The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples

2001

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ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH AND WELFARE INFORMATION:
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PREFACE

This publication is the third edition of the two-yearly series *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples.* It brings together a comprehensive body of information about Indigenous health and welfare, predominantly at the national level, and includes, where practicable, data comparable with those for the general population. The report is also a detailed supplement to the flagship publications *Australia's Health* and *Australia's Welfare* which are released in alternate years by the Australian Institute of Health and Welfare (AIHW).

The range of topics covered in this publication includes housing and infrastructure, community services and housing assistance, the availability and use of health services, the health of mothers and babies, health status, rates and causes of mortality, and a special chapter examining the impact of diabetes on the Indigenous population. Recent developments in the collection of Indigenous statistics nationally are also outlined. Much of the data presented updates information from previous editions of this publication. There is also a new housing section based on data from the Australian Housing Survey 1999 and the Community Housing and Infrastructure Needs Survey 1999.

Given the complexity of the issues affecting the health and welfare of Australia's Aboriginal and Torres Strait Islander people, and the restrictions on both the availability and quality of the data, it has not been possible, within the scope of this publication, to examine all the issues that impact upon the health and wellbeing of Indigenous people. The information presented here was drawn from key agencies nationally, and represents the most up-to-date material available at the time of writing.

The publication has been prepared by the Aboriginal and Torres Strait Islander Health and Welfare Information Unit of the National Centre for Aboriginal and Torres Strait Islander Statistics within the Australian Bureau of Statistics (ABS). The Unit is a joint program of the ABS and the AIHW, and is supported by the Office for Aboriginal and Torres Strait Islander Health within the Commonwealth Department of Health and Aged Care.

ABS and AIHW gratefully acknowledge the assistance and co-operation received from the individuals and organisations that have provided us with the statistics and information which form the basis of this publication. Special thanks go to the principal reviewers of the publication: Associate Professor Ian Anderson, Mr Andrew Benson, Mr Graham Brice, Dr Joan Cunningham, Dr Sandra Eades, Professor Ernest Hunter, Dr Ian Ring, Mr Craig Ritchie, Professor Fiona Stanley and Dr Neil Thomson for their valuable comments on the drafts. ABS and AIHW would also like to acknowledge particularly the contribution of Professor Kerin O'Dea to the specialist chapter on diabetes and to thank Dr Robyn McDermott and Professor David Tiller for reviewing that chapter.

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SUMMARY

SCOPE

This publication presents an overview of the health and welfare of Australia's Aboriginal and Torres Strait Islander peoples. The data and other information used were the most up-to-date available at the time of writing, and include the results of national censuses and surveys, as well as information held in the administrative datasets of various government departments and national statistical collection agencies. The majority of the information presented is at the national level, with State and regional data included where the quality of the information is adequate, and where comparative material illustrates significant variations between regions or populations. A separate chapter has been included which examines the nature and prevalence of diabetes in the Indigenous population.

DATA QUALITY, AVAILABILITY AND RECENT DEVELOPMENTS

The data available about Aboriginal and Torres Strait Islander people are limited by the extent to which Indigenous people are included in national surveys, the accuracy with which they are identified in both surveys and administrative datasets, uncertainties about Indigenous population estimates, and concerns about whether the survey methods employed are always the most suitable. It is also difficult to point to trends with confidence because the availability and quality of data about the Indigenous population have varied considerably over time.

The Australian Bureau of Statistics (ABS), in consultation with government agencies and other key stakeholders, including representatives of the Aboriginal and Torres Strait Islander community, has developed a strategy for collecting Indigenous statistics which is currently being implemented. Some of its key elements are: the six-yearly Indigenous Social Survey (to be conducted first in 2002); the inclusion of a supplementary Indigenous sample in the National Health Survey (the first supplement was included in the 2001 cycle of this survey); regular identification of Indigenous people in the Labour Force Survey; improved identification of Indigenous people in administrative datasets; and continued high priority given to improving the quality of Indigenous data from the five-yearly Census of Population and Housing and for annual Indigenous population estimates and projections. For the 2001 Census ABS has implemented a special Indigenous enumeration strategy and is using a range of evaluation techniques and strategies to monitor, report on and improve the quality of Census measures. The ABS is also conducting, on behalf of the Aboriginal and Torres Strait Islander Commission, the 2001 cycle of the Community Housing and Infrastructure Needs Survey (first conducted in 1999).

THE DEMOGRAPHIC, SOCIAL AND ECONOMIC CONTEXT

The 1996 Census showed that Aboriginal and Torres Strait Islander people comprised approximately 2% of the total population of Australia. This represented a 33% increase in the Indigenous population from the 1991 Census. The magnitude of this increase can only be partially explained in terms of 'natural' increases, determined by births, deaths and migration levels. Much of the additional change appears to be the result of increasing numbers of Aboriginal and Torres Strait Islander people recording their Indigenous status on census forms. This trend, and the fact that the components of natural increase are poorly reported for the Indigenous population, makes the estimation of the Indigenous population difficult to determine for the intercensal periods. In addition, the calculation of incidence and prevalence rates for specific diseases in a population depends upon reliable population estimates, and the experimental nature of these for the Indigenous population means any rate calculations must be treated with caution.

In 1996, the Indigenous population, with a median age of 20 years, was younger than the general Australian population, which had a median age of 34 years. More than half of all Indigenous people lived in New South Wales and Queensland, with the majority residing in urban areas. New South Wales had the greatest number of Indigenous people (110,000) and the Northern Territory had the highest proportion, with around 28% of its population reporting Indigenous status. Nearly 20% of the Indigenous population lived in areas classified as 'very remote', compared with only 1% of the non-Indigenous population.

Aboriginal and Torres Strait Islander people were disadvantaged across a range of socioeconomic factors reported upon in the 1996 Census. They experienced lower incomes than the non-Indigenous population, higher rates of unemployment, poorer educational outcomes and lower rates of home ownership, all of which can impact upon a person's health and sense of wellbeing.

COMMUNITY SERVICES

Aboriginal and Torres Strait Islander people were over-represented in several areas of community services, although poor data quality makes an accurate measure of their use of services difficult to determine. Available data show that Indigenous people were more highly represented in the Supported Accommodation Assistance Program than non-Indigenous people, and Indigenous children were more likely to be placed under care and protection orders, or in out-of-home care, than their non-Indigenous counterparts. Aged care services were accessed by Indigenous people at younger ages and in proportionally lower numbers than the non-Indigenous population.

