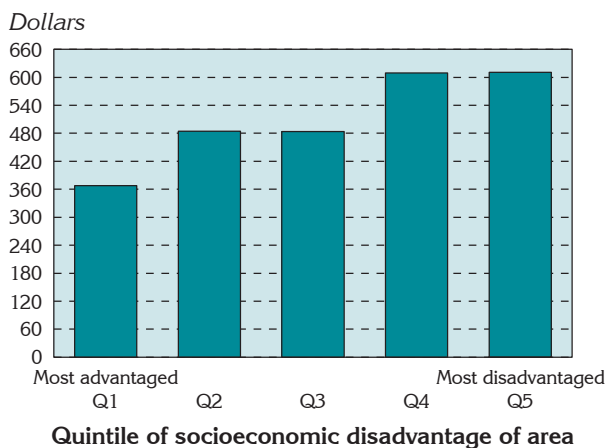


## Socioeconomic status

### Adelaide (excluding Adelaide city centre)

The pattern of gambling losses by socioeconomic status of area shows the lowest losses per adult in the most advantaged areas (Quintile 1, with \$368.12) and the highest losses in the most disadvantaged areas (\$610.94 per head) (Figure 29). The proportion in the most disadvantaged areas is 1.65 times higher than in the most advantaged areas, indicating that there were over one and a half times more gambling losses in the most disadvantaged areas.

**Figure 29: Gambling losses per adult from electronic gaming machines, Adelaide, 2002**



These data are not available for areas outside of Adelaide.

## Health and wellbeing: Self reported health status

How people rate their health is strongly related to their experience of illness and disability. This measure is therefore an important indicator of key aspects of quality of life. Self-reported health status is highly correlated with socioeconomic disadvantage, which also influences many of the following indicators.

### Key points

- The majority of South Australians aged 15 years and over considered themselves to be in good health, with 80% reporting their health status as good, very good or excellent (rather than fair or poor).
- The remaining 20% of the South Australian population reported their health as fair or poor.
- Self reported health status was, however, strongly related to age, with the proportion reporting their health as fair or poor increasing with age.
- The geographic distribution of people reporting their health as fair or poor is highly consistent with that for the indicators of disadvantage: i.e., the highest rates are largely in lower socioeconomic status areas.

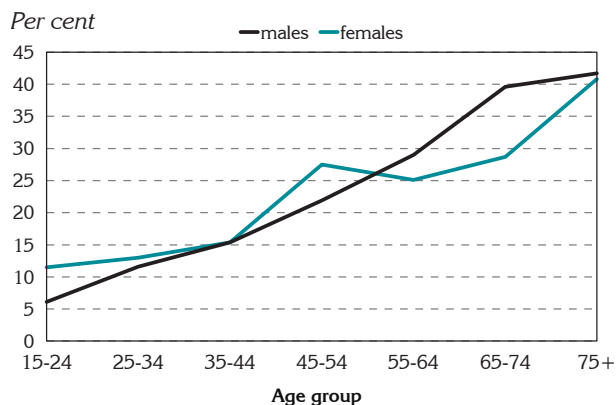
### Trend

#### By age

Overall, in 2001, one fifth (20%) of South Australians reported their health to be 'fair' or 'poor', compared with 80% who reported it as 'excellent', 'very good' or 'good'. This represents an increase from the level of 18.5% in 1995.

In 1995, females and males reported similar levels of fair or poor health, at 20.7% and 19.3%, respectively. The proportion of males reporting their health as fair or poor increased steadily with age, rising from 6.1% in the 15 to 24 year age group to 41.7% for people aged 75 years and over. The proportion of females reporting their health as fair or poor also increased with age, although the increase was less consistent than that shown for males (Figure 30).

**Figure 30: People reporting their health as fair or poor, by age, South Australia, 1995**

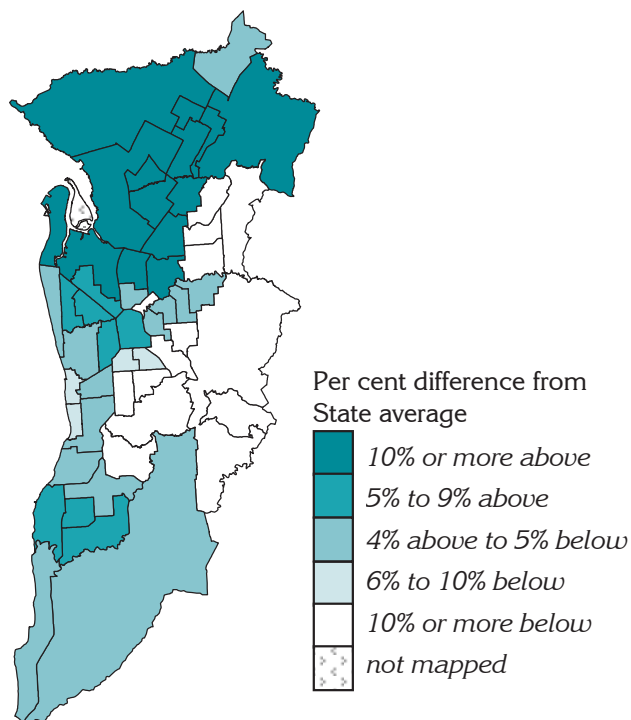


### Geographic variation

#### Adelaide

Areas with above average levels of people reporting their health as fair or poor reflect the pattern of socioeconomic disadvantage shown in the earlier indicators (Map 20). Overall, people in Adelaide reported having fair, or poor health at the same level as in the State as a whole. There are, however, substantial variations from this average across Adelaide.

**Map 20: Health status reported as fair or poor, Adelaide, 1995<sup>6</sup>**



<sup>6</sup> See Appendix for additional information on the production of estimates for these areas.

Playford - Elizabeth had 32% more people reporting their health as fair or poor than the State average. High proportions were also recorded for people in Port Adelaide Enfield - Port (27% above average), and Playford - East Central, Playford - West, Playford - West Central and Playford - Hills (all 22% above).

The lowest proportions of the population reporting their health as fair or poor were recorded in a number of areas, with Adelaide Hills - Central (24% below average), Onkaparinga - Reservoir, Burnside - South West and Burnside - North East (all 21% below), and Adelaide Hills - Ranges (20% below) recording the lowest.

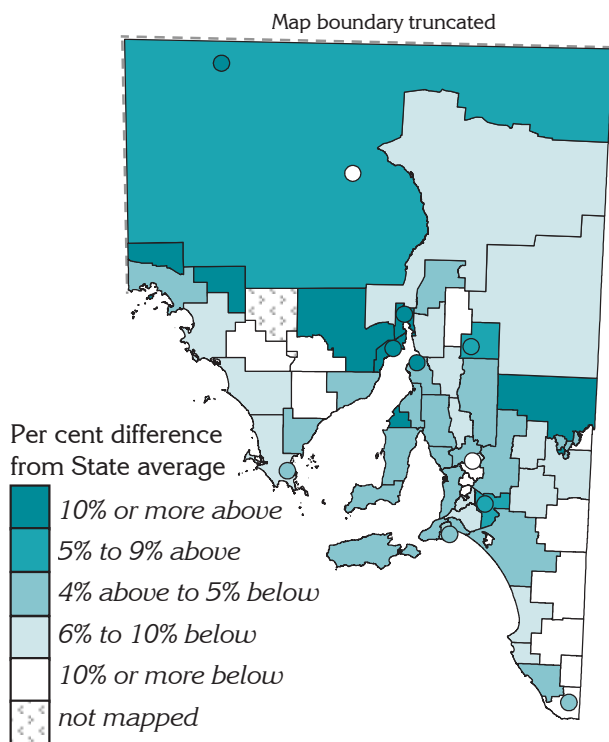
### Country South Australia

Overall, people living in the country reported having fair, or poor health at almost the same level as in the State as a whole (1% below the State average).

Outside of Adelaide, people most likely to report their health as fair or poor were living in Unincorporated Riverland (with 48% more than the State average), Unincorporated West Coast (41% above), Port Augusta (15% above), Unincorporated Whyalla and Whyalla (both 13% above), Port Pirie - City (12% above), Copper Coast (11% above) and Peterborough (10% above) (Map 21).

The lowest proportions were in Grant (25% below the State average), Roxby Downs (23% below), Adelaide Hills - North (20% below) and Southern Mallee and Barossa - Tanunda (both 15% below).

**Map 21: Health status reported as fair or poor, South Australia, 1995<sup>7</sup>**



<sup>7</sup> See Appendix for additional information on the production of estimates for these areas.

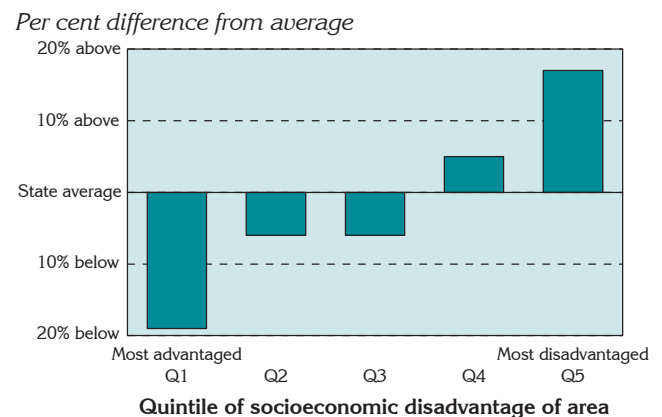
## Socioeconomic status

### Adelaide

Figure 31 shows the distribution of people reporting their health status as fair or poor by socioeconomic disadvantage of area for Adelaide. There are higher than expected rates in the most disadvantaged areas, with 17% above the State average.

This suggests that those who are socioeconomically disadvantaged are more likely to rate their health as fair or poor, thus also indicating their likely poorer quality of life.

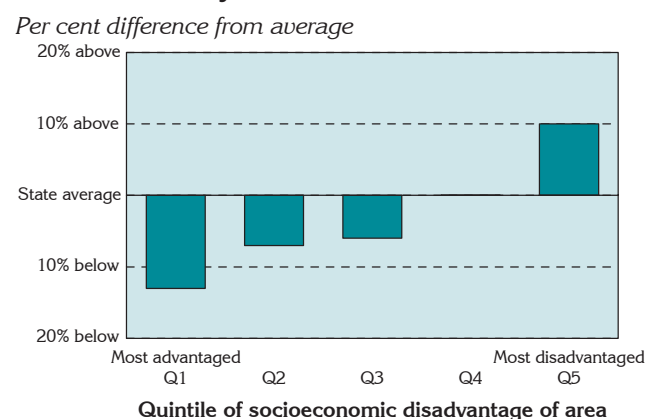
**Figure 31: Health status reported as fair or poor, Adelaide, 1995**



### Country South Australia

As for Adelaide, there are higher than expected rates of people reporting their health as fair or poor in the most disadvantaged areas in the country, at 10% above the State average (Figure 32).

**Figure 32: Health status reported as fair or poor, country South Australia, 1995**



# Health and wellbeing: Life expectancy

*Life expectancy at birth is an important measure of the health of a population and of quality of life. It is an indicator of mortality, and therefore of health conditions, and also reflects many social, economic and environmental influences.*

### Key points

- In South Australia, a baby boy born in 1998-2000 could be expected to live 76.6 years, while a baby girl could be expected to live 82.3 years.
- Indigenous life expectancy at birth was estimated to be 55.3 years for males (21.3 years less than for the total male population), and 61.2 years for females (16.2 years less than for the total female population).
- The distribution of life expectancy across the State is highly consistent with that for the indicators of disadvantage: i.e., the lowest life expectancies are in lower socioeconomic status areas.

Life expectancy at birth is an estimate of the average number of years that a newborn could expect to live, given the current age-specific mortality risks. Many social, economic and environmental factors also influence life expectancy.

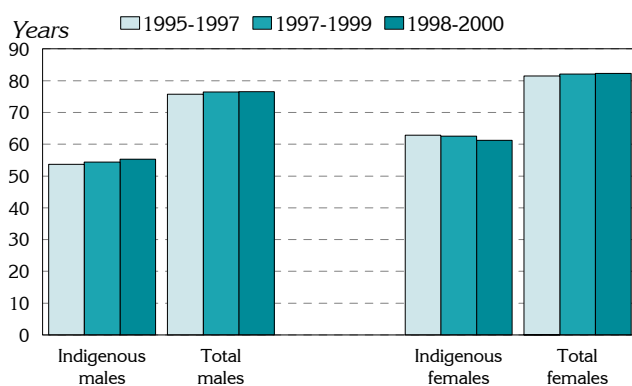
## Trend

### By sex and Indigenous status

From 1992 to 2001, the average life expectancy at birth of South Australians is estimated to have increased by 2.0 years for males (from 75.0 to 77.0 years) and by 1.6 years for females (from 80.9 to 82.5 years).

However, life expectancy for Indigenous males and females is estimated to be some twenty years lower than for the total population. While life expectancy for Indigenous males has increased, life expectancy for Indigenous females is estimated to have decreased, albeit marginally, from 62.8 years in 1995-97 to 61.2 years in 1998-2000 (Figure 33).

**Figure 33: Life expectancy at birth by Indigenous status, South Australia**



Estimates show that the gap in life expectancy is still substantial at age 65 years, when it is estimated to be 15.5 years for non-Indigenous males and 10.0 years for Indigenous males; and 18.9 years for non-Indigenous females and 11.8 years for Indigenous females.

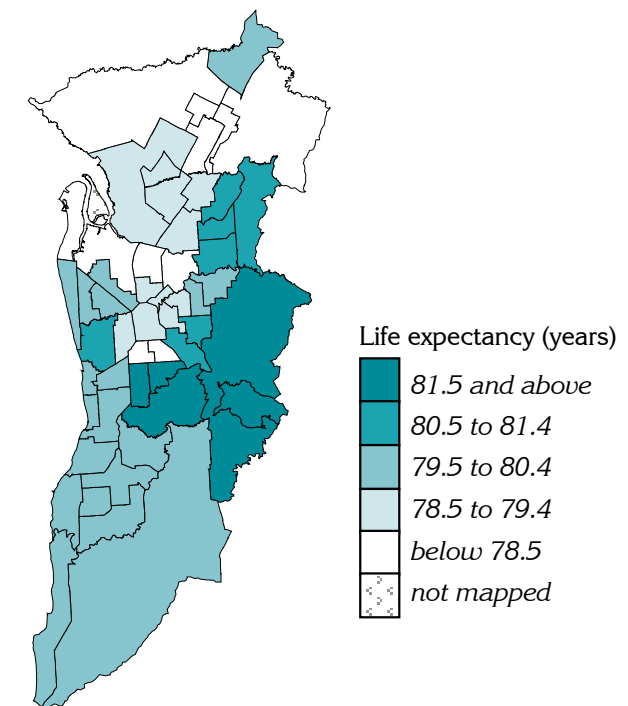
The low overall levels of life expectancy in South Australia for both Indigenous males and females, and the lack of improvement for Indigenous females, are cause for very grave concern.

## Geographic variation

### Adelaide

People around the city centre, as well as in the north-western and outer northern suburbs, are estimated to have the lowest life expectancy: these include the combined areas of Port Adelaide Enfield - Coast and Port Adelaide Enfield - Port (with a life expectancy of 77.0 years) and the City of Playford (77.7 years) (Map 22). See Note overleaf as to limitations of these estimates.

**Map 22: Life expectancy at birth, Adelaide, 1997-2000<sup>8</sup>**



<sup>8</sup> See Appendix for additional information on the production of estimates for these areas.

People living in the higher socioeconomic status areas to the east, north-east and south of the city are generally expected to live longer. For example, people in the City of Mitcham have an estimated life expectancy of 82.1 years, some five years higher than in Port Adelaide. This is a notable difference in life expectancy for people living in the same city and highlights the inequities that exist in Adelaide.

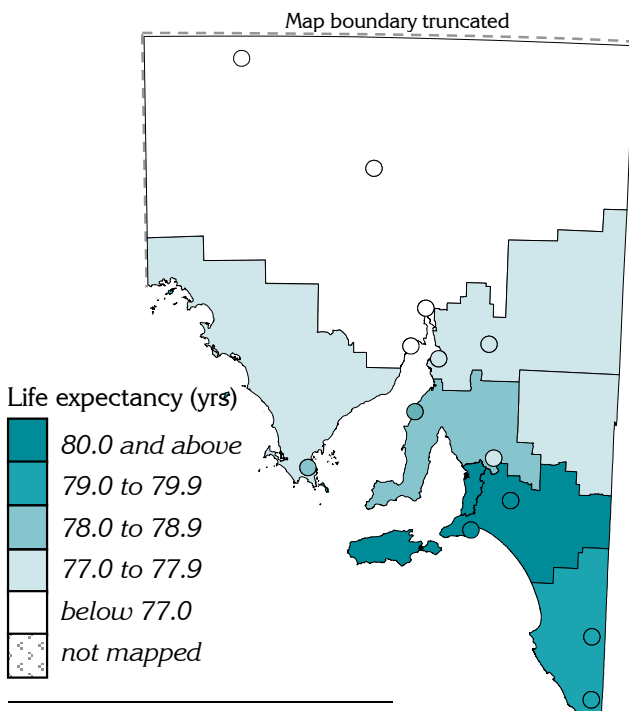
These estimates are likely to understate the size of the gap in life expectancy between areas, because of the concentration in some areas of residential aged care facilities. This is most evident in relation to Unley, where the very low estimate of life expectancy is likely to reflect the location of the Julia Farr Centre, other nursing homes and a number of hostels (catering for people with intellectual disability). These groups are likely to have shorter life expectancy than the general Unley population.

### Country South Australia

Areas in the far north of the State generally had the lowest estimated life expectancy at birth, with people from the Whyalla, Flinders and Far North Health Service Regions expected to live 76.5 years (Map 23). These areas have above average proportions of Aboriginal people; their low life expectancy is offset by higher life expectancy in other parts of the region, including in Roxby Downs.

People expected to live longest were those in the Hills, Mallee and Southern Region (80.0 years) and in the South East Region (79.2 years).

**Map 23: Life expectancy at birth, South Australia, 1997-2000<sup>9</sup>**



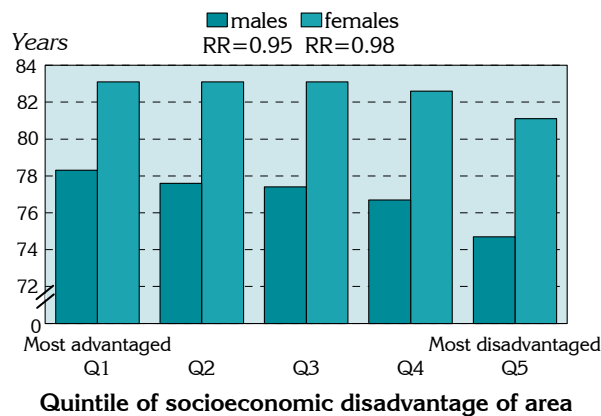
<sup>9</sup> See Appendix for additional information on the production of estimates for these areas.