Accurate information about levels of disability among Aboriginal and Torres Strait Islander people is not available because definitions of disability which are meaningful in the Indigenous context have not been developed. There is also a need to ensure that Indigenous people are accurately identified in disability data collections. The best available information comes from the Commonwealth/State Disability Agreement Minimum Data Set, which indicates that Indigenous people access

COMMUNITY SERVICES
continued

disability services at similar rates to the rest of the population. Indigenous people with a disability who received assistance under the Open Employment Services program experienced poorer outcomes than non-Indigenous participants, with lower mean hourly rates of pay, fewer hours of work per week and, consequently, lower mean weekly incomes.

HOUSING AND INFRASTRUCTURE

In 1999, Aboriginal and Torres Strait Islander people were more likely than the non-Indigenous population to live in conditions considered unacceptable by general Australian standards. In particular, overcrowding, high housing costs relative to income, poorly maintained buildings and facilities, and inadequate infrastructure were major issues associated with the housing of Indigenous people. Aboriginal and Torres Strait Islander people were also less likely to own their own homes than non-Indigenous Australians. Sewerage system malfunctions, water restrictions, and interruptions to power supplies were problems frequently reported by people living in discrete communities.

HEALTH SERVICE PROVISION, ACCESS AND USE

In 1998–99, an estimated $1,245 million was spent on health services for Aboriginal and Torres Strait Islander people. This figure represented 2.6% of health expenditure for all Australians, but is an estimate only, largely because of the incomplete identification of Indigenous people in many administrative datasets. Patterns of expenditure indicate clear differences between the Indigenous and non-Indigenous populations in the way that health services are accessed. Greater amounts were spent on Aboriginal and Torres Strait Islander people in relation to community and public health, patient transport, public hospital services, mental health institutions, and government administration and research, and lesser amounts on Medicare, private hospitals, the Pharmaceutical Benefits Scheme and residential aged care than other Australians. Overall, for each dollar spent on health services for non-Indigenous people, $1.22 was spent on health services for Indigenous people.

Overall, Indigenous people experienced lower levels of access to health services than the general population. Indigenous people were nearly twice as likely as members of the general population to live outside urban centres and were more likely to live further from a range of health services and facilities. A considerable number of the Indigenous communities included in the 1999 Community Housing and Infrastructure Needs Survey did not receive visits from a wide range of health professionals. Other factors which were likely to influence the level at which Indigenous people used health services were the socioeconomic status of patients, the availability of transport, the ability to speak English, and cultural factors such as the availability of same-sex Indigenous health workers.

MEASURES OF HEALTH STATUS

Although the incomplete recording of Indigenous status in administrative records and the experimental nature of Indigenous population estimates remain barriers to the production of a true picture of Indigenous health in Australia, the available evidence suggests that Indigenous people continue to suffer a greater burden of ill health than the rest of the population.

Over the period 1997–99, the life expectancy at birth for an Indigenous male was 56 years, and for an Indigenous female, 63 years. Comparable life expectancies were experienced by males in the total population in 1901–10, and females in 1920–22. Today, males in the total Australian population have a life expectancy of 76 years and females 82 years.

This publication uses deaths registrations from Queensland, South Australia, Western Australia and the Northern Territory to form a 'quasi-national' picture of Indigenous mortality for the period 1997 to 1999. During this time, there were 4,379 Indigenous deaths registered in these jurisdictions. Death rates among Aboriginal and Torres Strait Islander people were higher than those recorded in the general population for almost all causes of death and for every age group. In the age group 35–54 years, the Indigenous death rate was 5–6 times higher than expected.

The leading causes of death in both the Indigenous and non-Indigenous populations were diseases of the circulatory system, cancer and external causes. Together these accounted for 60% of all identified Indigenous deaths, affecting Indigenous people at younger ages than in the total Australian population. There were 7–9 times more deaths of Indigenous people than expected from endocrine and metabolic diseases (of which 88% were related to diabetes) based on rates for the total Australian population.

Data from national surveys in 1994 and 1995 show that Indigenous people were more likely than non-Indigenous people to smoke, consume alcohol at hazardous levels, be exposed to violence, and to be categorised as obese, all of which are significant health risk factors.

Indigenous women gave birth at younger ages than non-Indigenous women, with the data for 1996–98 showing over 80% of Indigenous mothers having babies before the age of 30. The comparable figure for non-Indigenous mothers was 54%. Babies of Indigenous mothers were nearly twice as likely as babies of non-Indigenous mothers to be of low birthweight, a factor affecting health in childhood and, as some evidence suggests, throughout adult life also. Babies of Indigenous mothers were twice as likely to die at birth and during the early post-natal phase.

MEASURES OF HEALTH STATUS *continued*

Measuring mental health in the Aboriginal and Torres Strait Islander population is a difficult undertaking because data definitions, standards and collection instruments have not yet been developed to adequately encompass the holistic view of health traditionally held by Indigenous people. There are, however, hospital data which indicate that Indigenous people suffer from higher levels of many mental and behavioural disorders. In 1998–99, there were about four times as many hospital separations as expected for mental disorders resulting from psychoactive drug use. Self-harm and assault may be indicators of social and emotional distress and psychological illness in a community. Hospitalisation data show that there were many more hospital separations than expected for intentional injury in the Indigenous population.

In 1998–99, Indigenous people were more likely than other people to be hospitalised for most diseases and conditions. Just over 26% of hospital separations for Indigenous people were for 'care involving dialysis'; making this the main reason for hospitalisation of Aboriginal and Torres Strait Islander people. Other common reasons were injuries and poisoning, respiratory diseases, digestive disorders and mental and behavioural disorders. Pregnancy and childbirth accounted for 17% of hospital separations among Indigenous women.

Kidney disease is associated with diabetes, high blood pressure, infections, low birthweight and obesity, all of which are conditions found more commonly in the Indigenous population. Kidney disease can also lead to the need for dialysis or transplant. This situation is reflected in the fact that 44% of all principal procedures in hospital recorded for Indigenous people in 1998–99 were for haemodialysis.

Diabetes is a disease of particular importance in the Indigenous population and manifests in two primary forms—Type 1 diabetes and Type 2 diabetes. In 1998–99 about 75% of Aboriginal and Torres Strait Islander people who received hospital treatment for the disease had Type 2 diabetes. Based on rates for the total Australian population, there were 10–15 times more hospital separations for Type 2 diabetes than expected in the Indigenous population. Diabetes can cause serious complications such as cardiovascular disease, kidney disease, nerve damage, eye damage, ulceration and gangrene. Indigenous people who have Type 2 diabetes often develop the disease earlier than other Australians and often die at younger ages.

There are a number of health risk factors associated with diabetes, including obesity, poor nutrition, lack of physical activity and as yet unspecified genetic factors. The higher levels of obesity in the Indigenous population, may be a contributing factor to elevated levels of Type 2 diabetes.

MEASURES OF HEALTH STATUS *continued*

As with much of the material presented in this report, information about the prevalence of diabetes in the Aboriginal and Torres Strait Islander population is limited by the availability and quality of the data. Incomplete identification of Indigenous people in administrative records would indicate an undercount of the number with the disease. In addition, current estimates suggest that 50% of all people with the disease are unaware of their condition.

RECENT INITIATIVES AND FUTURE PLANS

A number of important initiatives have been undertaken in recent years, by the ABS, AIHW and other bodies, to improve the quality and availability of data about the Indigenous population drawn from administrative data sources. Concurrent with these developments has been an increased emphasis on the inclusion of an Indigenous identifier in a range of surveys and administrative datasets. The National Indigenous Health Information Plan adopted in 1997 continues to be implemented, and comparable developments are under way with respect to community services and housing. Regular social surveys, national surveys with supplementary Aboriginal and Torres Strait Islander samples, the regular identification of Indigenous people in the Labour Force Survey, targeted Census Indigenous enumeration strategies and evaluations, and an analytical work program investigating the modelling of various statistical measures all form part of a national commitment to improve the quality and scope of information about Australia's Aboriginal and Torres Strait Islander people.

CHAPTER 1 INTRODUCTION

AIM

This publication is the third in a series of reports on the health and welfare of Australia's Aboriginal and Torres Strait Islander peoples. It aims to provide a national statistical overview of the health and welfare of Aboriginal and Torres Strait Islander people by drawing on information from a wide range of sources, and by providing comparative data with the total Australian population.

SCOPE

The publication updates, where possible, information presented in the previous two editions of *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* (ABS & AIHW 1997, 1999). The data used were drawn from key national statistical collections including new and updated information from both the Australian Bureau of Statistics (ABS) and Australian Institute of Health and Welfare (AIHW). Important information about Aboriginal and Torres Strait Islander health and welfare is being collected in 2001 by the ABS, with several collection activities already under way. The data from these collections, which include the Census of Population and Housing, the Community Housing and Infrastructure Needs Survey (CHINS) and the National Health Survey (Indigenous) will be available from 2002 onwards. In addition, the Indigenous Social Survey will begin in 2002 (see Chapter 9).

Chapters covering housing and infrastructure, community services and housing assistance, the availability and use of health services, the health of mothers and babies, health status, and rates and causes of mortality are included in this edition. Demographic, social and economic information provides a context in which current issues in Indigenous health can be understood. As in previous editions, a special topic has been chosen for detailed analysis. In this edition, diabetes was chosen because of the significant impact this disease has on the health of Aboriginal and Torres Strait Islander people. The chapter reviews research, surveys and administrative data concerning the prevalence of diabetes in the Indigenous population, and looks at risk factors, associated conditions and management strategies. The final chapter of the publication discusses issues and recent developments in the collection of Indigenous statistics.

Previous editions of this publication contained a separate chapter about Torres Strait Islanders. This has not been provided in the current edition because there is little new data available (see Appendix tables A8–A15 from 1999 edition of this publication). However, wherever possible, separate information about the Torres Strait Islander population has been included.

Health and wellbeing are influenced by a wide range of factors and this publication does not attempt to provide information on them all. Many significant social and economic factors, such as education, employment and issues pertaining to law and justice, are not within the scope of this report, but will be addressed in an ABS publication expected to be released in 2002.

SCOPE *continued*

Health and other issues confronting the Aboriginal and Torres Strait Islander population are neither uniformly spread nor uniformly experienced, a fact that is often not apparent in the national level data presented. Insets have been used throughout the publication to draw attention to a variety of local experiences and health initiatives that exist across Australia.

DATA QUALITY

The availability and quality of data about the Aboriginal and Torres Strait Islander population are limited by a number of factors. Three of the more important are outlined below.

Indigenous population estimates

Estimating the size and composition of the Aboriginal and Torres Strait Islander population is difficult for a number of reasons. One of the main reasons is the uncertainty about Indigenous population counts from the five-yearly Census of Population and Housing which provide the basis for estimating the population. There has been considerable volatility in the Census counts of Indigenous people, with only 42% of the increase between 1991 and 1996 being attributable to 'natural' growth, that is, the increase in the population due to the number of births exceeding the number of deaths over the given period (Ross 1999). The remaining increase in the Indigenous population can be explained by several factors. These include changes in the rate at which children with only one Indigenous parent are identified as Indigenous; changes in the propensity of Indigenous people to record their Indigenous status on Census forms; improvements to the Census enumeration procedures; and changes in the rates of non-response to the question on Indigenous origin (Ross 1999). While factors, such as the propensity to identify as Indigenous in the Census, can be identified, it is not possible to estimate how these trends are likely to change over time. Accurate births and deaths data, required to estimate the natural growth in the Indigenous population between Censuses, are not available nationally. These uncertainties affect the comparison of rates from year to year and limit the potential for assessment of trends in health status and events.

Indigenous identification

Administrative collections such as hospital records, birth and death registrations, and data collected by community service providers are major sources of information about Aboriginal and Torres Strait Islander people. However, Indigenous people are not accurately identified in many of these data collections. Some of the reasons for this include: variations in the definitions used in determining Indigenous status, different methods of data collection and failure to record clients' Indigenous status. The ABS and AIHW, in partnership with State and Territory authorities, are making considerable efforts to improve the completeness of Indigenous identification in a number of key data collections (see Chapter 9).

National household surveys

The sampling methods generally applied to national household surveys are designed to provide aggregate information about the total Australian population. Additionally, these surveys often exclude people living in sparsely settled (see Glossary) or remote areas of Australia. Aboriginal and Torres Strait Islander peoples make up a relatively small proportion of the total population and are more likely to live in sparsely settled areas than other Australians (see Demographic Context section in this chapter). Because of these factors, the random selection of participants for a national survey usually results in the Indigenous sample size being insufficient to enable separate results to be published. Where separate results have been produced, such as those from the 1995 National Health Survey (NHS), an enhanced sample of Indigenous people has been applied. This method will be used again in the 2001 NHS. In the 2004–05 NHS and six yearly thereafter, the enhanced Indigenous sample will be sufficient to produce results at State/Northern Territory as well as national level. Other issues which affect the availability of data about the Indigenous population from surveys include the relevance of the questions and concepts used and the quality and the comparability of self-reported health information (see Chapter 9).