## Socioeconomic status

### By sex

There is a gradient in life expectancy at birth for both males and females, with people from the most advantaged areas expected to live longer than those from the most disadvantaged areas. For males, the difference in life expectancy is 3.6 years between the most advantaged and disadvantaged areas, while for females it is somewhat smaller, at 1.9 years (Figure 34).

**Figure 34: Life expectancy at birth, by sex, South Australia, 1997-2000**

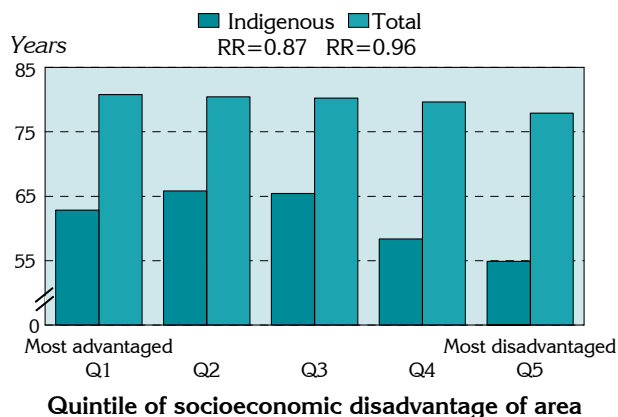


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

### By Indigenous status

Life expectancy is substantially lower in the Indigenous population than in the total population in each of the socioeconomic status groupings (Figure 35). This is particularly noticeable in the most disadvantaged areas of the State, where Indigenous people are estimated to have a life expectancy of 54.9 years, 23.0 years lower than for the total population. Indigenous people in the most advantaged areas are estimated to have a life expectancy 7.9 years longer than Indigenous people in the most disadvantaged areas of the State.

**Figure 35: Life expectancy at birth by Indigenous status, South Australia, 1997-2000**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Health and wellbeing: Smoking during pregnancy

*Smoking by mothers while pregnant causes problems for their babies, including premature births, low birthweight and being smaller at birth than they should be. These problems may affect the children through to adulthood, including higher risk of disability and developmental delay, lower intellectual outcomes and generally poorer health. Babies who are smaller at birth than they should be seem to have a higher risk of obesity, high blood pressure and coronary heart disease later in life.*

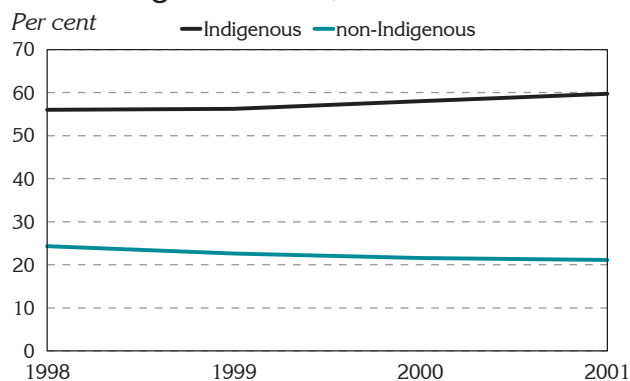
### Key points

- Almost one quarter of pregnant women in South Australia report smoking during pregnancy; however, the rate of smoking during pregnancy has decreased over the three years to 2001, from 25% to 21.9%.
- The rate for Indigenous women is almost three times higher than for non-Indigenous women, with over half reporting smoking during pregnancy.
- Rates are higher in the most disadvantaged areas than in the most well off areas, and higher among women in the country than in Adelaide.

### Trend

The proportion of women who reported smoking during pregnancy (smoking at first antenatal visit: see note, page 89) has declined, from 25% in 1998 to 21.9% in 2001, in line with trends in the general population. Within this overall decrease, the rate of smoking among non-Indigenous women also decreased, from 24.3% to 21.1% (**Figure 36**). However, of concern is that the rate for Indigenous women has increased, from 56.0% to 59.7%.

**Figure 36: Smoking during pregnancy by Indigenous status, South Australia**



### Geographic variation

#### Adelaide

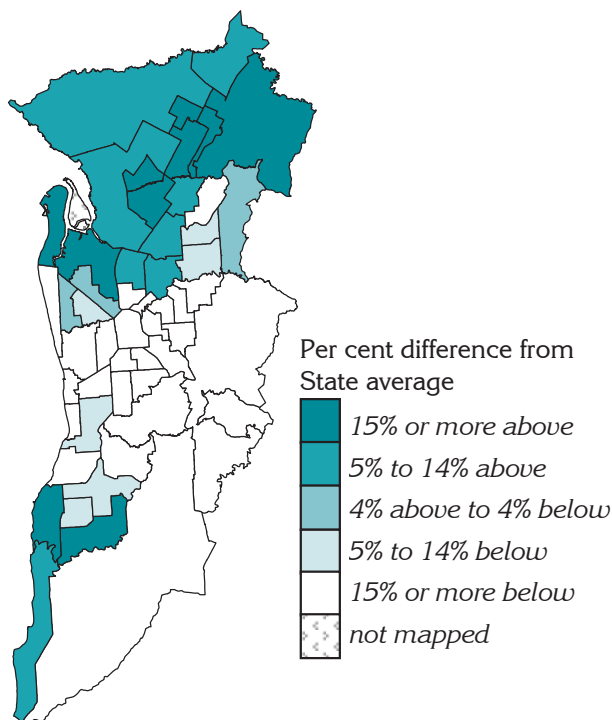
The distribution of women smoking during pregnancy maps a distinctive pattern across Adelaide, with the highest rates recorded in the outer northern and southern suburbs, as well as in some northern and north-western suburbs (**Map 24**).

Areas with smoking rates for pregnant women more than 40% above the State average include Playford - Elizabeth (60% above the State average) and Playford - West Central (45% above). Other areas with well above average smoking rates include Onkaparinga - North Coast (35% above), Playford -

East Central (33% above), Salisbury - Inner North (27% above) and Onkaparinga - Hackham (25% above). As noted elsewhere, these are areas with substantially disadvantaged populations.

The lowest rates are in Mitcham - North East (65% below average), Unley - East (63% below), Burnside - South West and Mitcham - Hills (both 62% below), Norwood Payneham St Peters - West (56% below) and Walkerville (52% below).

**Map 24: Smoking during pregnancy, Adelaide, 1998-2001**



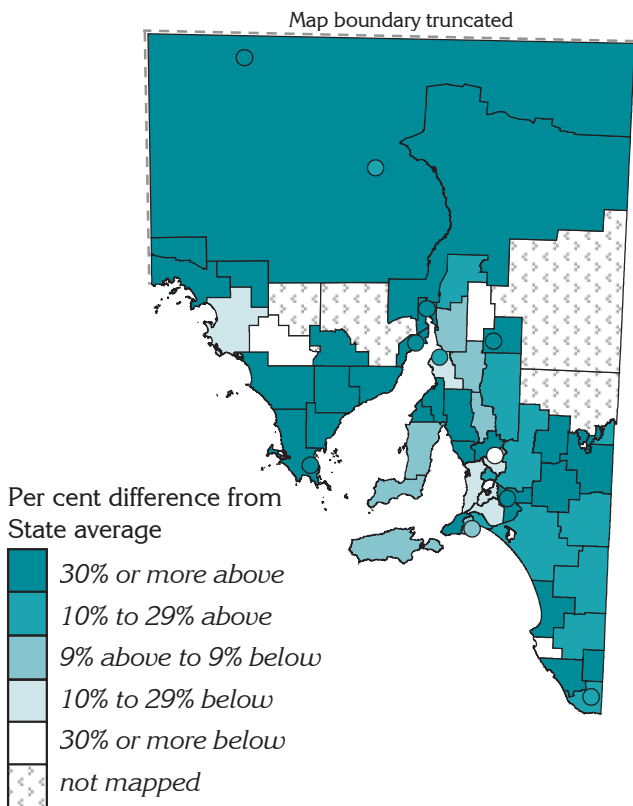
#### Country South Australia

Outside of Adelaide, rates of smoking during pregnancy were at least 50% above the State average for women in Lacedpede, Barunga West, Coober Pedy, Berri & Barmera - Berri and Berri & Barmera - Barmera and Peterborough, (**Map 25**).



The lowest proportions of women smoking during pregnancy were in Le Hunte (39% below average), Adelaide Hills Balance (36% below) and Robe (23% below).

**Map 25: Smoking during pregnancy, South Australia, 1998-2001**

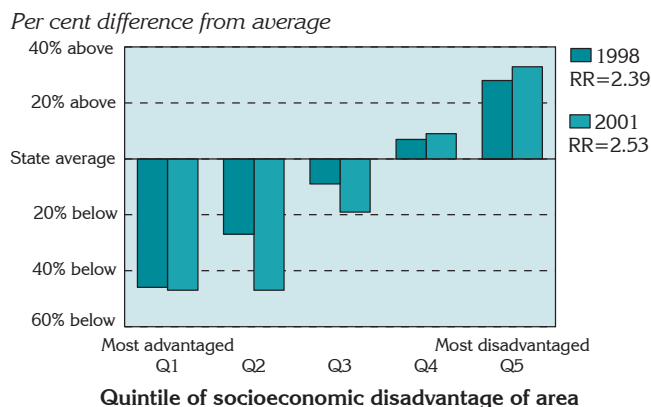


## Socioeconomic status

### Adelaide

The proportion of women smoking during pregnancy increased with increasing socioeconomic disadvantage in Adelaide in both 1998 and 2001, from the lowest rates in the most advantaged areas (Quintile 1) to the highest rates in the most disadvantaged areas (Quintile 5) (Figure 37).

**Figure 37: Smoking during pregnancy, Adelaide, 1998 and 2001**



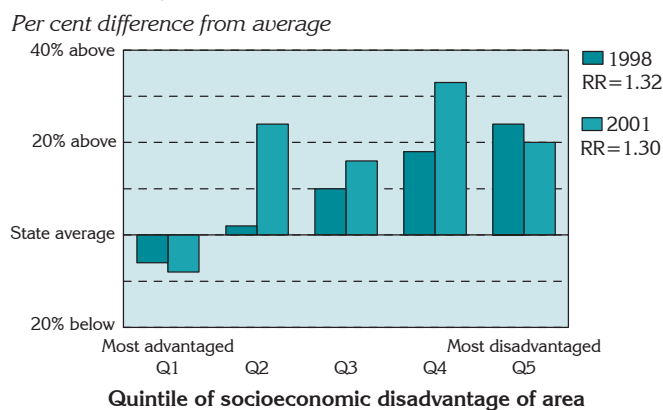
Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

The difference between the most disadvantaged and most well-off areas also increased, from 2.39 times higher in 1998 to 2.53 times higher in 2001.

## Country South Australia

Rates of smoking by pregnant women living in the country also increased with increasing socioeconomic disadvantage in both periods studied (Figure 38). However, the difference in rates between the most disadvantaged and advantaged areas decreased slightly, from 32% higher in 1998 to 30% higher in 2001.

**Figure 38: Smoking during pregnancy, country South Australia, 1998 and 2001**

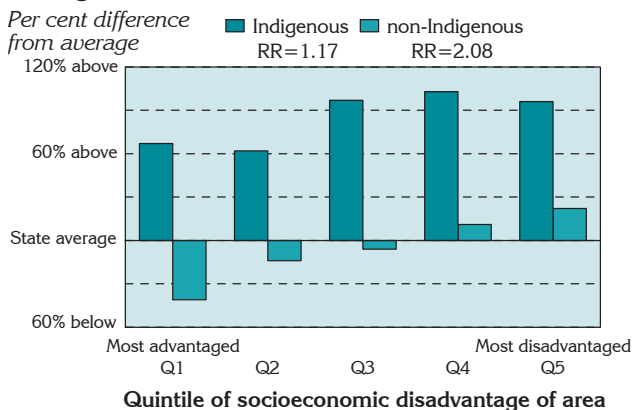


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Indigenous women

The proportion of Indigenous women smoking during pregnancy (59.7%) is substantially higher than for non-Indigenous women (21.1%) across all areas (Figure 39). However, the difference between rates in the most disadvantaged and most well-off areas is smaller, at 1.17 times higher for pregnant Indigenous women (compared with just over two times higher for pregnant non-Indigenous women).

**Figure 39: Smoking during pregnancy, by Indigenous status, South Australia, 1998-2001**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Health and wellbeing: Low birthweight babies

*Low birthweight is a widely used indicator of mortality and of morbidity among newborn babies. The significance of the relationship between low birthweight and mortality (of low birthweight babies) is striking. Research has shown that 14.6% of South Australian babies with low birthweight in 1994 were perinatal deaths, compared with a perinatal death rate of 0.99% in those with normal birthweight.*

### Key points

- In recent years, the proportion of low birthweight babies has increased in both Adelaide and the country.
- The proportion of babies with a low birthweight is greater in the most disadvantaged areas and the gap between the birth outcomes in these areas and the most well off areas is increasing.

### Trend

An infant may be small when it is born for two reasons. It may be born early (preterm), or it may be small for its gestational age (intra-uterine growth retardation (IUGR)). The factors contributing to low birthweight include socioeconomic status, size of parents and age of mother, number of babies previously born, mother's nutritional status, smoking, Aboriginality and illness during pregnancy.

Over the period from 1981-86 to 1995-97, the proportion of low birthweight babies rose in both Adelaide (from 6.1% to 6.9%, an increase of 12.2%) and the country (from 5.7% to 6.9%, an increase of 21.3%). The reasons for this are unclear, but may, in part, reflect changes in rates of multiple births and age at child bearing (at both older and younger ages).

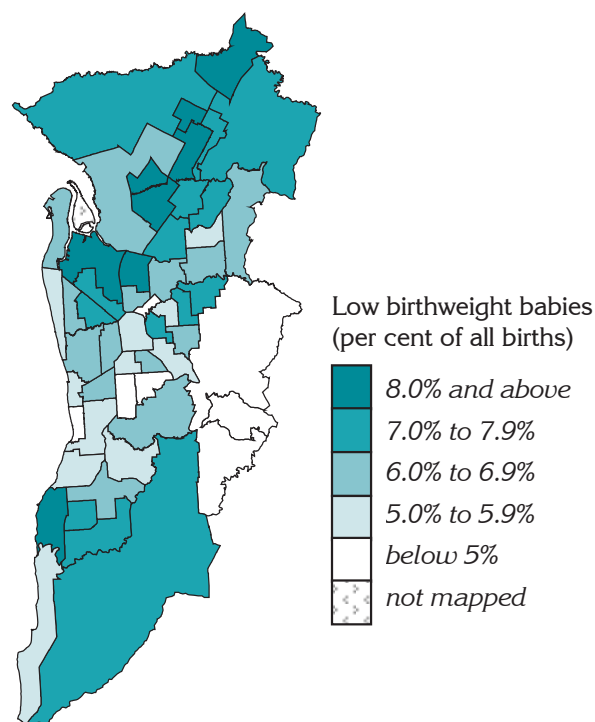
### Geographic variation

#### Adelaide

Areas with the highest proportions of babies born with a low birthweight are located in the inner north and north-western suburbs, as well as the outer north and some southern areas (**Map 26**). These included Onkaparinga - North Coast (9.1%), Playford - West Central (9.1%), Salisbury - Inner North (8.9%), Playford - Elizabeth (8.8%), Port Adelaide Enfield - Inner (8.3%), Gawler (8.3%), Port Adelaide Enfield - Port and Salisbury - Central (both 8.2%).

In contrast, relatively low proportions were recorded in areas scattered throughout the metropolitan area, including in Walkerville (2.6%), Adelaide Hills - Central (3.8%), Mitcham - West (4.2%), Holdfast Bay - South (4.6%), Mitcham - North-East (4.8%) and Adelaide Hills - Ranges (4.9%).

**Map 26: Low birthweight babies, Adelaide, 1995-1997**



#### Country South Australia

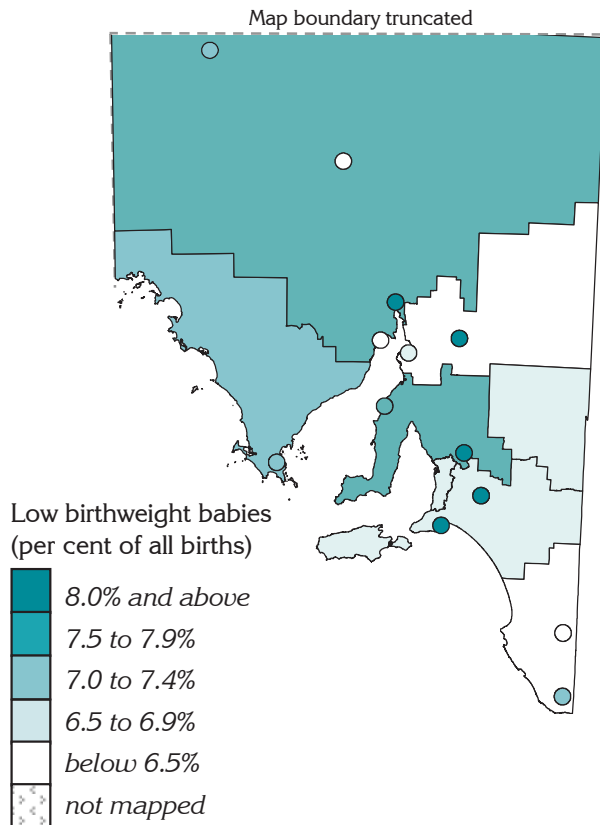
As the numbers of low birthweight babies are relatively small at an area level, they have been mapped by Health Region (see the Appendix for details). Yorke, Lower North and Barossa Health Region and Whyalla, Flinders and Far North Health Region had the highest proportions of low birthweight babies (both with 7.6%, **Map 27**). Eyre Peninsula Health Region also had an above average proportion, with 7.2%.

The lowest proportion of low birthweight babies, 6.2%, was recorded in the Mid North Health Region, with similar proportions in South East (with 6.3%), Hills, Mallee and Southern (6.7%) and Riverland (6.8%) Health Regions.



Walleroo had the highest proportion of low birthweight babies in the towns for which separate data were available, with 17.7% of babies in this category. Relatively high proportions were also recorded in the towns of Peterborough (with 9.3%), Murray Bridge (9.2%), Port Augusta (8.9%), Tanunda (8.8%) and Victor Harbor (8.3%). In contrast, Roxby Downs (3.1%), Naracoorte (5.2%), Whyalla (6.4%) and Port Pirie (6.7%) all had below average proportions of low birthweight babies.

**Map 27: Low birthweight babies, South Australia, 1995-1997**

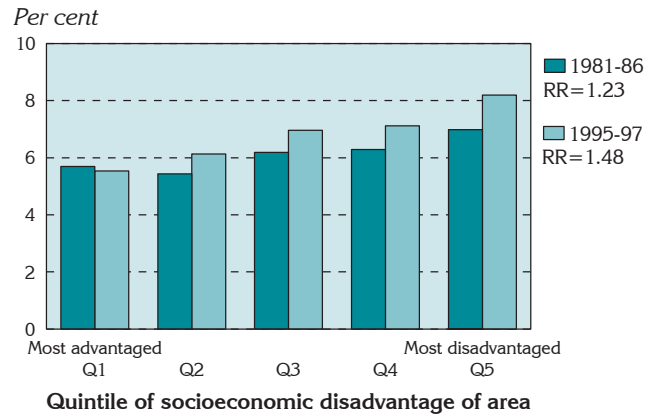


## Socioeconomic status

### Adelaide

In Adelaide, the extent of inequality in low birthweight between the most disadvantaged areas and the most well off areas increased from 23% higher in 1981-86 to 48% higher in 1995-97. This increase is due to the substantial increase in low birthweight babies in the most disadvantaged areas (up by 17.4%, compared with a small decline in the proportion in areas in Quintile 1) (**Figure 40**).

**Figure 40: Low birthweight babies, Adelaide, 1981-86 and 1995-97**

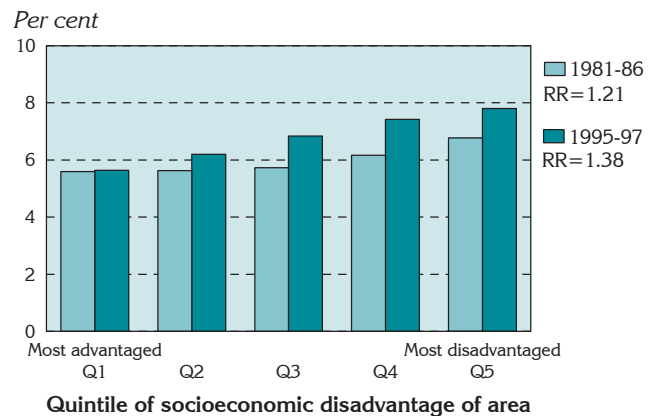


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

### South Australia

In South Australia<sup>10</sup>, the difference in low birthweight between the most disadvantaged areas and the most well off areas increased, from 21% higher in 1981-86 to 38% higher in 1995-97 (**Figure 41**).

**Figure 41: Low birthweight babies, South Australia, 1981-86 and 1995-97**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

### Indigenous infants

In 1999, infants born to Indigenous women in Australia were twice as likely to be of low birthweight (13.0%) than were those born to non-Indigenous women (6.5%). In South Australia, the gap was wider because the low-birthweight proportion was higher for infants of Indigenous women (16.8%) and slightly lower for non-Indigenous women (6.3%). Evidence suggests that the high prevalence of low birthweight in Indigenous communities is likely to be due to an excess of babies small for their gestational age, rather than an excess of preterm delivery.

<sup>10</sup> This chart is shown for the whole State, as there were too few low birthweight births to undertake the analysis for country areas alone.

## Health and wellbeing: Child abuse and neglect

*Child abuse and neglect are associated with serious physical, psychological and emotional health problems, both in the short and longer terms. They affect a significant number of children and young people in South Australia.*

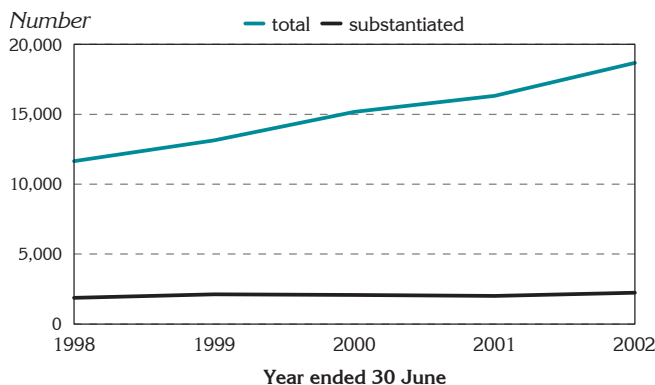
### Key points

- The number of notified cases of child abuse and neglect more than doubled from 1992 to 1999.
- While the number of these cases subsequently substantiated has remained relatively stable, rates of re-notification have increased, indicating that many children and young people are being 'recycled' through the child protection system.
- Higher rates of substantiated cases of child abuse and neglect are recorded for the country than for Adelaide, in the most disadvantaged areas, and among Indigenous children.

### Trend

From 1998 to 2002, the number of notified cases of child abuse and neglect almost doubled; however, substantiated cases remained relatively stable, rising slightly to 2,230 cases in 2002 (Figure 42). The increase in notifications of child abuse and neglect has been substantial in both Adelaide and country South Australia, up by 53.1% and 54.3%, respectively. Substantiated cases of child abuse and neglect for children and young people living in Adelaide increased by a much lower 19.8% and by 15.1% for those living in the country.

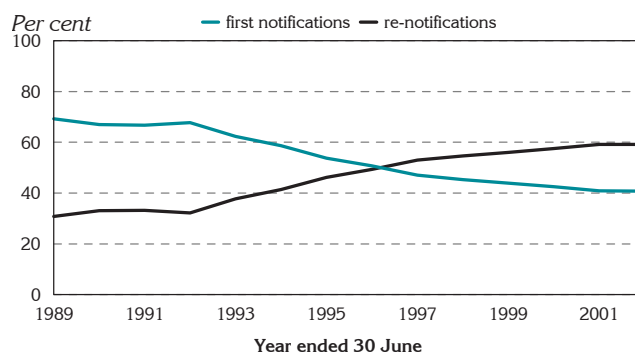
**Figure 42: Notified and substantiated cases of child abuse and neglect, South Australia**



The growing gap between the number of cases notified and those substantiated is concerning. The reduction in substantiated cases may reflect policy changes, but the rising trend in notified cases (both new and re-notified cases) is likely to indicate growing awareness and concern in the community. The increase in rates of re-notification (Figure 43) highlights the ineffectiveness of investigating allegations without available follow-up services that support families to provide for their children's needs; better resourcing of the tertiary welfare system; and more sustained and comprehensive solutions that address longstanding family issues earlier (such as

substance misuse, family violence, mental health problems, abusive parenting practices, chronic neglect and lack of material resources).

**Figure 43: First notifications and re-notifications as a proportion of all notifications of child abuse and neglect, South Australia**



### Geographic variation

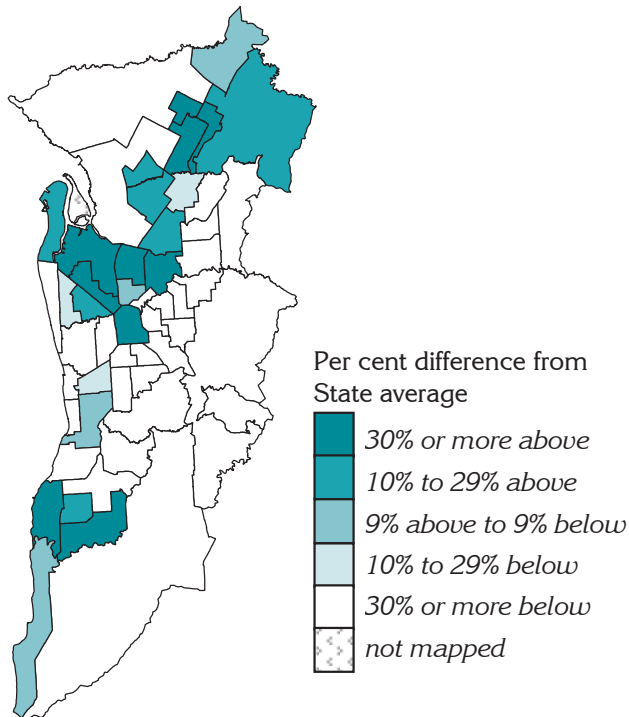
#### Adelaide

There were 5,786 substantiated cases of child abuse and neglect in Adelaide over the period from 1999 to 2002. The distribution of substantiated cases of child abuse and neglect across Adelaide closely follows the pattern of socioeconomic disadvantage shown in the earlier maps, with the highest rates in a number of north-western, inner and outer northern and outer southern suburbs (Map 28). Overall in Adelaide, substantiated cases were two per cent below the State average and a majority of areas had below average rates.

Areas with more than twice the State average number of cases were Port Adelaide Enfield - Inner, Onkaparinga - Hackham, Playford - Elizabeth and Port Adelaide Enfield - Port.

In areas with 20 or more substantiated cases of child abuse and neglect, the lowest proportions were recorded in Mitcham - Hills (82% below average), Unley - East (74% below) and Marion - South (67% below).

**Map 28: Substantiated cases of child abuse and neglect, children aged 0 to 19 years, Adelaide, 1999-2002**



### Country South Australia

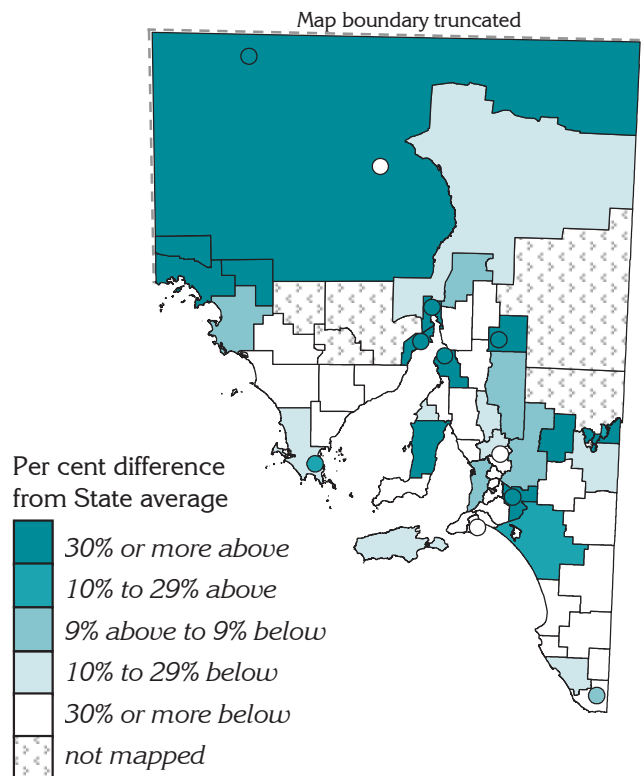
There were 2,760 substantiated cases of child abuse and neglect in country South Australia over the four years 1999 to 2002, a rate some ten per cent above the State average.

The towns and areas in the State's far north and west had the highest proportions of substantiated cases of child abuse and neglect (**Map 29**). It is likely that the greater proportions of Indigenous people living in these areas contribute significantly to the above average rate of substantiated cases.

Excluding the large number of areas with fewer than 20 substantiated cases, those with more than twice the State average number of cases were Coober Pedy, Unincorporated Far North, Port Augusta, Ceduna, Berri & Barmera - Berri, Port Pirie - City, Murray Bridge and Peterborough.

The lowest proportions were recorded in Adelaide Hills Balance (55% below average), Grant (53% below), Barossa - Angaston (49% below), Barossa - Barossa (42% below), Mount Barker - Central (37% below), Victor Harbor (34% below) and Wakefield (35% below).

**Map 29: Substantiated cases of child abuse and neglect, children aged 0 to 19 years, South Australia, 1999-2002**

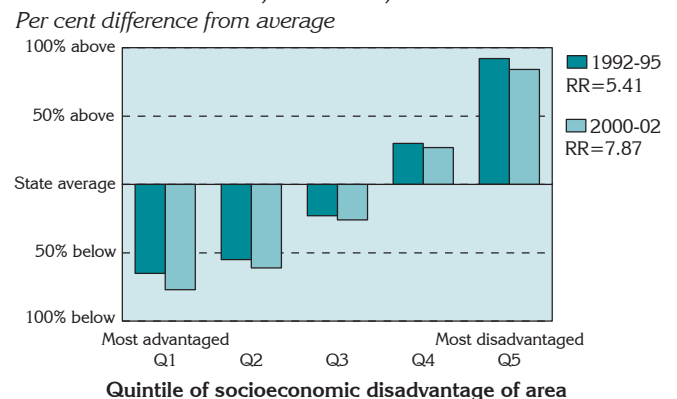


### Socioeconomic status

#### Adelaide

Between 1992-95 and 2000-02, the rate of substantiated cases of child abuse and neglect in Adelaide decreased substantially in the most advantaged areas (down by 34.0% in Quintile 1) and decreased slightly in the most disadvantaged areas (down by 3.9% in Quintile 5) (**Figure 44**). This resulted in the difference between the Quintile 5 and Quintile 1 areas increasing, from 5.4 times higher in the most disadvantaged areas in 1992-95 to a substantial 7.9 times higher in 2000-02 (an increase of 45.5%).

**Figure 44: Child abuse & neglect (0 to 19 years), Adelaide, 1992-95, 2000-02**

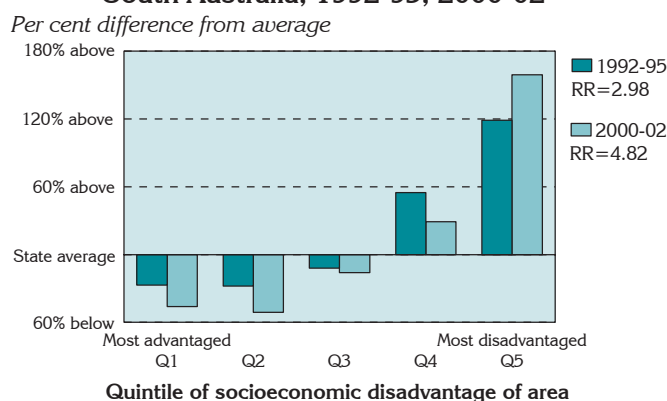


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## South Australia

The pattern for South Australia<sup>11</sup> is similar to that for Adelaide, with the rate of substantiated cases of child abuse and neglect decreasing from 1992-95 to 2000-02 in the most advantaged areas (down by 26.9% in Quintile 1), however an increase was recorded in the most disadvantaged areas (up by 18.2% in Quintile 5) (Figure 45). Similarly, the difference between the Quintile 5 and Quintile 1 areas increased, from 3.0 times higher in the most disadvantaged areas in 1992-95 to 4.8 times higher in 2000-02.

**Figure 45: Child abuse & neglect (0 to 19 years), South Australia, 1992-95, 2000-02**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Indigenous children

Aboriginal and Torres Strait Islander children are over-represented in the child protection system. The rate of Indigenous children who were the subjects of substantiations, for example, was more than seven times the rate for other children in South Australia in 2000/01. This is confirmed by the South Australian data presented here, which show that areas with the highest rates of substantiated cases of child abuse and neglect are also the areas where there are higher proportions of Indigenous residents.

The reasons for the over-representation of Aboriginal and Torres Strait Islander children in child protection substantiations are complex. The HREOC report, *Bringing Them Home*, examined the effects of child welfare policies on Indigenous people. It noted that some of the underlying causes of the over-representation of Aboriginal and Torres Strait Islander children in the child welfare system included the intergenerational effects of previous separations from family and culture, and the poorer socioeconomic status of Indigenous families.

<sup>11</sup> This chart is shown for the whole State, as there were too few child abuse and neglect cases to undertake the analysis for country areas alone.

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# Health and wellbeing: Overweight and obesity in childhood

*Overweight and obesity in childhood and adolescence can cause a wide range of serious physical and emotional health problems, and increase the risk of premature illness and death in adulthood.*

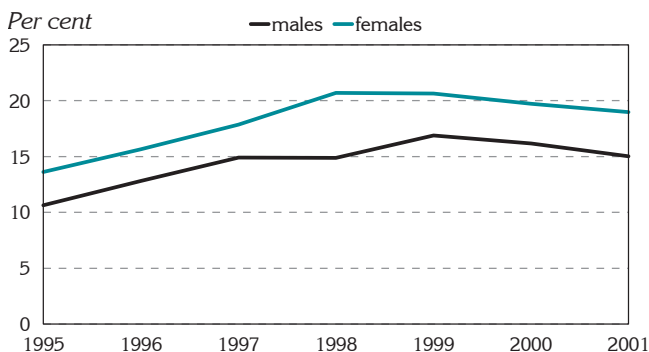
## Key points

- With almost one in five four year old children in South Australia being overweight or obese, Australian prevalence rates are high by international standards and represent a serious public health concern.
- Current rates represent a dramatic increase since 1995 of around 70% for both boys and girls at this age.
- Variations are evident across the State, with higher proportions of overweight or obese four year old children in the country than in Adelaide; and with the highest proportions found in the most disadvantaged areas.

## Trend

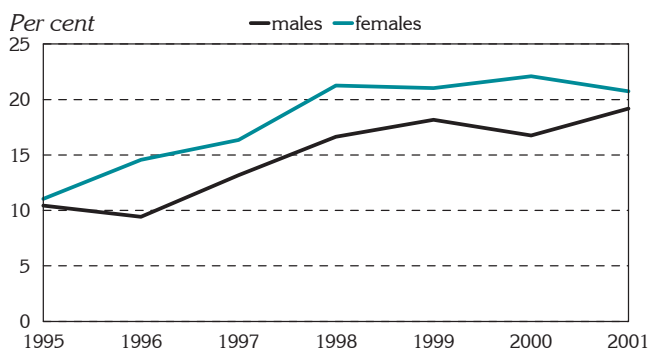
In 2000-01, 18.0% of four year old children were assessed as being overweight or obese: 17.2% in Adelaide and 19.7% in the rest of the State. The proportion of overweight and obese four year old children has increased markedly over the period from 1995 to 2001<sup>12</sup>. For Adelaide, the increase is from 13.6% to 19.0% for females and from 10.7% to 15.0% for males (Figure 46).

**Figure 46: Overweight and obese four year old children by sex, Adelaide**



Outside of Adelaide, the increase is from 11.0% to 20.7% for females and from 10.4% to 19.2% for males (Figure 47).