Despite these limitations in the availability of information and issues of data quality, regular reporting on the health and welfare of Aboriginal and Torres Strait Islanders is a high priority for governments, and plays an important role in informing community debate. Work to improve the quality and availability of the statistics is ongoing and progress is being made in many sectors and at all levels of government (see Chapter 9).

THE DEFINITION OF HEALTH AND WELFARE

The World Health Organization (1946) defines health as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’. The 1989 National Aboriginal Health Working Party described ‘health’ from an Indigenous perspective as:

> ‘...a matter of determining all aspects of their life, including control over their physical environment, of dignity, of community self-esteem and of justice. It is not merely a matter of the provision of doctors, hospitals, medicines or the absence of disease and incapacity.’ (A National Aboriginal Health Strategy 1989)

These concepts are embodied in the definition of ‘health’ put forward in The National Aboriginal Health Strategy Working Party report, and later reiterated in the draft review of this strategy (National Aboriginal and Torres Strait Islander Health Council 2001):

> ‘Not just the physical well-being of the individual but the social, emotional, and cultural well-being of the whole community. This is a whole-of-life view and it also includes the cyclical concept of life-death-life.’ (A National Aboriginal Health Strategy 1989)

THE DEFINITION OF HEALTH AND WELFARE *continued*

The term 'welfare' is also a wide-ranging term, encompassing the wellbeing of both the individual and the society of which they are a part, as well as the system of welfare services available to individual members of society (AIHW 1995). Welfare services are defined by the Australian Institute of Health and Welfare Act 1987 to include aged care services, child care services, services for people with disabilities, housing assistance, child welfare and other community services (AIHW 1995).

SOCIAL AND ECONOMIC CONTEXT

The relationship between socioeconomic status and health is well established, with people at the lowest socioeconomic levels experiencing the highest rates of illnesses and death (Lynch & Kaplan in Berkman and Kawachi [eds], 2000). As socioeconomic position improves, health status also improves. This gradient from poorest to wealthiest has been observed for most of the major causes of death (Turrell et al. 1999).

Compared with other Australians, Aboriginal and Torres Strait Islander people are disadvantaged with regard to a range of socioeconomic indicators, including education, employment, income and housing, and are therefore at greater risk of ill health. Information on these indicators is available from the 1996 Census and was covered in detail in the previous edition of this publication (see Appendix tables A2–A7). Data from 2001 Census will be presented in the next edition of this publication.

Socioeconomic status alone does not explain the variations in health status that exist between groups in society. Health risk behaviours (e.g. smoking, alcohol misuse) and other health risk factors (e.g. poor housing, exposure to violence) are also important determinants of health but even these do not fully explain the differential burden of disease between population groups. Research suggests that at least a partial explanation for the remaining differences lies in other determinants of health such as aspects of the social environment. These include the neighbourhood in which one lives, one's position in the workplace relative to others, the quality of one's social connections with friends, family and the community, and the degree to which one feels included or excluded by society (Wilkinson, 1999, Shaw et al. 1999). A lack of control, whether actual or perceived, over aspects of one's life, may also contribute to poor health (Marmot et al. in Marmot & Wilkinson 1999 and Lantz 1998). A recent qualitative analysis of the health of the Yolgnu people of north-east Arnhem Land extends these hypotheses to the Indigenous population. Trudgen (2000) has identified loss of control among the Yolgnu as leading to hopelessness, the loss of the will to live and, ultimately to high levels of sickness and mortality.

DEMOGRAPHIC CONTEXT

The Census of Population and Housing is the major source of information about the demographic characteristics of Australia's Aboriginal and Torres Strait Islander peoples. A detailed demographic profile, based on the 1996 Census, was presented in the 1999 edition of this publication (ABS & AIHW 1999) and is summarised here (see also Appendix table A20). Updated demographic data will be available following the collation of results of the 2001 Census.

DEMOGRAPHIC CONTEXT *continued*

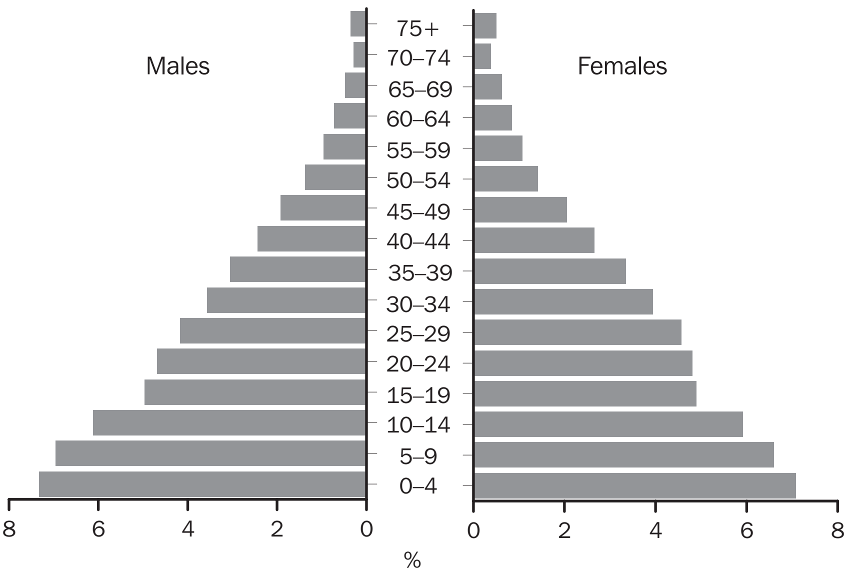
Based on the 1996 Census, Australia's Aboriginal and Torres Strait Islander population was estimated to be 386,049. This represented 2.1% of the total Australian population. About 11% of Indigenous people counted in the 1996 Census reported that they were of Torres Strait Islander origin (ABS 1998b) (see Chapter 9 for population projections and Torres Strait Islander estimates).