**Figure 47: Overweight and obese four year old children by sex, country South Australia**



## Geographic variation

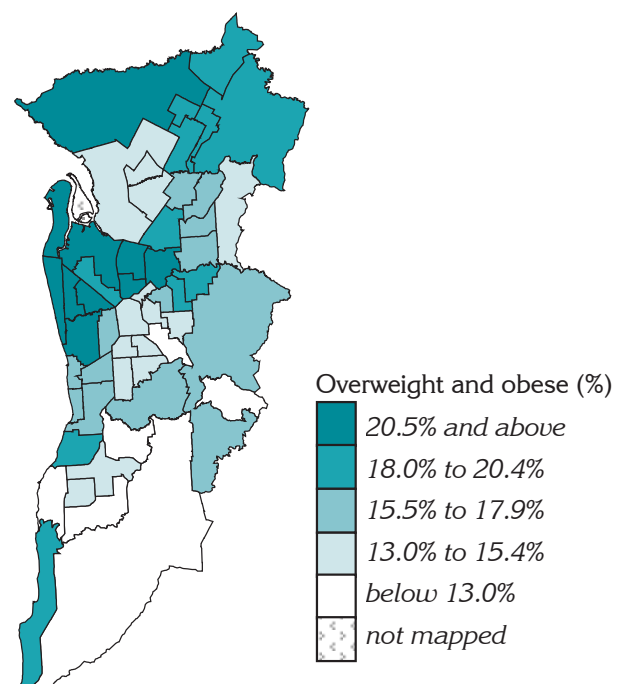
### Adelaide

The distribution of overweight and obese four year old children shows the highest proportions are largely in areas to the west, north and north-west of the city centre (Map 30). The areas include Charles Sturt - Inner West (23.1%), Port Adelaide Enfield - Coast (22.8%), Charles Sturt - Coastal (22.7%), Port Adelaide Enfield - East (22.3%) and Prospect (21.8%).

Areas with proportions of 13% or below were Adelaide Hills - Central (9.6%), Burnside - South-West (10.6%), Onkaparinga - Hackham (11.2%), Onkaparinga - Hills (11.6%), and Onkaparinga - North Coast (11.8%).

The distribution for females and males differs somewhat, with more overweight and obese four year old females than males in the most disadvantaged areas.

**Map 30: Overweight and obese four year old children, Adelaide, 2000-01**



<sup>12</sup> Obesity and overweight are defined in the Appendix.



## Country South Australia

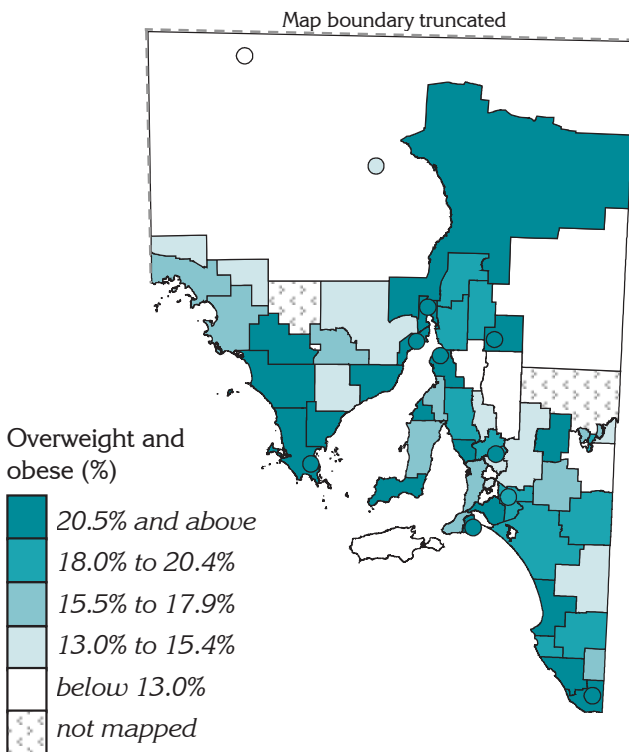
There is no clear pattern in the distribution of overweight and obese children in country South Australia (**Map 31**). The areas with the highest proportions of overweight and obese children are Lacepede (42.4%), Unincorporated Flinders Ranges (41.8%), Tumbly Bay (31.2%), Copper Coast (30.7%), Lower Eyre Peninsula (30.5%) and Wattle Range - West (30.1%).

The lowest proportions of overweight and obese children were in Coober Pedy (3.9%), Kangaroo Island (9.3%), Mount Barker - Central (10.7%), Loxton Waikerie - East (11.1%), Goyder (11.6%), Alexandrina - Coastal (11.7%), Adelaide Hills - North (11.8%) and Unincorporated Far North (12.4%).

The low proportions in some areas may reflect the high prevalence of underweight in Indigenous children living in these remote areas, as reported in numerous studies over recent decades. However, as the coverage in this collection of Indigenous children in some remote communities has been limited in the past, this may also reflect a lack of data.

The pattern of distribution is similar for females and males, although with a higher overall proportion of overweight and obese children than in Adelaide.

**Map 31: Overweight and obese four year old children, South Australia, 2000-01**



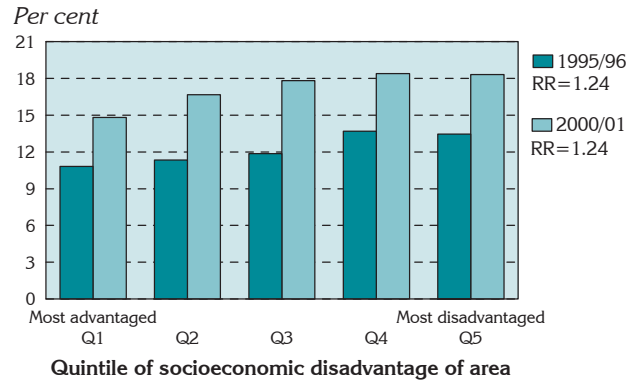
## Socioeconomic status

### Adelaide

For Adelaide, there is a marked gradient in both periods in the proportion of overweight and obese

four year old children, from the lowest proportions in the most well off areas, to the highest in the disadvantaged areas, with 18.4% in Quintile 4 and 18.3% in Quintile 5 in 2001/01. Over the five years from 1995-96, there has been a marked increase in the proportions of overweight and obese four year old children in each quintile (**Figure 48**).

**Figure 48: Overweight and obese four year old children, Adelaide, 1995-96 and 2000-01**

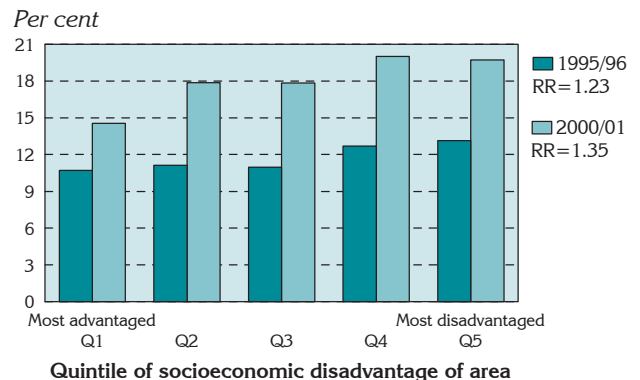


Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## South Australia

For South Australia as a whole, there is also a gradient in both periods, with increases in the proportions of overweight and obese four year old children in each quintile from 1995/96 to 2000/01. Over the two periods, the difference between the Quintile 5 and Quintile 1 areas increased, from 23% higher in the most disadvantaged areas in 1995-96 to 35% higher in 2000/01 (**Figure 49**).

**Figure 49: Overweight and obese 4 year old children, South Australia, 1995-96 and 2000-01**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

## Indigenous children

The 1994 National Aboriginal and Torres Strait Islander Survey found that rural Indigenous children were shorter and lighter than their counterparts in the capital cities. A more recent study showed that Aboriginal children living in urban areas included an excess of both overweight and underweight children.



## Access to services: Outside school hours care

*Outside school hours care services provide care for primary school children before and after school, and during school vacations, enabling parents to participate in the labour force. These services offer a range of social and recreational activities, and provide flexible care on a regular or casual basis.*

### Key points

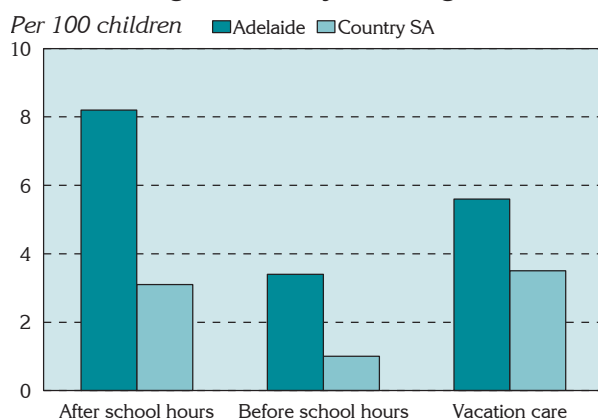
- A number of areas have very few or no after school hours care places, limiting opportunities for parents to participate in the work force, or to continue their education and training.

Outside school hours care services provide supervised care and activities for children aged 5 to 12 years before and after school, on pupil free days, and during school vacations. After school hours care services (the services shown in the map) provide care for primary school children after school has finished for the day, enabling parents to participate in the work force or to continue their education and training.

For South Australia as a whole, there were 6.7% after school hours places per 100 children aged from 5 to 12 years (8.2 per 100 in Adelaide; 3.1 per 100 in country SA); 3.1 before school places per 100 children (3.4 per 100 in Adelaide; 1.0 per 100 in country SA) and 5.8 vacation care places per 100 children (5.6 places per 100 in Adelaide; 3.5 per 100 in country SA). The total number of available outside school hours care places in South Australia in August 2003 was 10,603 for after school; 4,843 for before school; and 9,251 for vacation care. Note that children can be counted in more than one category.

Figure 50 shows outside school hours care places in Adelaide and country South Australia per 100 children aged 5 to 12 years in these areas.

**Figure 50: Outside school hours care places for children aged 5 to 12 years, August 2003**



### Geographic variation

The data mapped are limited to after school hours places, as these provide for the largest numbers of children. After school hours care places are shown

per 100 children aged from 5 to 12 years in the areas in which the places are located. The distribution of places is influenced by the location of schools. Some areas have more schools than others because of their location and for historical reasons.

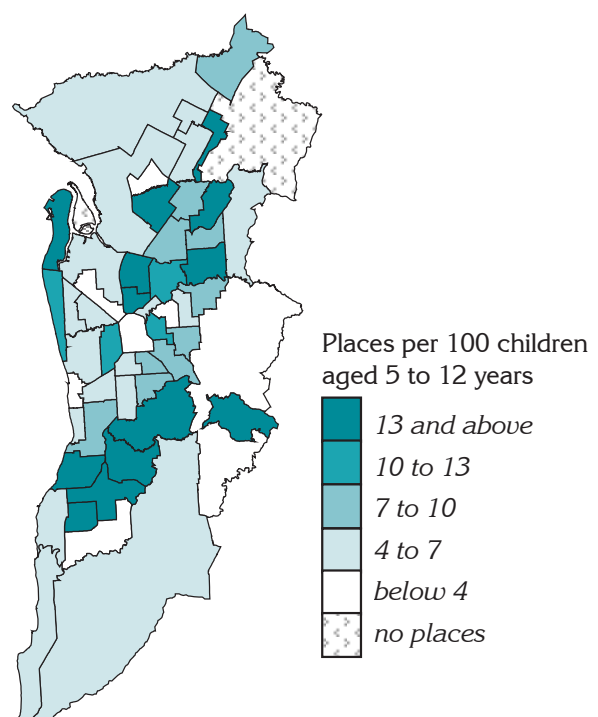
After school care places are not just for use by people in the area in which the school is located, as students cross the boundaries of the areas mapped to attend school: this is particularly so for students attending private schools.

### Adelaide

The distribution of after school hours care places differs from that in many of the other variables, not necessarily following any socioeconomic pattern. Perhaps the strongest association can be seen with the maps for labour force participation and participation in full-time education.

While after school hours care places are located in most areas, some areas have very high, and some have very low, numbers of places per head of population. (Map 32).

**Map 32: After school hours care places, Adelaide, August 2003**



The highest rates are in areas concentrated in two main locations: one running from Stirling in the south-east to Marion - South in the south-west, and the other to the north of the city.

In August 2003, the highest rates of after school hours places per 100 children aged from 5 to 12 years were in Mitcham - Hills (40.0), Tea Tree Gully - North (38.2), Prospect (33.3), Tea Tree Gully - South (27.0), Onkaparinga - Reservoir (21.4) and Onkaparinga - Woodcroft (20.8).

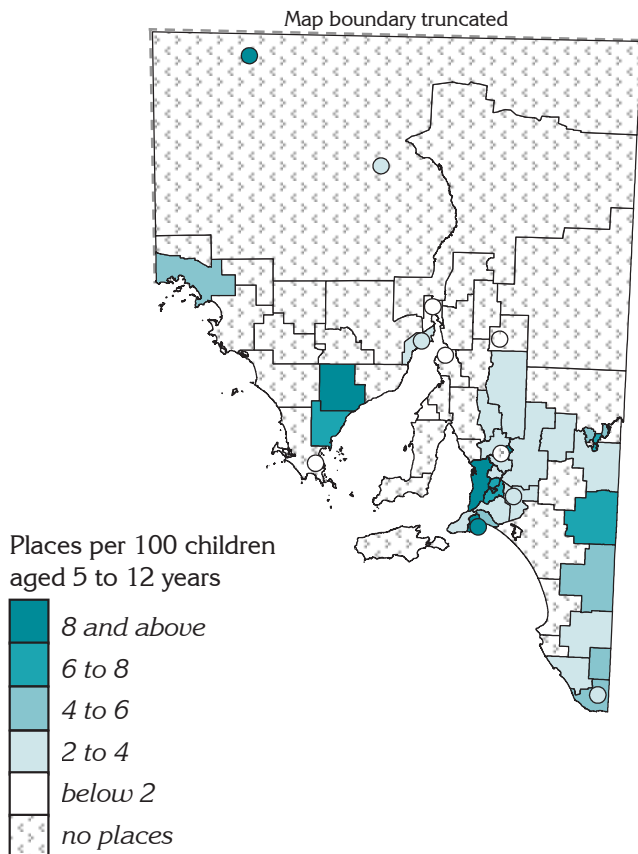
The lowest rates were in the areas of Holdfast Bay - North (2.2), Salisbury - Inner North and Norwood Payneham, St Peters - East (both 2.5), Onkaparinga - Hackham (2.6), and Adelaide Hills - Ranges and Charles Sturt - North-East (both 3.8).

### Country South Australia

The highest rates of after school hours places outside of Adelaide are in the areas of Barossa - Angaston (10.5 places per 100 children aged 5 to 12 years), Coober Pedy (8.9), Cleve (8.5), Victor Harbor (8.0), and Mount Barker Balance, Adelaide Hills Balance and Tumby Bay (all 7.2) (Map 33).

Many country areas did not offer any after school care places. Of those with after school hours places, the lowest rates are in Copper Coast (1.0 place per 100 children aged 5 to 12 years, Port Pirie - City (1.2), Port Lincoln and Port Augusta (both 1.8), Adelaide Hills - North (2.2) and Mid Murray (2.3).

**Map 33: After school hours care places, South Australia, August 2003**

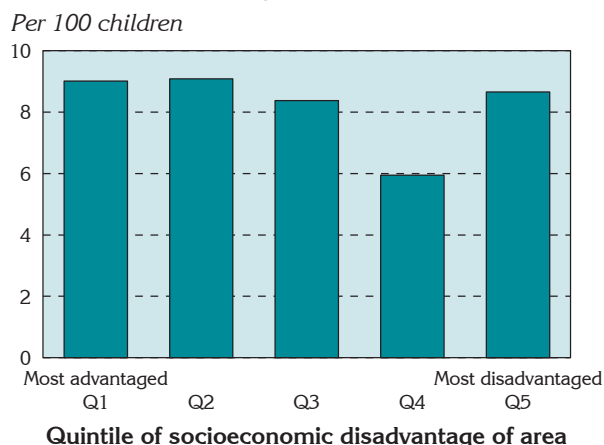


## Socioeconomic status

### Adelaide

There is no apparent pattern in the distribution of after school care places per 100 children aged from 5 to 12 years when analysed by socioeconomic status (Figure 51). The highest rates were in the two most advantaged areas (9.0 and 9.1), with a slightly lower proportion (of 8.7) in the most disadvantaged areas. The lowest proportion (of 6.0) was in the second most disadvantaged areas.

**Figure 51: After school hours care places for children aged 5 to 12 years, Adelaide, August 2003**



### South Australia

There were insufficient areas with after school hours care places for the analysis by socioeconomic status in country South Australia.

## Access to services: Booking lists for non-urgent surgery

*It is widely acknowledged that access to a public hospital for non-urgent (elective) surgery can involve waiting until resources are available. If access to these services is not the same across the population, then the publicly funded hospital system is failing to deliver equitably in terms of access to necessary, non-urgent surgery.*

### Key points

- The number of Adelaide residents who waited for six months or more for an elective surgical procedure at a public hospital has decreased, from 2,739 in 1992 to 2,194 in 2002.
- People in low socioeconomic status areas are twice as likely to be on booking lists than those in the most well off areas.
- People with private health insurance (with hospital cover) have another avenue to access elective surgery, other than through waiting on a public hospital booking list.

The major metropolitan public acute hospitals each maintain a list of people who have been assessed as needing non-urgent (i.e., elective) surgery – these lists are referred to as booking lists. People requiring urgent treatment for life-threatening conditions are not placed on a booking list but are admitted for treatment. Where the condition of a person on a booking list deteriorates to the extent that their condition become life threatening, they are admitted for treatment, regardless of their position (relative to others) on the booking list.

The booking lists do not cover private hospitals: people with private health insurance (which includes hospital cover) therefore have access to elective surgery at a private hospital.

### Trend

At 30 June 1992, 2,739 Adelaide residents had been on a booking list for six months or more. By 2002, this figure had dropped to 2,194, a decrease of 19.9%.

### Geographic variation

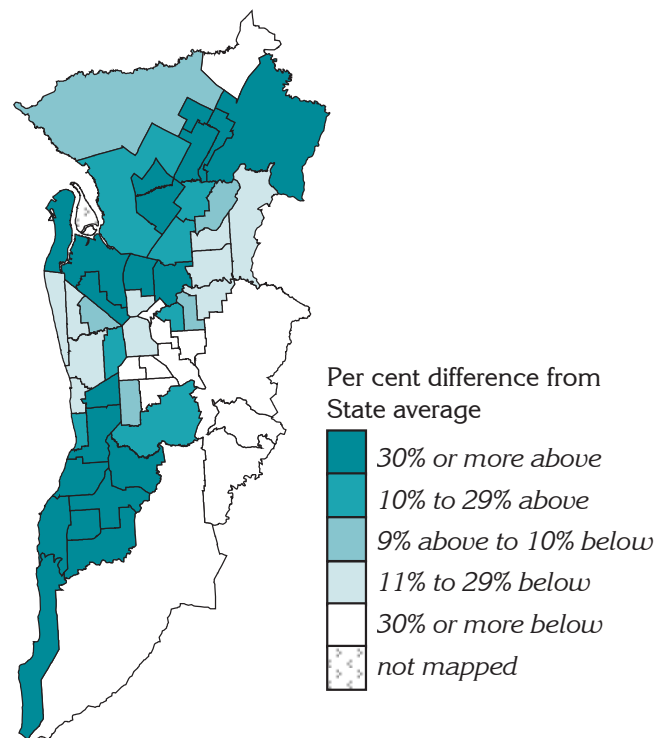
#### Adelaide

In 2002, the distribution of Adelaide residents who waited six months or more for a surgical procedure is similar to the pattern seen in many of the previous maps. The highest ratios were recorded in the outer northern and southern suburbs, as well as in the inner northern and western areas (**Map 34**).