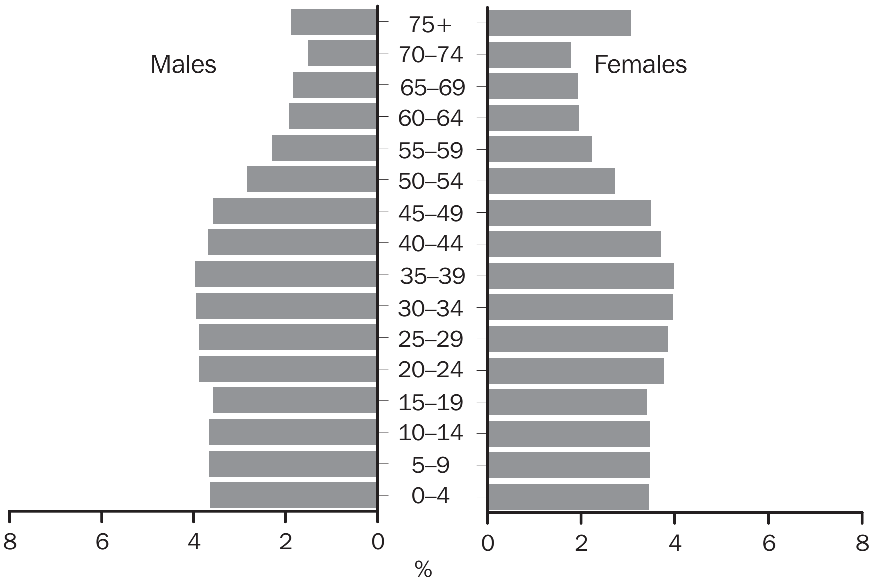
Age

The Aboriginal and Torres Strait Islander population has a younger age profile than the Australian population as a whole. In 1996, half the Indigenous population was aged 20 years or less, while the corresponding proportion for the total Australian population was 34 years or less (ABS 1998b). The following graph (1.1) shows the proportion of each population in five year age groups. The graphs show that the Indigenous population has higher proportions of young people than the total Australian population and lower proportions of older people. The graphs indicate higher rates of fertility in the Indigenous population and deaths occurring at younger ages.

The different age profiles of the Indigenous and non-Indigenous populations mean that comparisons between the two must take age into account, either by age-standardisation or the use of age-specific rates. This is particularly important if health outcomes are being compared because, since age and health status are closely related, the relative youth of the Indigenous population may mask health status when compared with the older non-Indigenous population (see Chapter 8).

1.1 INDIGENOUS AND TOTAL AUSTRALIAN AGE PYRAMIDS—1996


Indigenous population
Age group (years)


Total population
Age group (years)

Source: ABS 1998c.

Population distribution

In 1996, New South Wales and Queensland were the jurisdictions with the highest estimated population of Aboriginal and Torres Strait Islander people (109,925 and 104,817 respectively, or 28.5% and 27.2% of the total Indigenous population). In the Northern Territory, Indigenous people made up the largest proportion of the total population (51,876 people, 28.5% of the total Northern Territory population) (table 1.2).

1.2 ESTIMATED RESIDENT POPULATION—30 JUNE 1996

	Indigenous population	*Proportion of the total Australian Indigenous population*	*Proportion of the total State/Territory population*
		%	%
New South Wales	109 925	28.5	1.8
Victoria	22 598	5.9	0.5
Queensland	104 817	27.2	3.1
South Australia	22 051	5.7	1.5
Western Australia	56 205	14.6	3.2
Tasmania	15 322	4.0	3.2
Northern Territory	51 876	13.4	28.5
Australian Capital Territory	3 058	0.8	1
Australia(a)	**386 049**	**100.0**	**2.1**

(a) Includes Jervis Bay Territory.

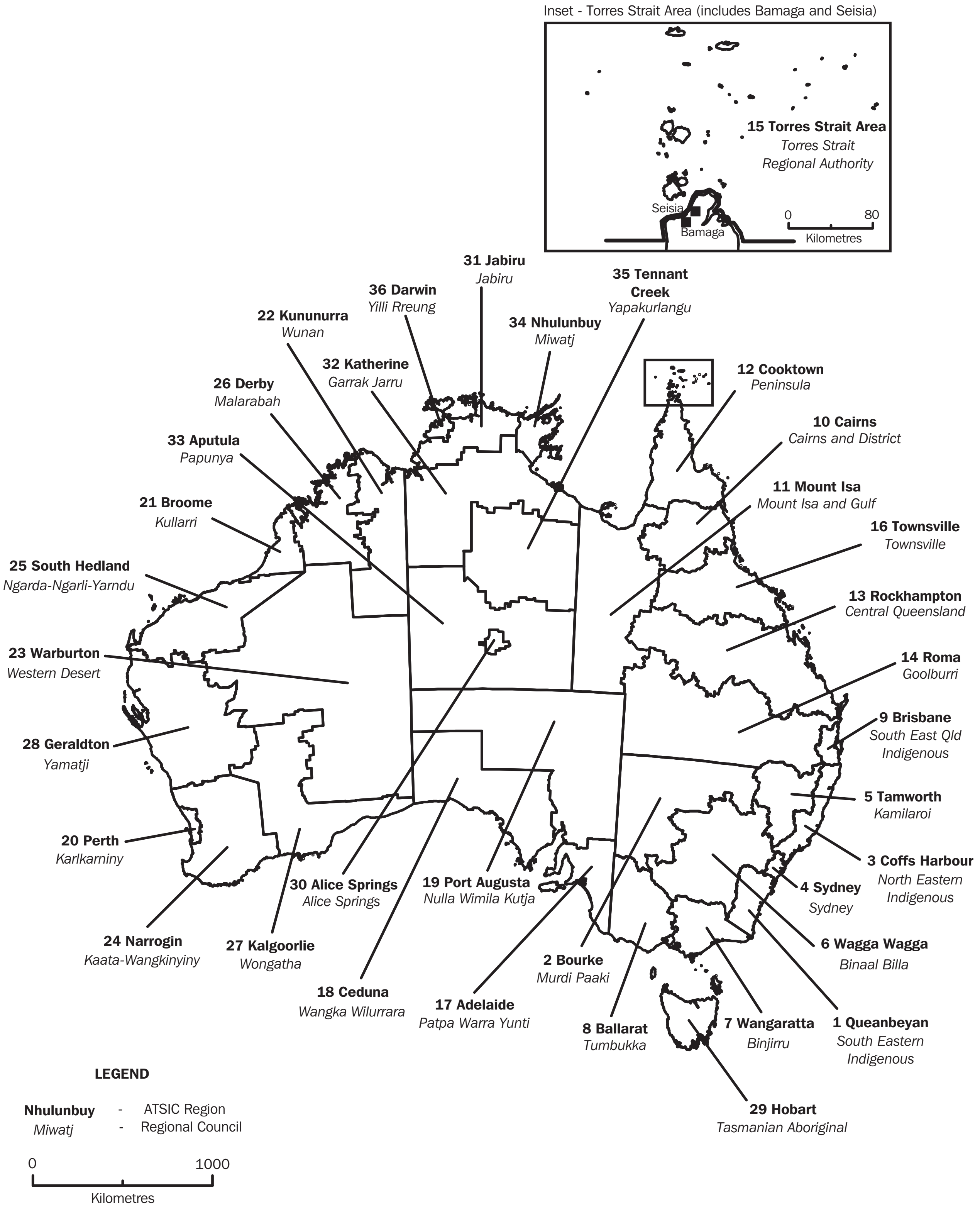
Source: ABS 1998c.

Maps 1.4 and 1.5 show the distribution of the Indigenous population across Australia in 1996, using Aboriginal and Torres Strait Islander Commission (ATSIC) regions as their geographical basis (see map 1.3). In the northern and central regions of the country, Indigenous people made up a large proportion of the local population, while the majority of Aboriginal and Torres Strait Islander people lived in urban areas.

Map 1.4 shows the distribution of the total Indigenous population in each region. It is evident that the ATSIC regions of Sydney, Coffs Harbour, Brisbane, Cairns, Wagga Wagga, Hobart and Perth have the highest Indigenous populations.

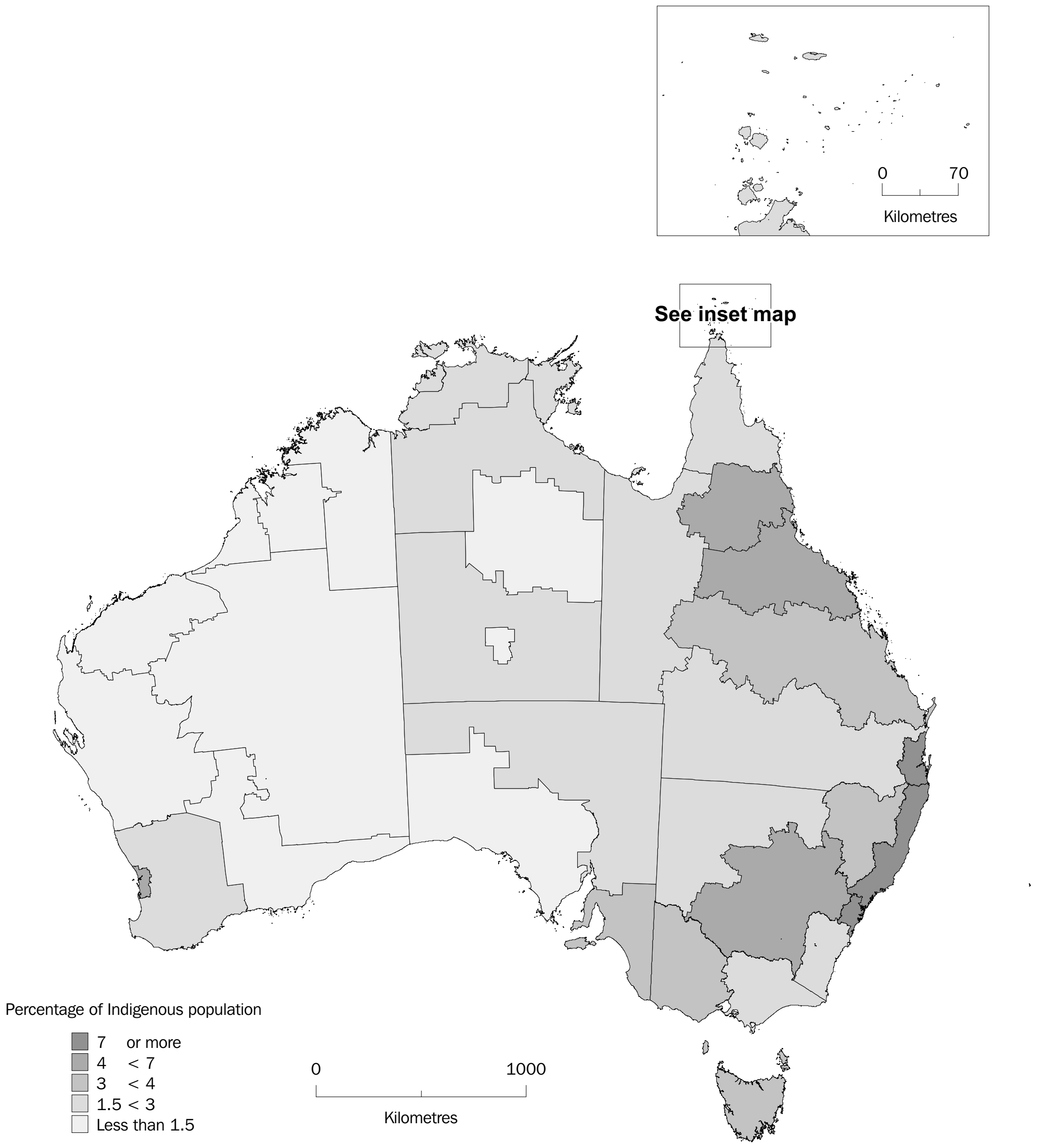
Map 1.5 shows the proportion of the total population of each ATSIC region in 1996 that was Indigenous. Over two-thirds of the population in the Torres Strait Area (86.0%), Aputula (79.5%), Jabiru (75.4%) and Derby (66.8%) ATSIC regions were Indigenous. The combined populations of these regions accounted for approximately 7% of the total Indigenous population.