The highest proportions were recorded in Playford - West Central (116% above the average), Playford - Elizabeth (110% above), Onkaparinga - Morphett (102% above) and Marion - Central (100% above).

The areas of Burnside - South-West (71% below the average), Adelaide Hills - Central (68% below), Burnside - North-East (63% below), Gawler (56% below) and Mitcham - North-East (55% below), recorded the lowest proportions for this variable.

**Map 34: Booking lists for elective surgery, public acute hospitals, Adelaide, 2002**



#### Country South Australia

There were 310 country residents on a booking list at one of the major metropolitan public acute hospitals which maintain these lists, representing 12.4% of the total on the lists. As hospitals in the country do not maintain these lists, it is unclear whether or not country residents are waiting for elective procedures at these hospitals; and, if they are, what the length of wait and the socioeconomic status of those waiting might be.

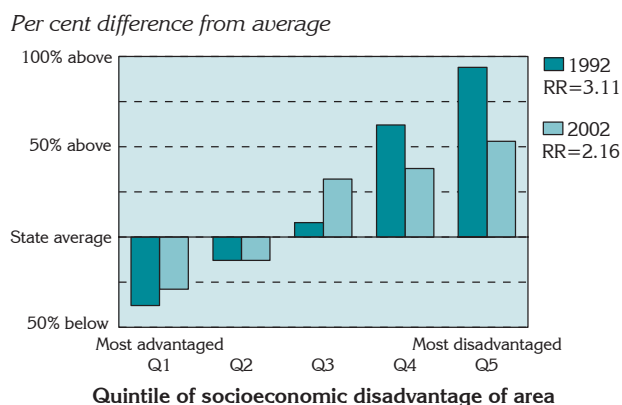
## Socioeconomic status

### Adelaide

People in Adelaide's most disadvantaged areas are over-represented on the booking lists, reflecting their poorer access to these services.

In 1992, people living in the most disadvantaged areas of Adelaide were on a booking list more than three times (3.1) those in the most well off areas. In 2002, the difference had decreased but, at just over twice the level in the most well off areas (2.1), it is still substantial (Figure 52).

**Figure 52: Hospital booking lists, Adelaide, 1992 and 2002**



Note: RR (rate ratio) is the ratio of the rate in Quintile 5 to the rate in Quintile 1.

The differentials in total admissions and admissions for a surgical procedure in 2002 between the most disadvantaged areas and the most well off areas were similar (both 2.3 times) to the differential in admissions from the booking list (2.1 times). That is, it would appear that the most disadvantaged groups were no more disadvantaged in their access to elective surgery than is shown by their use of public hospitals in general. However, this ignores the reality that people with private health insurance (which includes hospital cover), or the resources to pay for the procedure, have access to elective surgery at a private hospital in respect of a wide range of procedures, reducing their reliance on the public hospital system, and the necessity to wait.

## Other indicators: Those for which there are no small area data

### Homelessness

*Homelessness is strongly linked to disadvantage, with poverty and unstable housing resulting in a much higher risk of a lack of education and unemployment. Homelessness is linked to poor health and wellbeing through poor nutrition and inadequate hygiene, exposure to the elements, increased risk of communicable diseases, and fatigue. People without stable housing are at significantly higher risk of physical or sexual abuse, violence and emotional trauma. There are barriers to accessing health care for homeless people, including difficulties in the prevention and treatment of illness.*

#### Key points

- Homelessness is a significant problem for adults and for young people in South Australia.
- Homelessness is strongly linked to disadvantage, with poverty and unstable housing resulting in a much higher risk of poor health, a lack of education, unemployment and difficulty in accessing services.

At the 1996 Census, there were an estimated 6,837 homeless people in South Australia, a rate of 48.1 homeless people per 10,000 population: by 2001 this had increased to 7,586 homeless people, a rate of 51.6 per 10,000 population. For comparison, the rates for the other States/ Territories are shown in **Table 2**.

**Table 2: Homelessness by State/ Territory, 1996 and 2001**

*Rate per 10,000 population*

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
1996	49.4	41.0	77.3	48.1	71.5	43.9	523.1	40.3
2001	42.4	43.6	69.8	51.6	64.0	52.4	288.3	39.6

Of the total number of homeless in South Australia, 2,394 were estimated to be aged 12 to 18, a rate of 17 per 1,000 young people. Queensland, Western Australia and Tasmania had slightly higher rates, with rates in New South Wales, Victoria and the Australian Capital Territory lower. As is the case for the overall homeless population, the Northern Territory had the highest homeless youth rate (69 per 1,000 young people). These estimates of youth homelessness were derived from a national census of homeless school students (using the ABS' definition of homelessness: see Appendix), with the addition of students who had been homeless within the last three months.

### Consumption of fruit and vegetables

*Evidence shows that people whose usual diets are high in fruit, vegetables, and other plant foods have lower risks of chronic disease (including coronary heart disease, stroke, diabetes mellitus (type 2) and certain cancers). Adults are recommended to eat two to four serves of fruit, and four to eight serves of vegetables each day.<sup>13</sup>*

#### Key points

- The consumption of fruit and vegetables in South Australia falls well below recommended levels.
- Overall, people from the most disadvantaged areas consumed the least fruit and vegetables.

The 2002-03 South Australian Monitoring and Surveillance System (SAMSS) survey found that over half (56.3%) of people contacted had consumed less than the recommended two serves of fruit per day (**Table 3**). Of some concern is that one fifth of the respondents consumed either no fruit (5.3%) or less than one serve (15.9%) per day. Less than one fifth (17.0%) of respondents met the recommended level for consumption of vegetables (four to eight serves per day). One third (33.9%) reported eating two serves of vegetables and almost one quarter (24.4%) reported eating one serve per day.

<sup>13</sup> A serve of fruit equals one medium piece or two small pieces of fruit or one cup of diced pieces. A serve of vegetables is one half cup of cooked vegetables or one cup of salad.

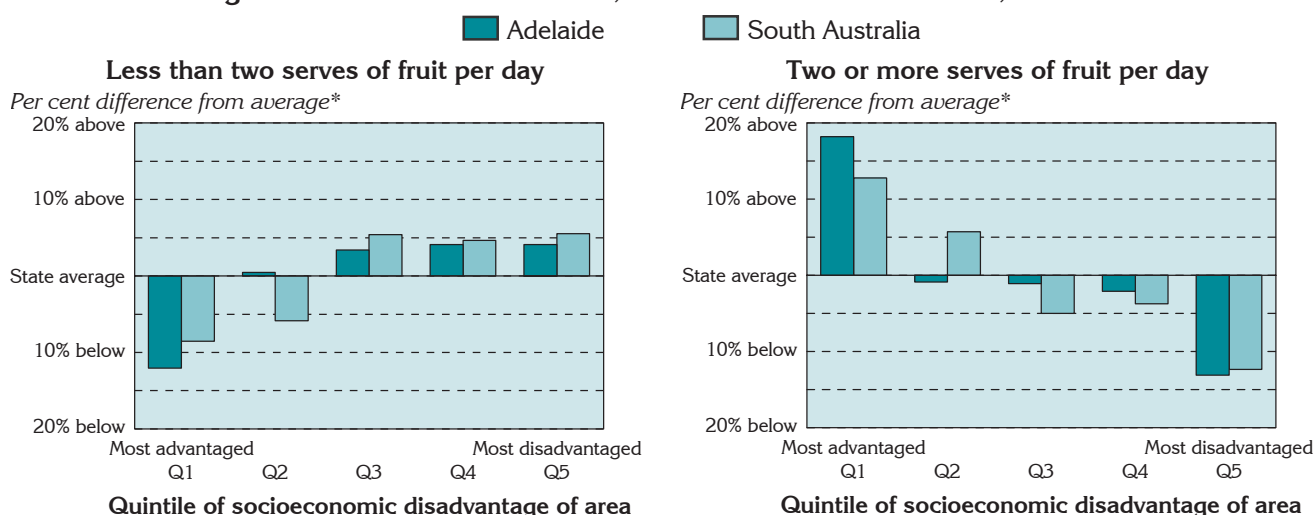
**Table 3: Estimated fruit and vegetable intake, South Australia, 2002-03**

*Per cent*

Total serves per day	Fruit	Vegetables
None	5.3	0.7
<1 serve	15.9	5.3
1 serve	35.1	24.4
2 serves	26.4	33.9
3 serves	12.0	18.5
4 serves	3.2	11.1
≥ 5 serves	2.1	5.9
Don't know	-	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

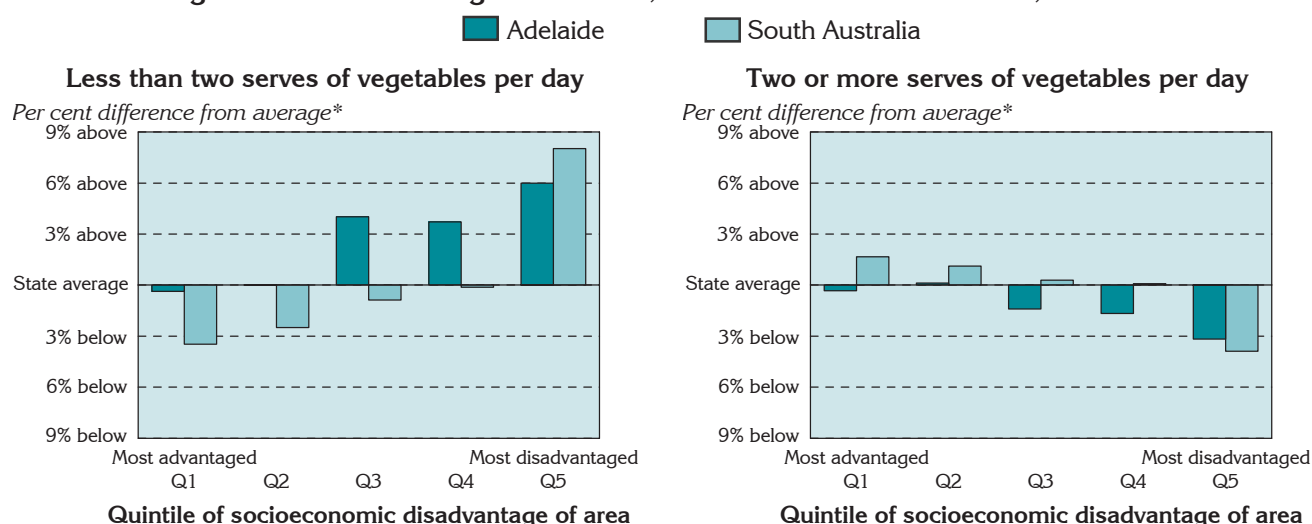
In both Adelaide and South Australia, there is a socioeconomic pattern evident in the consumption of fruit, with people in the most disadvantaged areas being more likely (than those in the most advantaged areas) to consume less than two serves of fruit (4.1% above the State average in Adelaide; and 5.5% above in South Australia) and less likely to consume two or more serves (13.1% below the State average in Adelaide; and 12.4% below in South Australia) (Figure 53).

**Figure 53: Estimated fruit intake, Adelaide and South Australia, 2002-03**



The consumption of vegetables shows a less significant socioeconomic pattern than that of fruit, although people in the most disadvantaged areas were more likely (than those in the most advantaged areas) to consume less than two serves of vegetables (6.0% above the State average in Adelaide; and 8.0% above in South Australia) and less likely to consume two or more serves (3.2% below the State average in Adelaide; and 3.9% below in South Australia) (Figure 54). It should be noted that consuming more than two serves of vegetables is still well below the recommended four to eight serves per day, however there were insufficient numbers to present the consumption of four or more serves.

**Figure 54: Estimated vegetable intake, Adelaide and South Australia, 2002-03**



## Section 5

### Summary and next steps

**In this section ...**

- Summary of findings
- Addressing health inequalities
- Action following on from this report
- Sources of information



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## Summary of findings

The information presented in the previous section identifies substantial inequalities in the distribution of income, employment and labour force participation and participation in education. These inequalities are evident both in Adelaide and across the rest of the State.

The patterns of variation in the maps and graphs of the indicators of health and wellbeing are also strikingly similar to those shown for social and economic inequalities. The extent of this association between social inequality and health and wellbeing in Adelaide is supported by further analysis.

The most striking associations within Adelaide are between areas characterised by high proportions of low income families, high unemployment rates and relatively high proportions of Indigenous population, and areas where rates of child abuse and neglect and smoking during pregnancy are also high. Notably, these areas also have the lowest rates of participation in schooling at age 16 and low labour force participation. An overview of the results of this additional analysis is shown in **Table 4**, with the detailed version in the Appendix.

The summary measure of disadvantage, the Index of Relative Socio-Economic Disadvantage (IRSD), is also highly correlated with high rates of child abuse and neglect and smoking during pregnancy.

There is also evidence in the country of an association at the small area level between the indicators of social inequality and the indicators of health and wellbeing; however, the association is weaker than in Adelaide, in part because of the smaller populations in these areas. The most notable associations are between areas characterised by high unemployment rates and high proportions of dwellings without a motor vehicle, and areas where rates of child abuse and neglect and smoking during pregnancy are high. Areas with low rates of participation in schooling at age 16 and areas with relatively high proportions of Indigenous population also have high rates of smoking during pregnancy. An overview of the results of this additional analysis is shown in **Table 5**, with the detailed version in the Appendix.

**Table 4: Key relationships between indicators for Statistical Local Areas in Adelaide**

Variable	Low income families	Children in low income families	School participation at age 16	Labour force		Dwellings without a motor vehicle	Indigenous population
				Participation	Unemployment		
Offences involving apprehension	S	M	S	S	S	M	S
Gambling	W	W	W	W	W	W	W
Smoking during pregnancy	S	S	S	M	S	-	S
Low birthweight babies	M	M	W	W	W	-	M
Child abuse & neglect	S	S	S	S	S	M	S
Overweight & obese	W	W	W	-	-	-	W
Relative disadvantage (IRSD <sup>1</sup> )	S	S	M	M	S	W	S

**S: Strong association; M: Moderate association; W: Weak association; see *Additional Data* section of the Appendix**

<sup>1</sup> IRSD: Index of Relative Socio-Economic Disadvantage; see *Notes on the Data* section of the Appendix

**Table 5: Key relationships between indicators for Statistical Local Areas in country South Australia**

Variable	Low income families	Children in low income families	School participation at age 16	Labour force		Dwellings without a motor vehicle	Indigenous population
				Participation	Unemployment		
Smoking during pregnancy	-	M	-	-	W	W	W
Child abuse & neglect	-	-	-	W	W	W	-
Overweight & obese	-	-	W	-	-	-	-
Relative disadvantage (IRSD <sup>1</sup> )	M	W	W	M	M	S	M

**S: Strong association; M: Moderate association; W: Weak association; see *Additional Data* section of the Appendix**

<sup>1</sup> IRSD: Index of Relative Socio-Economic Disadvantage; see *Notes on the Data* section of the Appendix

## Addressing health inequalities

In conclusion, these findings paint a concerning picture of social inequality in this State, particularly for Aboriginal South Australians who are the most disadvantaged citizens in the population. It is a situation that is both avoidable and unfair.

However, it is not an inevitable one. The findings in this report highlight areas where further action is needed and there is much that can be done.

There is a growing body of knowledge that can provide direction for developing policies to reduce inequities. The socioeconomic environment is a powerful and potentially modifiable factor and public policy is a key instrument to improve this environment, particularly in areas such as housing, taxation and social security, work environments, urban design, pollution control, educational achievement, and early childhood development <sup>(5)</sup>.

The following four stories are examples of how information about inequalities can underpin the planning and implementing of projects aimed at reducing existing inequities.

### 1. Housing improvements and health in New Zealand

People who live in overcrowded and poorly heated housing tend to have more respiratory complaints and more admissions to hospital.

Research into housing insulation and health being undertaken in Wellington, New Zealand is benefiting many disadvantaged older people. The research program is working in partnership with community and other organisations to undertake a study of the health benefits of insulated homes <sup>(1)</sup>.

Baseline data collected in the winter of 2002 showed that about 70 per cent of participants taking part in the study reported that their houses were cold, and about 40 per cent said they were cold and damp “mostly” or “always” during the winter months <sup>(2)</sup>.

Information is now being collected about how adding insulation can improve the living conditions and health of elderly people on low incomes for whom heating costs are a large part of a tight budget. The aim is to provide convincing evidence to government of the health and economic benefits of supporting schemes to retrofit insulation into existing homes. Funding and resources for the study have come from the University, the government, the local council, community organisations and private enterprises <sup>(2)</sup>.

## 2. Educational strategies to increase school retention rates in SA

In South Australia currently, only two thirds of our young people who start year 7 complete year 12. The proportion of Aboriginal young people finishing year 12 is even lower. Some regions – both metropolitan and regional – also have very poor school retention rates.

The SA Government has developed a \$28.4 million plan, funded over four years, to help lift the school retention rate back to the level of the early 1990s, when 93 per cent of the State's secondary students were finishing Year 12 <sup>(4)</sup>. The State average since has dropped to 69.5 per cent.

*Futures Connect* is an initiative aimed at increasing learning opportunities for students through a collaborative, cross-agency approach to services that assist young people to make the transition from school. It links with and complements the range of other strategies used to enhance the provision of education and care for children from birth through the primary years of schooling <sup>(7)</sup>.

Schools across the state will draw upon the *Futures Connect* strategy to help young people in mapping options and directions that will assist their transition from adolescence to adulthood. Schools will work with students to ensure that curriculum provision meets their needs and connects them with their community and future aspirations <sup>(7)</sup>.

*Futures Connect* will result in schools and local service providers joining their resources to provide young people and their families with:

- improved career and transition services;
- more opportunity to learn about and work in their local industries;
- greater access to community support and services for students while at school and beyond; and
- increased education and training choices.

These alternative approaches to education and training also rest on social partnerships involving industry, local community and education providers <sup>(3)</sup>. They depend upon different kinds of relationship building, between students and teachers, between the social partners and between central and local government agencies. These reconfigured relationships are aimed at sustaining innovative learning practices, particularly for those young people and adults ‘at risk’ of social exclusion – those who fall between the cracks of employment, education and training <sup>(3)</sup>.

### 3. Aboriginal family projects in country areas

There are a number of pilot programs, operating within Aboriginal communities in South Australia, which promote models of good practice. These include the Port Augusta Families project, the Kinship program, and the Murray Bridge Aboriginal Family Team – all funded through the then SA Department of Human Services.

The Port Augusta Aboriginal Families Project is a joint venture undertaken by the South Australian Housing Trust, Family and Youth Services and the Port Augusta Hospital. It is aimed at providing support and care to Aboriginal families who are experiencing many serious challenges and who have been involved with numerous agencies over a long period of time <sup>(6)</sup>. More recently, the Project has begun working in a preventative way with Aboriginal families who have single problems and involvement with one agency.

The Project has proven to be a highly innovative service that has enhanced individual and community wellbeing. Results have shown that, through the project, there has been a very significant and positive impact on children - more are attending school regularly and are in better health <sup>(6)</sup>. The Project has been very successful with a number of other outcomes, namely, the prevention of children entering foster care; increased stability with housing; repayment of debt; reduction of child abuse; discharging of criminal justice orders; and reductions in gambling, drug and alcohol abuse and domestic violence <sup>(6)</sup>.

The Project aims to apply the principles of empowerment, participation and partnership in a creative way that is acceptable to Aboriginal families in Port Augusta <sup>(6)</sup>. Furthermore, a rapidly increasing knowledge base has allowed staff to continue to trial new and creative interventions with increased levels of competence and effectiveness <sup>(6)</sup>.

### 4. Youth Building Playford program: Creating employment pathways

The Youth Building Playford (YBP) program aims to build self-confidence and self-esteem in disadvantaged young people, through the development of building skills and teamwork, thereby leading to greater employability and motivation.

The program is funded by the Department of Further Education, Employment, Science and Technology - Office of Employment (SA Government). It is a partnership between the City of Playford, Para Worklinks Inc., Regency Institute

of Technical and Further Education (TAFE) and Playford Partnership.

The Peachey belt, located around Peachey Road, in Elizabeth West and Davoren Park, is well known as an area that has experienced long term disadvantage. The aim of the program is to focus on young unemployed people living in and around this area, with a target group of 15 to 19 year olds not enrolled at school. Common barriers among young people living in and around the Peachey belt are low levels of literacy and numeracy; lack of skills; lack of transport access; fragmentation in training and employment; and inter-generational unemployment.

The YBP program seeks to address the general barriers highlighted above through mentoring, training, the development of skills, building trust and being involved in building projects, such as the construction of pergolas and paving. An important element of the course is teamwork, as well as training to focus on improving literacy and numeracy. Evidence has shown that this approach helps to build self-confidence and self-worth in the participants, leading to greater employability and motivation.

The purpose of the YBP project is to:

- create pathways for school leavers into the construction industry;
- enable Peachey belt residents to access programs which they would not otherwise access;
- generate employment outcomes for Peachey belt residents; and
- build collaborative relationships between providers in the training and employment industries.

Since the program started in February 2003, 51 individuals have commenced the program. Of these, 9 have commenced full-time pre-vocational courses at TAFE; 14 are attending training to gain a driver's licence (paid for by the program); 13 are employed; and 17 have left the program without completion.

The success of some participants has been inhibited by peripheral problems, such as homelessness, legal problems, drug and alcohol use and illness. This has resulted in some young people experiencing difficulties in completing the course. Comments from such participants include, "How do you expect me to think about getting a job when I don't even have a place to live?". Rather than just asking them to leave the program, the YBP training providers respond by continuing to work with these young people, with some moving onto an alternative program, the Job

Pathways Education and Training program. This has meant that successful completion of the program is more likely to be achieved through the one-on-one support provided to the young people in assisting them to work out many of the peripheral issues in their life with the option of returning to YBP through a more focussed and supportive approach.

The benefits of the program are apparent, with the young people freely commenting at the graduation ceremonies about the journey being a positive and rewarding experience for them. Some young people mentioned that the YBP program was the first time in their life that they had ever completed something. They reportedly found pleasure in being able to stand back and look at what they had built; and there was 'real ownership' among them.

For success among young people in training and employment, whether from marginalised or non-marginalised communities, it is important to offer flexibility, support and individualised attention. The experiences of the YBP program provide a good example of how such a model is working to achieve improvements in the lives and future prospects of young people.

## Action following on from this report

This report, *Inequality in South Australia – key determinants of wellbeing, Volume 1: The Evidence*, will be distributed widely to South Australian agencies and communities to assist in the development of an understanding of the extent and impact of social inequalities across the State; and to encourage the direction of greater resources to reduce these inequalities.

A second volume, containing examples of projects and programs that have been successful in addressing social inequality, will be published later in 2004. The projects and programs to be included in this companion volume will be identified through sector specific consultation workshops by an across government advisory group.

The Department of Health and Department for Families and Communities will use these two documents to redirect financial and human resources towards this end.

For further information, those interested should contact:

Chief Policy Officer  
Innovation and Development Team  
Health Promotion SA  
Department of Health

Phone: 08 8226 6329; Fax: 08 8226 6133.

## Sources of information

The following resources were used to underpin the information presented in this Section.

1. Howden-Chapman P. *University and Community Partnerships; linking research and policy*. Paper presented at the 35<sup>th</sup> Public Health Association of Australia conference, Brisbane 28 September to 1 October 2003.
2. University of Otago. He Kitenga Research Highlights - Research into housing insulation and health. At [http://www.otago.ac.nz/research/he\\_kitenga/p42.html](http://www.otago.ac.nz/research/he_kitenga/p42.html) (accessed 20 October 2003).
3. Seddon T. *Social Partnerships: Changing Practices of Government and Community Interventions*. Paper presented at the Technology Colleges Trust Vision 2020 - Second International Online Conference 13-26 October and 24 November-7 December 2002. At <http://www.cybertext.net.au/tct2002/keynote/printable/seddon%20-%20printable.htm> (accessed 20 October 2003).
4. Rann M. \$28.4 million to improve school retention rates. Press release 13 October 2003. At <http://www.ministers.sa.gov.au/Minister/MediaFrame.asp?article=2022&MinisterID=2> (accessed 20 October 2003).
5. Halfon N and Hochstein M. Life course health development: An integrated framework for developing health, policy, and research. *The Milbank Quarterly* 2002; 80(3): 433-79.
6. McCallum S. *Review of the Port Augusta Aboriginal Families Project*. DHS: June 2000.
7. Department of Education and Children's Services (DECS). *Futures Connect – Our strategy for young people leaving school*. DECS: 2003. At <http://www.leadersdesktop.sa.edu.au/community/files/links/Futures%20Connect%20Strategy%20Brochure.pdf> (accessed 20 November 2003).

## Section 6

# Appendices

### **In this section ...**

- Notes on the data
- Notes on the indicators and data sources
- References for sections 4 to 6
- Additional data: correlations
- Keys to areas mapped

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## Notes on the data

### Data

#### Measure used

Data are presented as percentages or rates per population. Where it was considered that variations in the age distribution of the population for any variable could affect the analysis, the data have been indirectly age standardised. However, in order to make the data easily understood, standardised ratios have been converted to percentages (above or below the State rate for that data item).

#### Quintile of socioeconomic disadvantage of area

In the absence of any direct measure of socioeconomic status in the datasets from which the indicators of health and wellbeing have been constructed, the socioeconomic status (as determined by the Index of Relative Socio-Economic Disadvantage<sup>14</sup> (IRSD) score for the area) of the address has been used as a proxy measure: the address is the usual resident address of the person to whom the statistic refers (eg. of women smoking during pregnancy; of overweight and obese children). The areas for which the data were available (postcode or SLA) were ranked by their IRSD score. They were then allocated to one of five groups (quintiles) of approximately equal population. Thus, Quintile 1 comprises the areas with the highest IRSD scores (highest socioeconomic status, or most advantaged, areas) and Quintile 5 comprises areas with the lowest IRSD scores (lowest socioeconomic status, or most disadvantaged, areas). The IRSD used was the 1996 Census version, as the 2001 Census version (described on pages 31 and 32) was not available until the final stages of the project.

### Maps

The maps show data for the usual resident address of the person to whom the statistic refers (eg. of women smoking during pregnancy; of overweight and obese children).

Where possible, data have been mapped for Adelaide (the Adelaide Statistical Division) and South Australia. The areas mapped are Statistical Local Areas (SLAs). In Adelaide, four of the 54 SLAs are equivalent to a Local Government Area (LGA) and the remainder are smaller than an LGA (with the exception of Torrens Island, which is not incorporated as an LGA). In the map of South Australia in 2001 (the date of the boundaries used for most indicators), 41 of the 71 SLAs are equivalent to an LGA, ten LGAs are split into smaller SLAs and the nine areas not incorporated as LGAs – the unincorporated areas of the State – are also SLAs. On this State map, Adelaide is shown as one area (i.e., SLAs within Adelaide are not shown) and the remainder of the State (referred to as the country, or country South Australia) is shown by SLA.

Note: For South Australia, the indicator for low birthweight babies is shown by Health Regions, which are aggregations of SLAs, because of the small number of cases at an area level.

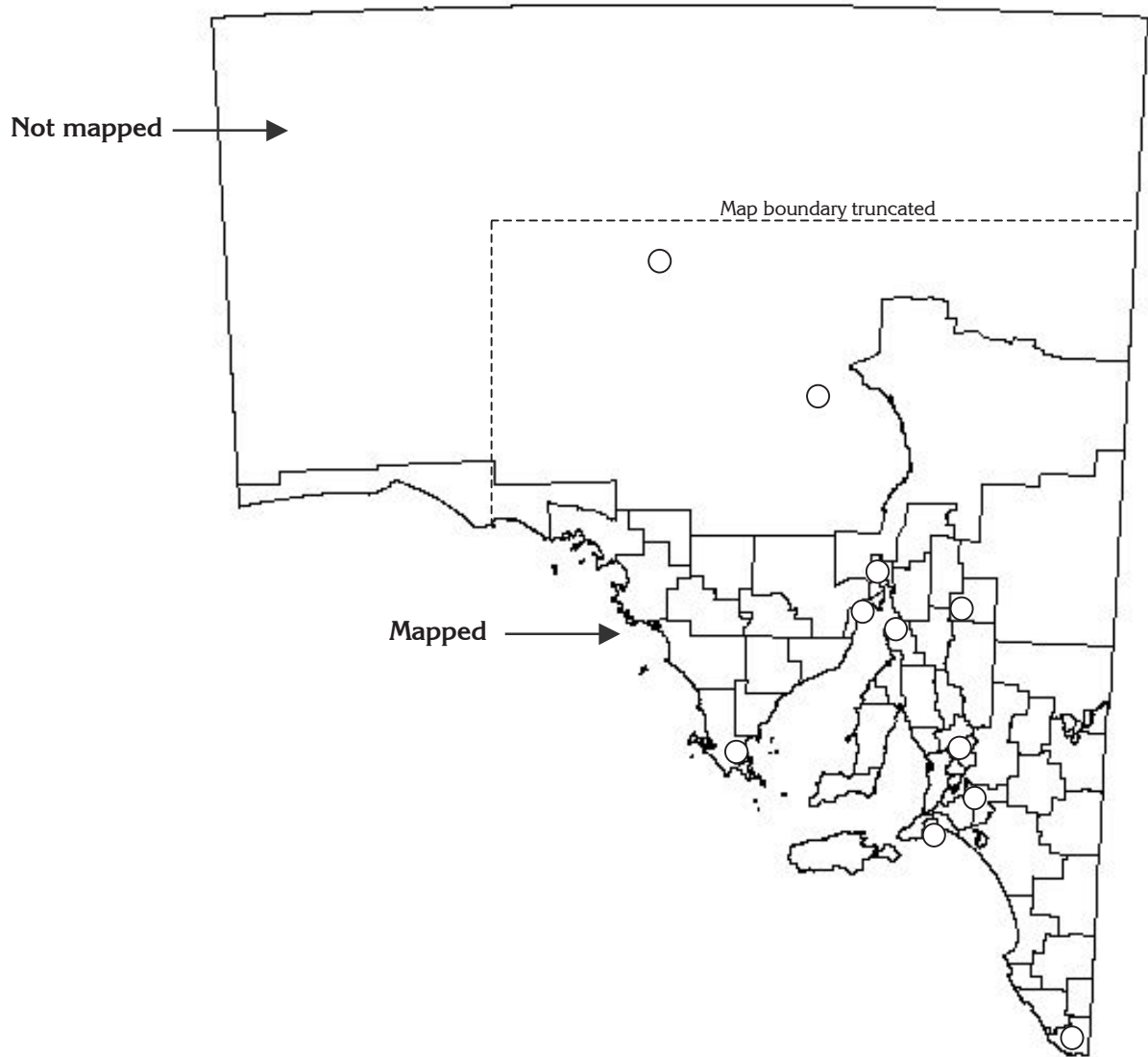
In the maps, some areas are shown as data 'not mapped'. For Adelaide, this only affects Torrens Island, whose small population and any associated events (eg. unemployment, births) are included with Port Adelaide Enfield – Port. In the country, the unincorporated areas frequently are shown as data 'not mapped' e.g., for child abuse and neglect and overweight and obese four year old children.

The map of South Australia is shown as smaller than its actual size. Part of the northern and western area has been cut off – truncated – to allow the remainder of the State, where there are more separate areas to map, to be shown more clearly. The map on the next page shows the extent of the area removed.

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<sup>14</sup> The IRSD is a summary measure of socioeconomic status, calculated from data collected at the 1996 Population Census.

Area mapped for South Australia



## Notes on the indicators and data sources

### **Disadvantage: Summary measure of socioeconomic disadvantage**

The Index of Relative Socio-Economic Disadvantage is one of four socioeconomic indexes produced from the 2001 Census. The data to produce the Index at this area level were purchased from the ABS.

It is derived, using principal component analysis, from attributes such as low income, low educational attainment, high unemployment, jobs in relatively unskilled occupations and variables that reflect disadvantage, rather than measure specific aspects of disadvantage (e.g., Indigenous status and separated/divorced). Full details of the composition and construction of this and the other three indexes are available from the Information Paper, Socio-Economic Indexes for Areas, Australia, 2001 ABS Cat. No. 2039.0.

### **Income: Low income families**

Low income families are defined as families with annual incomes of less than:

- \$16,000 (less than \$300 per week) at the 1991 Census
- \$21,000 (less than \$400 per week) at the 1996 Census
- \$26,000 (less than \$500 per week) at the 2001 Census.

Note: The use of low income as a measure of poverty is compromised to an extent by the fact that it is influenced by differences in family size, age structure and housing tenure and costs (Glover & Tennant 1999). While the variable will normally capture most welfare dependent families, it will also include sizeable numbers of families for which low income is linked to their retirement status. When interpreting the figures for low income families over time, it should be noted that the indicators of low income used are based on categories of income available from each Census selected to approximate the levels of income (including rent allowance) of recipients of the sole parents' pension and the unemployment benefit.

The data in the Indigenous section for this indicator were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*. The remainder of the data presented are from the 1991, 1996 and 2001 ABS Censuses.

### **Income: Children living in low income families**

The number of children aged under 16 years and living in families receiving an income support payment (Sole Parent or Disability Support Pension; unemployment, sickness or special benefits; or the Family Tax Benefit B) from the Department of Family and Community Services (DFaCS) is expressed as a percentage of all children aged under 16 years.

The data do not include children in families receiving unemployment payments under the Community Development Employment Program, a job creation scheme for Aboriginal communities. To this extent, the percentages of children in some areas will be understated: this is particularly likely to be the case in remote areas of the State, where Indigenous people are a larger proportion of the population.

The pension and benefit data are from DFaCS and for the years 1989, 1992, 1996 and 2001.

### **Education: School retention and participation**

The number of students in Year 10 who stay on to Year 12 is estimated by dividing the total number of full-time students in Year 12 by the total number of full-time students in Year 10. This figure is expressed as a proportion and is referred to as the apparent retention rate.

As retention rates are not available by student address, participation rates have been calculated for young people at ages 14, 15, 16 and 17 years of age. These rates show the estimated proportion of young people at these ages that are full-time students in secondary school, totalling 93.5% (65,307 persons) of persons aged 14 to 17 in full-time education. Excluded from the data analyses were persons attending other educational institutions, including 1.5% (1,074 persons) aged 14 to 17 attending TAFE full-time; 1.9% (1,352 persons) attending other schools (eg business colleges); and 3.0% (2,123 persons) where the institution was not stated or not applicable. The analyses by geographical location and socioeconomic status were also for full-time participation in secondary school education only.

The statement in the key points section that:

*Young people completing Year 12 are more likely to make a successful initial transition to further education, training and work than early leavers* is from the Dusseldorp Skills Forum (2003).

In the section on trend in school retention rates, the research, which states the two major reasons influencing low retention rates in young people, is from Teese and Polesel (2003), and the longitudinal research is from Marks et al. (2003). The comments regarding the higher participation rates of girls and their relationship to labour market outcomes are from Collins et al. (2000).

The school retention data are from the ABS publication *Schools Australia, 2001*. The school participation data are from the 2001 ABS Census.

The data in the Indigenous section were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*.

### **Labour force: Participation**

Labour force participation is calculated as the proportion of the civilian population aged 15 years and over who were either employed or unemployed (see below for definition of unemployment).

The data presented for the time series were supplied by Centre for Labour Research, University of Adelaide. The data mapped were extracted from *Small Area Labour Markets, Australia, March Quarter 2003*, Department of Employment and Workplace Relations.

The data in the Indigenous section were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*.

### **Labour force: Unemployment**

The unemployment rate measures the number of unemployed persons, expressed as a proportion of those in that age group who are participating in the labour force (either working or seeking work).

For the time series data, the 'official' rate shown in the figure is the trend rate of unemployment obtained from ABS labour force statistics. The 'estimate' rate is the comprehensive rate of unemployment, produced by S Barrett, PhD student (unpublished thesis) at the Centre for Labour Research, University of Adelaide. The comprehensive rate is the trend unemployment rate plus estimates of hidden unemployment (caused by changes in the participation rate) and visible under employment (resulting from the loss of full-time jobs and the creation of part-time jobs).

Indigenous people receiving unemployment benefits under the Community Development Employment Project scheme (CDEP), an employment scheme for Aboriginal people, generally report in the Census that they are 'employed'. The number of people receiving benefits under each project by geographical location was provided by the Aboriginal and Torres Strait Islander Service, and has been included in the estimates presented for the March 2003 analysis.

The data presented for the time series were supplied by Centre for Labour Studies, University of Adelaide. The data mapped were extracted from *Small Area Labour Markets, Australia, March Quarter 2003*, Department of Employment and Workplace Relations.

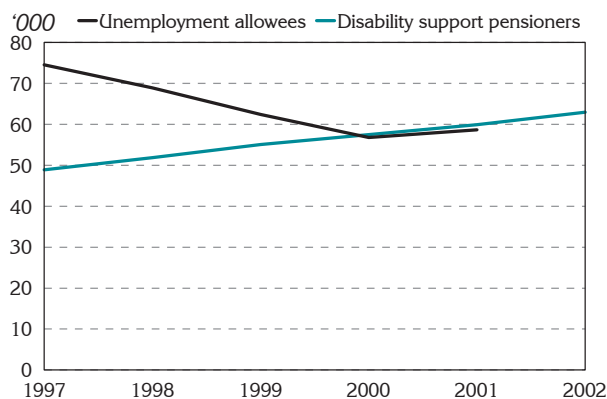
The data in the Indigenous section were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*.