1.3 ATSIC REGIONS—1996



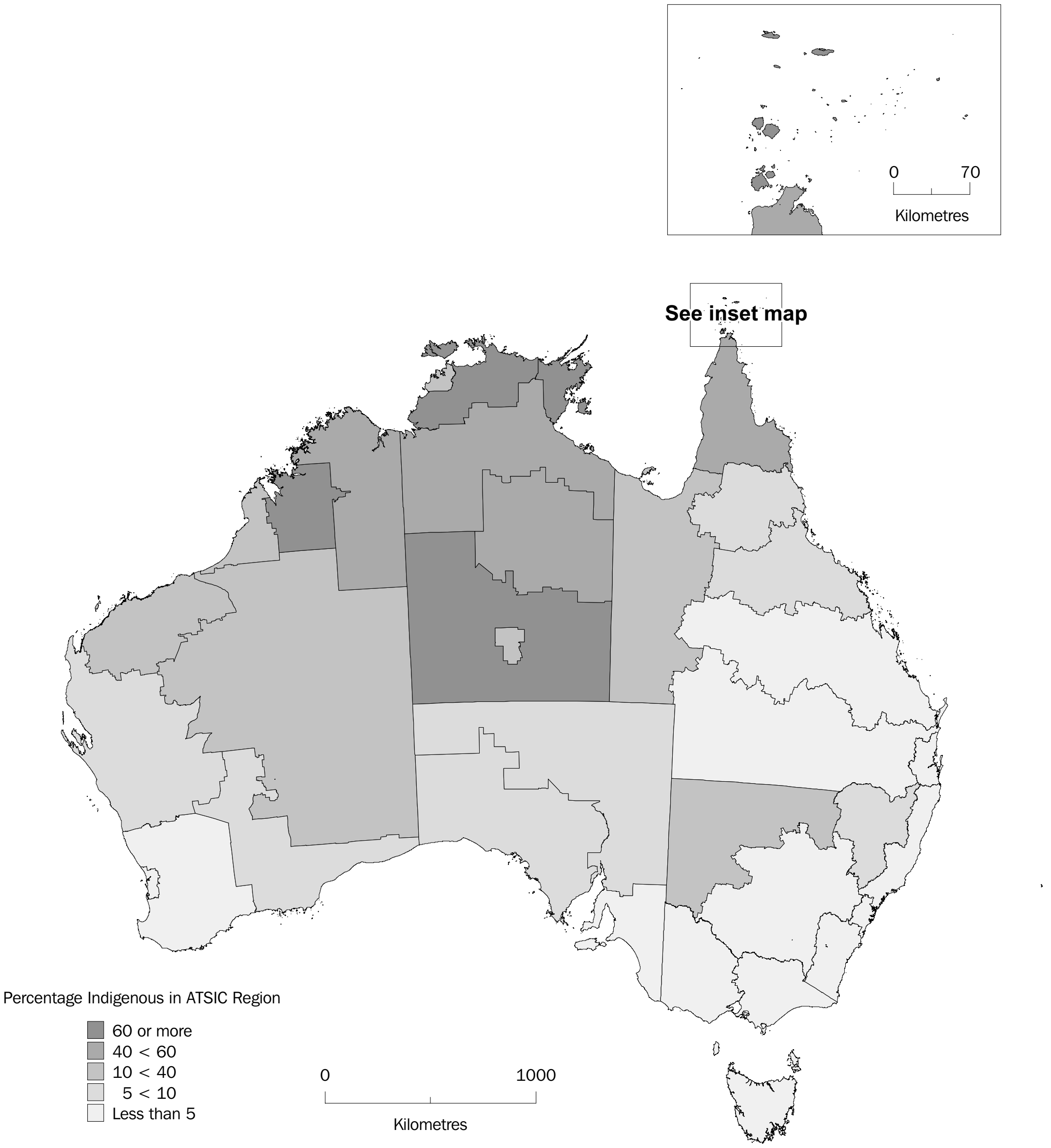
Source: Aboriginal and Torres Strait Islander Commission

1.4 PROPORTION OF THE TOTAL AUSTRALIAN INDIGENOUS POPULATION—1996



Source: ABS data available on request, 1996 Census

1.5 PROPORTION OF THE REGIONAL POPULATION—1996

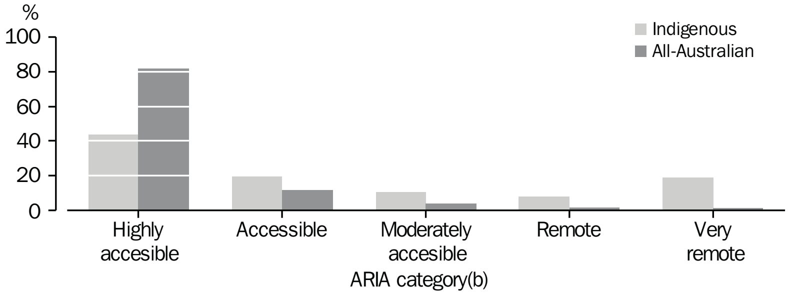


Source: ABS data available on request, 1996 Census

Population distribution *continued*

In general, Aboriginal and Torres Strait Islander people were more likely than non-Indigenous people to live in remote or rural areas in 1996. Graph 1.6 shows the distribution of the population according to the Accessibility/Remoteness Index of Australia (ARIA) (see Glossary). Although a high proportion of Indigenous people (over 40%) lived in areas where geographic access to services was high, they were more likely than non-Indigenous people to live in less accessible areas. Almost one in five Indigenous people lived in areas classified as 'very remote', compared with less than one in a hundred of the total Australian population.

1.6 CENSUS COUNTS(a), By ARIA—1996



(a) Place of enumeration. Excludes overseas visitors, persons in water, off-shore, migratory & shipping collection districts.
(b) See Glossary for definitions relating to ARIA.

Source: ABS data available on request, 1996 Census.

CHAPTER 2 HOUSING AND INFRASTRUCTURE

INTRODUCTION

Housing has been identified as a major factor affecting the health of Aboriginal and Torres Strait Islander people. Adequate housing provides protection from the elements, minimises the risk of disease and injury, and contributes to the physical, mental and social wellbeing of the occupants. Inadequate or poorly maintained housing and the absence of essential infrastructure, such as a supply of safe drinking water and effective sewerage systems, can pose serious health risks. Studies have shown that many Indigenous people live in housing which does not satisfy these basic requirements, and which is considered unacceptable by general Australian standards (Neutze 1998).

In this chapter, housing information is presented that describes the situation of Aboriginal and Torres Strait Islander people in relation to tenure, overcrowding, affordability, dwelling conditions and essential infrastructure. The information is drawn largely from two surveys conducted by the ABS in 1999: the Australian Housing Survey (AHS), which provides information on both Indigenous and non-Indigenous households, excluding those living in sparsely settled areas (see Glossary); and the Community Housing and Infrastructure Needs Survey (CHINS), which collected information from discrete Indigenous communities, located predominantly in remote areas.

Inset 2.1 provides a more detailed description of each of these surveys.

2.1 HOUSING SURVEYS OF RELEVANCE TO ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

Australian Housing Survey, 1999

The Australian Housing Survey 1999 (AHS) provides information about the characteristics, condition and quality of housing of the Australian population. It collected information from persons living in private dwellings, but not those living in sparsely settled areas, and so excluded much of the population living in remote areas. Data items collected by the AHS included demographic characteristics, tenure, household income, housing costs and dwelling conditions.

The AHS was developed in consultation with major stakeholders, in particular the Commonwealth Department of Family and Community Services (DFaCS), which provided a significant proportion of the funding for the survey, including that needed for the supplementation of the Indigenous sample. The supplementation allowed results for the Aboriginal and Torres Strait Islander population (excluding those living in remote areas) to be produced and compared with the total Australian population for the first time.

It should be noted that in the AHS an Indigenous household is defined as any household containing at least one person of Aboriginal and/or Torres Strait Islander origin aged 15 years or over. This definition differs from that used with Census data (see Glossary).

More detailed information on the AHS can be found in *Australian Housing Survey: Aboriginal and Torres Strait Islander Results* (ABS 2001c).