#### **Additional information:**

Reference is made on page 43 to the fact that, in 2001, there were more people in receipt of a Disability Support Pension (DSP) in South Australia than were receiving an unemployment allowance. This is a reversal of the situation in earlier years (see **Figure A1** overleaf). A similar situation applied in New South Wales and the Australian Capital Territory in 2001, and in Victoria, the numbers were equal, having also shown a striking reversal. The relevance of the DSP to this discussion of unemployment – and what the true level of unemployment might be – of the number of people receiving a DSP, and the growth in this number since 1990, is the widely held view that some who have gone on to the DSP would in earlier years have received the unemployment benefit.

The data on unemployment allowees and disability support pensioners are from the ABS publication *Australian Social Trends*, Catalogue no. 4102.0, 1998 to 2002.

Figure A1: Unemployment allowees and disability support pensioners, South Australia



Note: The disability support pensioners' data for 2000 were not available; the data point has been interpolated.

### Transport: *Dwellings without a motor vehicle*

The number of occupied private dwellings without a motor vehicle garaged or parked on Census night is expressed as a proportion of all occupied private dwellings.

The data presented are from the 1991, 1996 and 2001 ABS Censuses.

### Housing costs: *Rent assistance*

References for the introductory statement on housing affordability and rent assistance are the SACOSS Submission to the Housing Management Council for the State Housing Plan, June 2003; the ACOSS Submission to the Productivity Commission Inquiry on housing affordability, October 2003; and the ABS publication, *Census of Population and Housing: Selected Social and Housing Characteristics, Australia, 2001*.

The data presented are Centrelink Income Units, expressed as 'renters', in receipt of Rent Assistance, from June 1999 to June 2002, and provided by Centrelink. The denominator used is the number of households.

### Crime: *Offences involving apprehension*

References for the introductory statement on offences are Boni (1999) and Hawkins et al. (1998).

The data presented are of the number of offences recorded on apprehension reports, by the area of address of the alleged offender. This will usually be where they lived, but could include a prison address, or other place where people are detained. The data are for people aged 10 years and over.

Data were also available for the total number of offences and a summary of these is shown below.

All data were provided by the Office of Crime Statistics and Research, on approval from the SA Police Department.

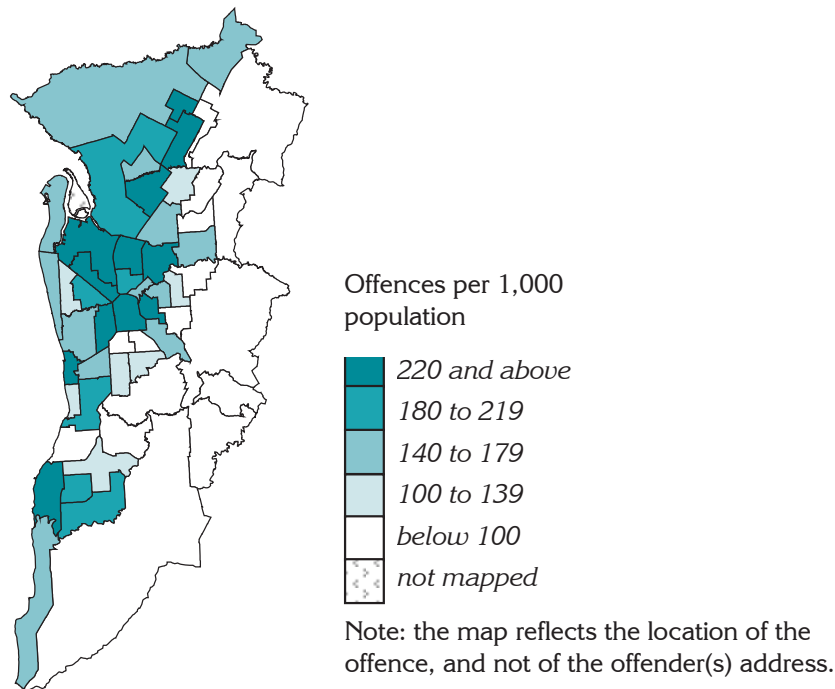
### Total offences (which may or may not result in apprehension)

Total offences include offences against the person (including sexual offences), offences against property, robbery and extortion, offences against good order and drug offences.

There were 290,752 offences in South Australia in 2002/03. The highest offence rates in Adelaide are concentrated in areas to the north and north-west of the city, as well as in the outer north and south (**Map A1**). By far the highest rate was recorded in the City of Adelaide, with 1,872 offences per 1,000 population. This reflects the higher incidence of offences in areas where groups of people gather (eg places of entertainment, shopping malls).

Readers should note that these data reflect the location of the offence, and not of the offender(s) address.

Map A1: Total offences, Adelaide, 2002/03



### Gambling: *Expenditure and losses*

The time series shows proportion of household expenditure going towards gambling for South Australia, with comparisons to New South Wales and Victoria for the years 1983 to 1998.

The data on gambling losses are expressed per adult (aged 18 years and over) and relate only to losses from electronic gaming machines in the metropolitan area, excluding the City of Adelaide, for 2002. Variations in the location of gaming machines are also frequently cited as the most significant factor affecting gambling losses. For example, see *Inquiry into management of gaming machine numbers*, March 2003 and *The Economic Impact of Gambling, Project Report*, March 2000.

The data presented for the time series of gambling expenditure are from the project report prepared by the National Institute of Economic and Industry Research for the Victorian Casino and Gaming Authority on *The Economic Impact of Gambling*, March 2000.

The 2002 data on gambling losses per adult from electronic gaming machines were obtained from the report of the Independent Gambling Authority's *Inquiry into management of gaming machine numbers*, December 2003.

### Health and wellbeing: *Self reported health status*

In the 1995 National Health Survey (NHS), the population aged 18 years and over was asked to indicate its perception of its own health status, on a scale of 'excellent', 'very good', 'good', 'fair' and 'poor'. In the analysis in this report, details are shown of that proportion of the population who reported their health as being fair or poor. The ABS report that how people rated their health was strongly related to their illness experience (ABS 1997). This is consistent with the finding by McCallum et al. (1994) that people rate their health as poor on the objective basis of illness and disability.

The data presented are age-standardised estimates for SLAs across South Australia from data in the NHS, using the synthetic prediction technique: the details of this technique are on page 109, *A Social Health Atlas of Australia: Volume 5, South Australia* (Glover and Tennant 1999). The estimates were initially produced for SLAs in existence at the time. The rates of fair/poor health have been apportioned to the 2001 SLA boundaries used throughout the majority of this report.

### Health and wellbeing: *Life expectancy*

The reference in the introductory statement on life expectancy is from *Indicators of Sustainable Development: United Nations Centre for Sustainable Development Methodology Sheets – Life expectancy* (at [http://esl.jrc.it/envind/un\\_meths/UN\\_ME034.htm](http://esl.jrc.it/envind/un_meths/UN_ME034.htm)).



Life expectancy is an estimation of the average length of time (in years) that a person can expect to live, assuming that the prevailing rates of death for each age group will remain the same for the lifetime of that person.

To ensure reliability of the estimates, SLAs were grouped to form areas of approximately 25,000 population. In most cases the groups are formed by the Local Government Area eg. Burnside and Playford.

The life expectancy trend data were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*. The remainder of the life expectancy data were produced by the Public Health Information Development Unit (PHIDU), University of Adelaide.

### **Health and wellbeing: Smoking during pregnancy**

The introductory statement that *Smoking by mothers while pregnant causes problems for their babies, from prematurity to low birthweight and being smaller at birth than they should be*, is from Chan et al. (2001).

The rate of smoking during pregnancy measures the number of women smoking whilst pregnant, expressed as a proportion of all women who were pregnant over the period. Women were asked at their first antenatal visit if they smoked (as at that visit).

The data presented are from the 1998 to 2001 Perinatal Statistics Collections, Epidemiology Branch, Department of Human Services.

### **Health and wellbeing: Low birthweight babies**

The introductory statement that:

*Research has shown that 14.6% of South Australian babies with low birthweight in 1994 were perinatal deaths, compared with a perinatal death rate of 0.99% in those with normal birthweight is from Taylor et al. (1995).*

Low birthweight is calculated from data in the Perinatal Statistics Collection. Low birthweight babies are babies (both live-born and stillborn) weighing less than 2500 grams at birth. Areas with fewer than five births over this period have been excluded from the analysis. The low birthweight data for country South Australia were mapped at the Health Region level due to the small numbers.

The data in the Indigenous section for this indicator were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*.

### **Health and wellbeing: Child abuse and neglect**

The statement in the key points section that:

*While the number of these cases subsequently substantiated has remained relatively stable, rates of re-notification have increased, indicating that many children and young people are being 'recycled' through the child protection system is from Layton (2003).*

The data presented are of numbers of substantiated cases of child abuse and neglect, not of individual children. Thus, if a child is the subject of more than one substantiated notification, then they will appear in the statistics more than once. Data not coded by age or by area were excluded from the analysis.

In assessing variations between areas, readers should also be aware that there is likely to be an overall under-reporting of child abuse and neglect in these data. However, as noted in the Indigenous section, Indigenous children are clearly over-represented in the child protection system (AIHW 2002).

The data in the Indigenous section for this indicator were obtained from the State Government's report: *Indigenous Profile: Comparing the Indigenous with the non-Indigenous population in South Australia, 2001*.

### **Health and wellbeing: Obesity and overweight in childhood**

The introductory statement that:

*Overweight and obesity in childhood and adolescence can cause a wide range of serious physical and emotional health problems, and increase the risk of premature illness and death in adulthood is from Booth et al. (2001) and Ebbeling et al. (2002).*

The Body Mass Index (BMI) is a measure of body fat, based on height and weight: it is defined as weight in kilograms divided by the square of height in metres (kg/m<sup>2</sup>). The BMI calculation is based on the international



standard definitions for overweight and obesity proposed by Cole et al. (2000). Using 4.5 years of age, the cut off point for BMI for overweight is 17.47 for males and 17.19 for females. For obesity, it is 19.26 and 19.12, respectively.

The data were provided by Child and Youth Health. Note that the data available for 2002 were not presented in the analyses due to the sharp increase in the proportion of overweight and obese four year olds between the 2001 and 2002 datasets. For Adelaide, the increase is from 19.2% in 2001 to 21.5% in 2002 for females, and from 15.4% to 18.7% for males. For country South Australia, the increase is from 19.9% to 21.9% for females and from 16.2% to 18.5% for males. The sharp increase from 2001 to 2002 may, in part, reflect a change in data collection practice. In 2002, staff resources were limited and those available were directed to ensuring that coverage in lower socioeconomic status areas was maintained. The effect of this was a reduction in coverage in higher socioeconomic status areas. It is not clear what impact, if any, this has had on the BMI or the proportions of overweight and obese children.

In the country section, it is noted that some areas with low BMIs might reflect the high prevalence of underweight in Indigenous children living in these remote areas, as reported in numerous studies over recent decades. Examples of such studies include Kirke (1969); and Rousham & Gracey (1997). In the Indigenous section, the study that found an excess of both overweight and underweight Aboriginal children is Mackerras et al. (2003).

### **Access to services: *Outside school hours care***

References for the introductory statement on outside school hours care are from the ABS publication, *Child Care, Australia 2002*.

The data on access to after school hours care were obtained from the South Australian Department of Education and Children's Services.

### **Access to services: *Booking lists for non-urgent surgery***

The booking list data for non-urgent surgery for June 2002 were obtained from the Data Analysis and Consulting Unit, Department of Human Services.

### **Other: *Homelessness***

The definition used to determine homelessness includes 'primary', 'secondary' and 'tertiary' homelessness. Primary homelessness is the same as literal homelessness, such as people living on the streets and sleeping in parks. Secondary homelessness includes people who are staying in any form of temporary accommodation, with no other secure housing elsewhere, for example, people using emergency accommodation or residing temporarily with other families. Tertiary homelessness refers to the occupants of single rooms in private boarding houses who live there on a long-term basis (three months or longer). As noted in the homelessness section, the data on youth homelessness include the addition of students who had been homeless within the last three months.

The homelessness data are from the ABS publication *Counting the Homeless*, 1996 (ABS Cat. No. 2041) and 2001 (ABS Cat. No. 2050.0). The youth homelessness data are from a report, *Youth Homelessness 2001* by Chamberlain and MacKenzie of RMIT University.

### **Other: *Fruit and vegetable intake***

The introductory statement was compiled from NPHP (2001); NHMRC (1999; 2003a; 2003b); and SIGNAL of the NPHP (2001). The fruit and vegetable intake data were provided by the Population Research and Outcomes Studies Unit, Department of Human Services.

Further details on data sources and information can be obtained from:

PHIDU, The University of Adelaide, South Australia 5005  
Phone: 08-8303 6239 or e-mail: [PHIDU@publicheath.gov.au](mailto:PHIDU@publicheath.gov.au)

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## Additional data: correlations

### Introduction

The correlation coefficients from the two tables below have been presented in a summary form in Tables 4 and 5 in the Summary of findings, Section 5. The correlation analysis shows key relationships between indicators at the small area level (between Statistical Local Areas) in Adelaide and in country South Australia.

Note: Correlation is the degree to which one variable is statistically associated with another. The correlation coefficient is a measure of the strength of this association. When high values for one variable are matched by high values for the other (or when low values are matched by low values), then they are positively correlated. Where the interdependence is inverse (ie. high values for one are matched by low values for another), the two variables are negatively correlated. See Methods, overleaf, for further details.

**Table A1: Correlation matrix for Statistical Local Areas in Adelaide**

Variable	Low income families	Children in low income families	School participation at age 16	Labour force		Dwellings without a motor vehicle	IRSD
				Participation	Unemployment		
Low income families	1.00	0.85	-0.64	-0.86	0.81	0.56	-0.82
Children in low income families	0.85	1.00	-0.62	-0.69	0.73	0.17	-0.90
Single parent families	0.86	0.76	-0.68	-0.82	0.83	0.42	-0.70
School participation at age 16	-0.64	-0.62	1.00	0.73	-0.77	-0.40	0.63
Labour force participation	-0.86	-0.69	0.73	1.00	-0.91	-0.62	0.69
Female labour force participation	-0.86	-0.84	0.79	0.88	-0.88	-0.38	0.78
Unemployment	0.81	0.73	-0.77	-0.91	1.00	0.57	-0.75
Dwellings without a motor vehicle	0.56	0.17	-0.40	-0.62	0.57	1.00	-0.30
Dwellings rented from the State Housing Authority	0.86	0.66	-0.66	-0.85	0.81	0.66	-0.68
Rent assistance	0.48	0.37	-0.54	-0.57	0.62	0.71	-0.43
Indigenous population	0.84	0.77	-0.77	-0.84	0.87	0.53	-0.76
IRSD	-0.82	-0.90	0.63	0.69	-0.75	-0.30	1.00
Offences involving apprehension	0.77	0.66	-0.81	-0.90	0.91	0.57	-0.68
Gambling	0.38	0.31	-0.30	-0.38	0.43	0.40	-0.35
Self reported health status	0.74	0.83	-0.70	-0.69	0.79	0.36	-0.95
Life expectancy	-0.40	-0.41	0.54	0.49	-0.60	-0.41	0.62
Smoking during pregnancy	0.75	0.92	-0.71	-0.67	0.80	0.13	-0.86
Low birthweight babies	0.54	0.59	-0.42	-0.44	0.48	0.16	-0.58
Child abuse & neglect	0.83	0.79	-0.75	-0.85	0.88	0.58	-0.78
Overweight & obese	0.43	0.38	-0.26	-0.28	0.28	0.29	-0.54
Booking lists	0.71	0.76	-0.57	-0.66	0.70	0.25	-0.71
After school hours care	-0.30	-0.18	0.22	0.35	-0.28	-0.30	0.19

## Methods

The Pearson product-moment correlation coefficient has been used in the analysis to indicate the degree of correlation between pairs of variables. Pearson correlation coefficients range from +1 (complete positive correlation) through 0 (complete lack of correlation) to -1 (complete negative correlation). As a general rule, correlations of plus or minus 0.5 or above are considered to be of meaningful statistical significance. Correlations of plus or minus 0.71 or above are of substantial statistical significance, because this higher value represents at least 50 per cent shared variation ( $r^2$  greater than or equal to 0.5). Correlation coefficients were calculated by comparing the value (expressed as a percentage or as a standardised ratio) for each variable in the SLA (or postcode) with the value of each of the other variables.

The following ranges are those used in **Tables 4** and **5**, page 77:

**S: Strong association (correlation coefficients of 0.71 or higher); M: Moderate association (correlation coefficients of 0.50 to 0.71); W: Weak association (correlation coefficients of below 0.30 to 0.49)**

**Table A2: Correlation matrix for Statistical Local Areas in country South Australia**

Variable	Low income families	Children in low income families	School participation at age 16	Labour force		Dwellings without a motor vehicle	IRSD
				Participation	Unemployment		
Low income families	1.00	0.57	-0.05	-0.67	0.41	0.48	-0.65
Children in low income families	0.57	1.00	-0.12	-0.27	0.28	0.26	-0.44
Single parent families	0.57	0.22	-0.34	-0.65	0.57	0.78	-0.62
School participation at age 16	-0.05	-0.12	1.00	0.26	-0.42	-0.54	0.47
Labour force participation	-0.67	-0.27	0.26	1.00	-0.53	-0.63	0.64
Female labour force participation	-0.59	-0.24	0.46	0.84	-0.36	-0.66	0.70
Unemployment	0.41	0.28	-0.42	-0.53	1.00	0.63	-0.57
Dwellings without a motor vehicle	0.48	0.26	-0.54	-0.63	0.63	1.00	-0.78
Dwellings rented from the SA Housing Trust	0.02	0.09	0.03	-0.14	0.20	0.47	-0.41
Rent assistance	0.35	0.46	-0.01	-0.41	0.01	0.21	-0.36
Indigenous population	0.24	0.14	-0.73	-0.47	0.59	0.74	-0.50
IRSD	-0.65	-0.44	0.47	0.64	-0.57	-0.78	1.00
Offences involving apprehension	0.18	0.16	-0.47	-0.30	0.78	0.47	-0.43
Self reported health status	0.61	0.48	-0.54	-0.70	0.61	0.79	-0.84
Life expectancy	-0.44	-0.20	-0.26	0.13	-0.29	-0.28	0.49
Smoking during pregnancy	0.13	0.20	-0.45	-0.18	0.37	0.42	-0.56
Child abuse & neglect	0.16	0.28	-0.08	-0.32	0.38	0.38	-0.46
Overweight & obese	0.00	-0.11	0.31	0.01	-0.10	0.03	-0.01



Key to areas mapped for indicators, Adelaide and South Australia  
(excluding low birthweight babies in country areas – see over)

Alphabetical key to Statistical Local Areas, country South Australia, 2001

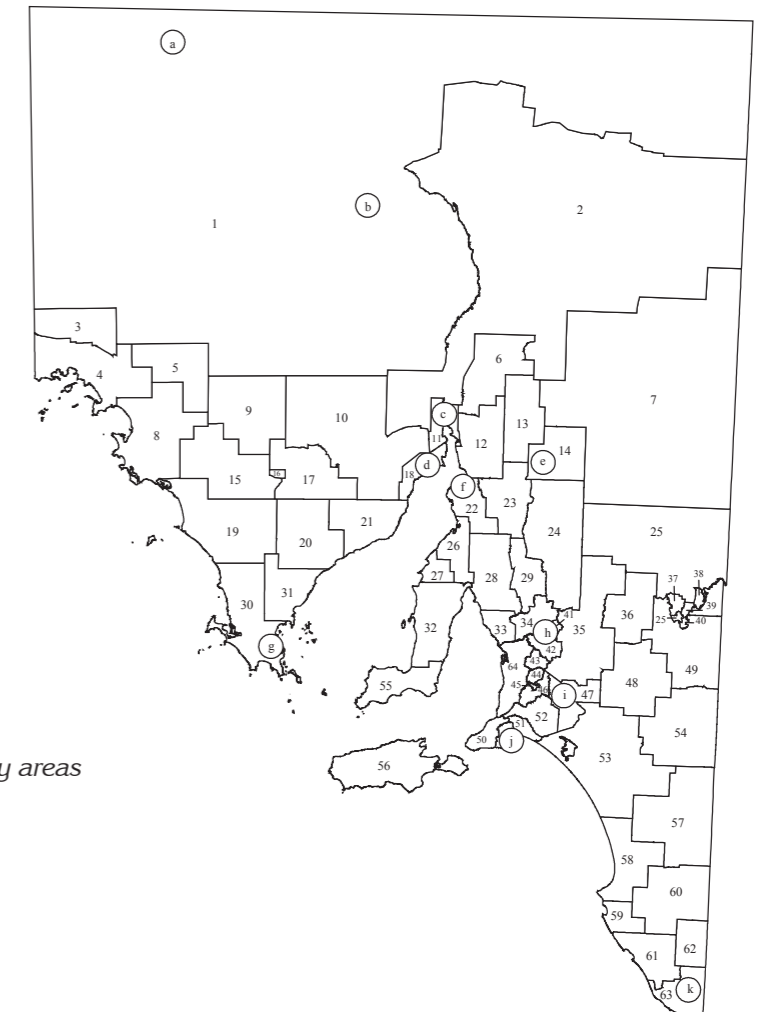
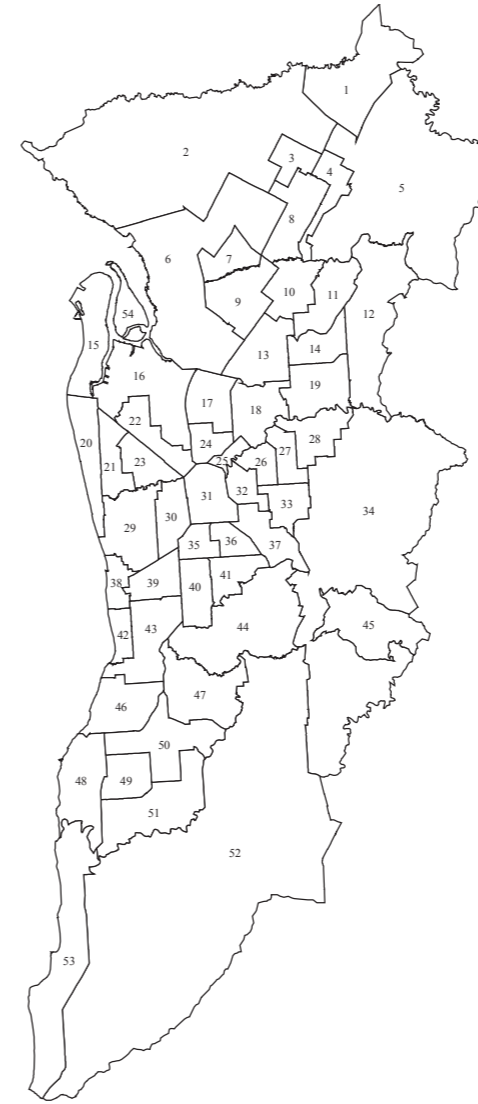
Adelaide Hills (DC) - North	43	Port Pirie Districts (M) Balance	22
Adelaide Hills (DC) Balance	44	Renmark Paringa (DC) - Paringa	39
Alexandrina (DC) - Coastal	51	Renmark Paringa (DC) - Renmark	38
Alexandrina (DC) - Strathalbyn	52	Robe (DC)	59
Barossa (DC) - Angaston	41	Southern Mallee (DC)	54
Barossa (DC) - Barossa	42	Streaky Bay (DC)	8
Barunga West (DC)	26	Tatiara (DC)	57
Berri & Barmera (DC) - Barmera	37	The Coorong (DC)	53
Berri & Barmera (DC) - Berri	40	Tumby Bay (DC)	31
Ceduna (DC)	4	Wakefield (DC)	28
Clare and Gilbert Valleys (DC)	29	Wattle Range (DC) - East	62
Cleve (DC)	20	Wattle Range (DC) - West	61
Copper Coast (DC)	27	Whyalla (C)	18
Elliston (DC)	19	Yankalilla (DC)	50
Flinders Ranges (DC)	6	Yorke Peninsula (DC) - North	32
Franklin Harbor (DC)	21	Yorke Peninsula (DC) - South	55
Goyder (DC)	24	Unincorporated Far North	1
Grant (DC)	63	Unincorporated Flinders Ranges	2
Kangaroo Island (DC)	56	Unincorporated Lincoln	9,16
Karoonda East Murray (DC)	48	Unincorporated Pirie	7
Kimba (DC)	17	Unincorporated Riverland	25
Lacepede (DC)	58	Unincorporated West Coast	3,5
Le Hunte (DC)	15		
Light (DC)	34	<i>Metropolitan Adelaide</i>	64
Lower Eyre Peninsula (DC)	30		
Loxton Waikerie (DC) - East	49	<b>Towns</b>	
Loxton Waikerie (DC) - West	36	Barossa (DC) - Tanunda	h
Mallala (DC)	33	Cooper Pedy (DC)	a
Mid Murray (DC)	35	Mount Gambier (C)	k
Mount Barker (DC) - Central	45	Murray Bridge (DC)	i
Mount Barker (DC) Balance	46	Peterborough (M)	e
Mount Remarkable (DC)	12	Port Augusta (C)	c
Murray Bridge (RC)	47	Port Lincoln (C)	g
Naracoorte & Lucindale (DC)	60	Port Pirie City & Districts (M) – City	f
Northern Areas (DC)	23	Roxby Downs (M)	b
Orroroo/Carrieton (DC)	13	Victor Harbor (DC)	j
Peterborough (DC)	14	Whyalla (C)	d
Port Augusta (C)	11		

Note: See overleaf for numerical key

Alphabetical key to Statistical Local Areas, Adelaide, 2001

Adelaide (C)	31	Onkaparinga (C) - Reservoir	47
Adelaide Hills (DC) - Central	45	Onkaparinga (C) - South Coast	53
Adelaide Hills (DC) - Ranges	34	Onkaparinga (C) - Woodcroft	50
Burnside (C) - North-East	33	Playford (C) - East Central	4
Burnside (C) - South-West	37	Playford (C) - Elizabeth	8
Campbelltown (C) - East	28	Playford (C) - Hills	5
Campbelltown (C) - West	27	Playford (C) - West	2
Charles Sturt (C) - Coastal	20	Playford (C) - West Central	3
Charles Sturt (C) - Inner East	23	Port Adelaide Enfield (C) - Coast	15
Charles Sturt (C) - Inner West	21	Port Adelaide Enfield (C) - East	18
Charles Sturt (C) - North-East	22	Port Adelaide Enfield (C) - Inner	17
Gawler (M)	1	Port Adelaide Enfield (C) - Port	16
Holdfast Bay (C) - North	38	Prospect (C)	24
Holdfast Bay (C) - South	42	Salisbury (C) - Central	9
Marion (C) - Central	43	Salisbury (C) - Inner North	7
Marion (C) - North	39	Salisbury (C) - North-East	10
Marion (C) - South	46	Salisbury (C) - South-East	13
Mitcham (C) - Hills	44	Salisbury (C) Balance	6
Mitcham (C) - North-East	41	Tea Tree Gully (C) - Central	14
Mitcham (C) - West	40	Tea Tree Gully (C) - Hills	12
Norwood Payneham St Peters (C) - East	26	Tea Tree Gully (C) - North	11
Norwood Payneham St Peters (C) - West	32	Tea Tree Gully (C) - South	19
Onkaparinga (C) - Hackham	51	Unley (C) - East	36
Onkaparinga (C) - Hills	52	Unley (C) - West	35
Onkaparinga (C) - Morphett	49	Walkerville (M)	25
Onkaparinga (C) - North Coast	48	West Torrens (C) - East	30
		West Torrens (C) - West	29
		Unincorporated Western	54

Note: See overleaf for numerical key



See key opposite for country areas

**Numerical key to Statistical Local Areas, Adelaide, 2001**

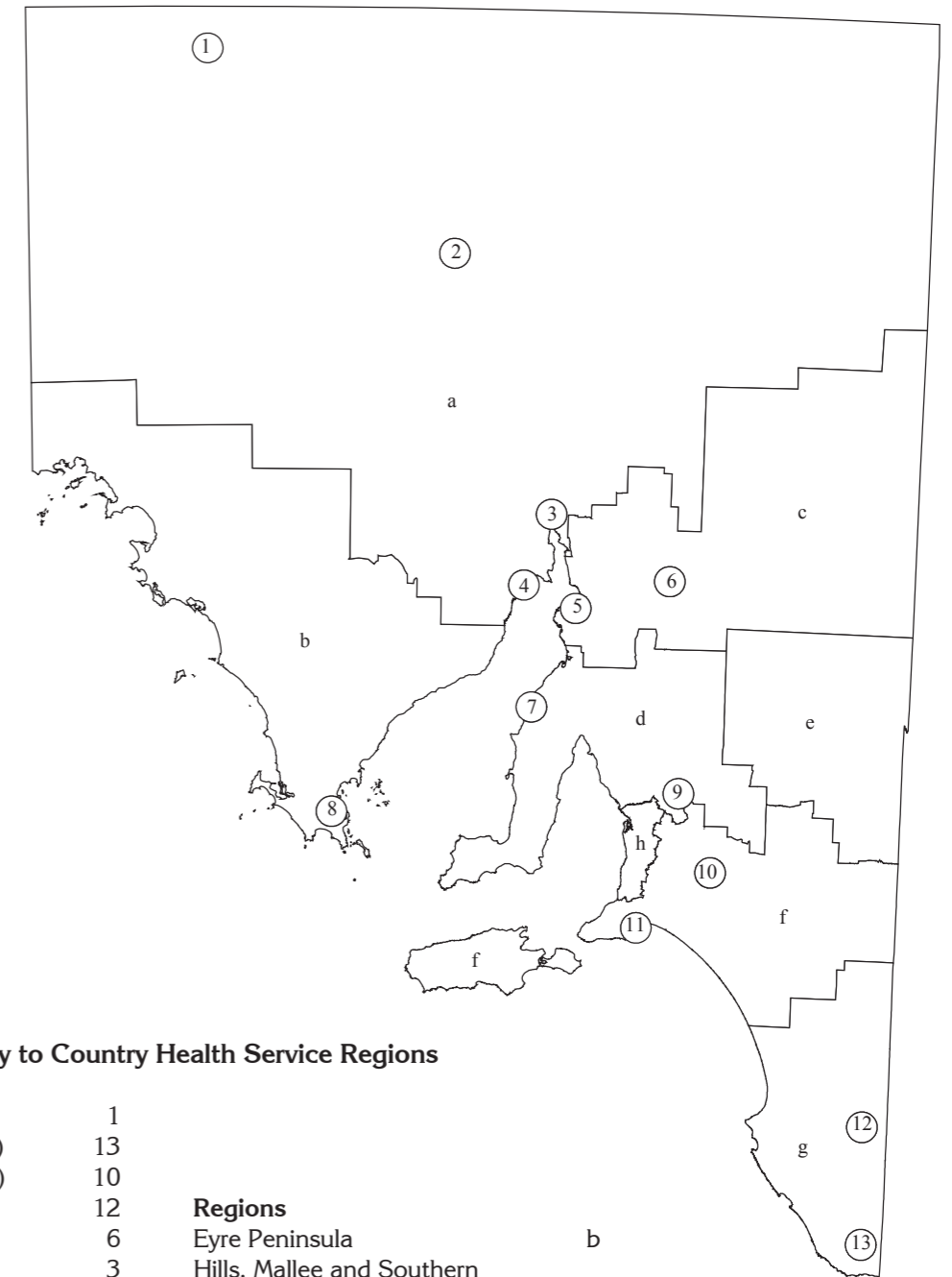
Gawler (M)	1	Charles Sturt (C) - Coastal	20	Burnside (C) - South-West	37
Playford (C) - West	2	Charles Sturt (C) - Inner West	21	Holdfast Bay (C) - North	38
Playford (C) - West Central	3	Charles Sturt (C) - North-East	22	Marion (C) - North	39
Playford (C) - East Central	4	Charles Sturt (C) - Inner East	23	Mitcham (C) - West	40
Playford (C) - Hills	5	Prospect (C)	24	Mitcham (C) - North-East	41
Salisbury (C) Balance	6	Walkerville (M)	25	Holdfast Bay (C) - South	42
Salisbury (C) - Inner North	7	Norwood Payneham St Peters (C)		Marion (C) - Central	43
Playford (C) - Elizabeth	8	- East	26	Mitcham (C) - Hills	44
Salisbury (C) - Central	9	Campbelltown (C) - West	27	Adelaide Hills (DC) - Central	45
Salisbury (C) - North-East	10	Campbelltown (C) - East	28	Marion (C) - South	46
Tea Tree Gully (C) - North	11	West Torrens (C) - West	29	Onkaparinga (C) - Reservoir	47
Tea Tree Gully (C) - Hills	12	West Torrens (C) - East	30	Onkaparinga (C) - North Coast	48
Salisbury (C) - South-East	13	Adelaide (C)	31	Onkaparinga (C) - Morphett	49
Tea Tree Gully (C) - Central	14	Norwood Payneham St Peters (C)	30	Onkaparinga (C) - Woodcroft	50
Port Adelaide Enfield (C) - Coast	15	West	32	Onkaparinga (C) - Hackham	51
Port Adelaide Enfield (C) - Port	16	Burnside (C) - North-East	33	Onkaparinga (C) - Hills	52
Port Adelaide Enfield (C) - Inner	17	Adelaide Hills (DC) - Ranges	34	Onkaparinga (C) - South Coast	53
Port Adelaide Enfield (C) - East	18	Unley (C) - West	35	Unincorporated Western	54
Tea Tree Gully (C) - South	19	Unley (C) - East	36		

**Numerical key to Statistical Local Areas, country South Australia, 2001**

Unincorporated Far North	1	Wakefield (DC)	28	Yorke Peninsula (DC) - South	55
Unincorporated Flinders Ranges	2	Clare and Gilbert Valleys (DC)	29	Kangaroo Island (DC)	56
Unincorporated West Coast	3,(5)	Lower Eyre Peninsula (DC)	30	Tatiara (DC)	57
Ceduna (DC)	4	Tumby Bay (DC)	31	Lacepede (DC)	58
Unincorporated West Coast	5,(3)	Yorke Peninsula (DC) - North	32	Robe (DC)	59
Flinders Ranges (DC)	6	Mallala (DC)	33	Naracoorte & Lucindale (DC)	60
Unincorporated Pirie	7	Light (DC)	34	Wattle Range (DC) - West	61
Streaky Bay (DC)	8	Mid Murray (DC)	35	Wattle Range (DC) - East	62
Unincorporated Lincoln	9,(16)	Loxton Waikerie (DC) - West	36	Grant (DC)	63
Unincorporated Whyalla	10	Berri & Barmera (DC) - Barmera	37		
Port Augusta (C)	11	Renmark Paringa (DC) - Renmark	38	<i>Metropolitan Adelaide</i>	64
Mount Remarkable (DC)	12	Renmark Paringa (DC) - Paringa	39		
Orroroo/Carrieton (DC)	13	Berri & Barmera (DC) - Berri	40		
Peterborough (DC)	14	Barossa (DC) - Angaston	41	<b>Towns</b>	
Le Hunte (DC)	15	Barossa (DC) - Barossa	42	Coober Pedy (DC)	a
Unincorporated Lincoln	16,(9)	Adelaide Hills (DC) - North	43	Roxby Downs (M)	b
Kimba (DC)	17	Adelaide Hills (DC) Balance	44	Port Augusta (C)	c
Whyalla (C)	18	Mount Barker (DC) - Central	45	Whyalla (C)	d
Elliston (DC)	19	Mount Barker (DC) Balance	46	Peterborough (M)	e
Cleve (DC)	20	Murray Bridge (RC)	47	Port Pirie City & Districts (M)	
Franklin Harbor (DC)	21	Karoonda East Murray (DC)	48	- City	f
Port Pirie Districts (M) Balance	22	Loxton Waikerie (DC) - East	49	Port Lincoln (C)	g
Northern Areas (DC)	23	Yankalilla (DC)	50	Barossa (DC) - Tanunda	h
Goyder (DC)	24	Alexandrina (DC) - Coastal	51	Murray Bridge (DC)	i
Unincorporated Riverland	25	Alexandrina (DC) - Strathalbyn	52	Victor Harbor (DC)	j
Barunga West (DC)	26	The Coorong (DC)	53	Mount Gambier (C)	k
Copper Coast (DC)	27	Southern Mallee (DC)	54		



Key to areas mapped for the low birth weight babies indicator, South Australia



**Key to Country Health Service Regions**

**Towns**

Coober Pedy (DC)	1
Mount Gambier (C)	13
Murray Bridge (DC)	10
Naracoorte (M)	12
Peterborough (M)	6
Port Augusta (C)	3
Port Pirie (C)	5
Port Lincoln (C)	8
Roxby Downs (M)	2
Tanunda (DC)	9
Victor Harbor (DC)	11
Walleroo (M)	7
Whyalla (C)	4

**Regions**

Eyre Peninsula	b
Hills, Mallee and Southern (includes Kangaroo Island)	f
Mid North	c
Riverland	e
South East	g
Whyalla, Flinders and Far North	a
Yorke, Lower North and Barossa	d
Metropolitan Adelaide	h