Community Housing and Infrastructure Needs Survey, 1999 (CHINS)

The ABS conducted the Community Housing and Infrastructure Needs Survey (CHINS) from August to October 1999. The survey was carried out on behalf of, and with funding from, the Aboriginal and Torres Strait Islander Commission (ATSIC). The CHINS was designed to collect data which would assist in the evaluation of policies and programs aimed at improving the housing conditions and infrastructure services of discrete Indigenous communities and other community-managed housing.

2.1 HOUSING SURVEYS OF RELEVANCE TO ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE *continued*

The CHINS collected data from all known Indigenous housing organisations and discrete Indigenous communities, including those located in urban and sparsely populated areas. Data included details of the current housing stock, management practices and financial arrangements of organisations that provided housing to Aboriginal and Torres Strait Islander people. Other information collected related to housing and infrastructure services such as water, power and sewerage systems, and the extent of community access to facilities such as education and health services.

Details of the results of the 1999 CHINS are available in *Housing and Infrastructure in Aboriginal and Torres Strait Islander Communities, Australia, 1999* (ABS 2000f).

Two important concepts used in CHINS were:

Reported usual population: The number of people, Indigenous and non-Indigenous, who usually reside in a community and whose main, or only, residence is that community. In this context 'residence' means the community in which a person resides, or intends to reside, for at least six months. Community populations were reported by key members of housing organisations and communities.

Discrete Indigenous community refers to a geographical location with a physical or legal boundary, that is inhabited, or intended to be inhabited, predominantly by Indigenous people, and which contains housing and infrastructure that are owned or managed on a community basis.

The 1999 CHINS was not the first survey carried out on Indigenous community housing and infrastructure. In 1992, ATSIC commissioned the Housing and Community Infrastructure Needs Survey (HCINS), which collected housing and infrastructure information from Aboriginal and Torres Strait Islander people across Australia. However, the data collection methods employed varied between States and Territories, affecting attempts to aggregate the data at a national level. There were also differences between the methodologies and definitions used in the 1992 HCINS and the 1999 CHINS, which prevent comparisons between the results of the two surveys being made. An ABS technical note discussing these issues in more detail will be included in the 2001 edition of *Housing and Infrastructure in Aboriginal and Torres Strait Islander Communities, Australia, 2001* (ABS Cat. no. 4710.0).

The CHINS 2001 collected information which will allow housing conditions, community infrastructure and access to services, to be compared for 1999 and 2001.

CHARACTERISTICS OF INDIGENOUS HOUSEHOLDS

Homelessness

Aboriginal and Torres Strait Islander people generally do not have the same levels of access to affordable, secure housing as other Australians. This can be the result of low income levels, discrimination on the part of landlords and rental agencies or a lack of suitable housing. Additionally, some Indigenous people leave their homes for long periods to fulfil cultural obligations and this may lead to the loss of a permanent dwelling (AIHW 1999a).

Differing definitions and concepts of homelessness, combined with problems in collecting data about homeless people, make it difficult to accurately estimate the number of homeless people in Australia. There are, however, five general situations, representing points on a continuum of circumstances, which provide a useful basis for defining homelessness:

- living on the street;
- living in crisis accommodation;

Homelessness *continued*

- living in temporary arrangements without security of tenure (e.g. staying with friends or relatives, living in squats, improvised dwellings or boarding houses);
- living in unsafe family circumstances; and
- living on very low incomes and facing extraordinary expenses or personal crisis (AIHW 1999a, pp. 297–298).

One measure of homelessness can be obtained from Census data which records people as living in 'improvised dwellings', a category which includes sheds, humpies, tents (other than in caravan parks) and park benches. It should be noted that census data are likely to underestimate the number of people without adequate housing because people staying with friends or relatives, or in shelters are not counted as 'homeless' (ABS & AIHW 1999).

On the night of the 1996 Census, 19,579 people reported that they were living in improvised dwellings. Just over 95% reported that they were at their usual address (see Glossary, 'usual residence'), and half reported that they were of Aboriginal or Torres Strait Islander origin (Chamberlain 1999).

There were over 5,800 households in improvised dwellings, just under a third (31%) of which were Indigenous households (see Glossary). Indigenous households in improvised dwellings were, on average, much larger than other households in similar circumstances, with 4.9 people per household, compared with 2.0 people per household for other households (ABS & AIHW 1999).

The 1999 CHINS identified a total of 2,284 'occupied temporary dwellings', including caravans, tin sheds without dividing walls, 'humpies', 'dongas' and other makeshift shelters, in discrete Indigenous communities. These temporary dwellings were occupied by 7,954 people, representing 7% of the total population of all discrete Indigenous communities. Almost all (92%) of those living in temporary dwellings were reported to be in need of permanent housing (ABS 2000f).

Overcrowding

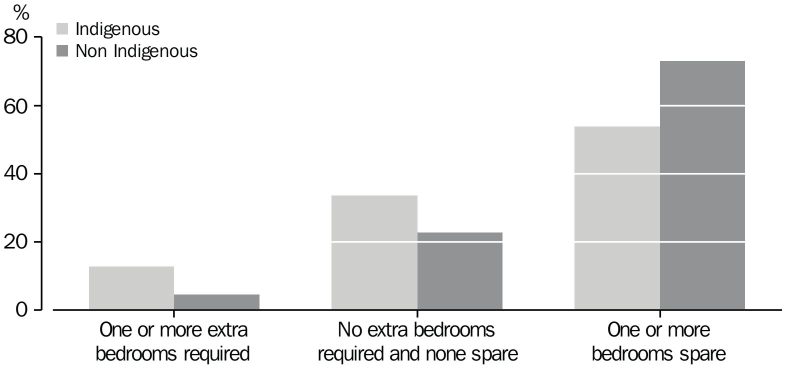
Overcrowded living conditions increase the risk of the spread of infectious diseases such as meningococcal disease, rheumatic fever, tuberculosis and respiratory infections (Waters 2001). An analysis of 1996 Census data by Jones 1999, found that Aboriginal and Torres Strait Islander people experience overcrowded living conditions more commonly than other Australians (see Glossary). His analysis showed that at the time of the 1996 Census, 10% of Indigenous family and group households in major urban areas were overcrowded. Similarly, 15% in other urban areas were overcrowded, and 27% in rural areas. Comparable non-Indigenous proportions were 4% for major urban areas and 3% for both other urban and rural areas. The Jones study also estimated that the average number of additional bedrooms required per overcrowded Indigenous household was 1.9, compared with 1.2 for overcrowded non-Indigenous households. Average bedroom need per overcrowded Indigenous household for rural areas was double that for major urban areas (2.6 compared with 1.3) (Jones 1999).

Overcrowding *continued*

Housing for Indigenous people, particularly that in rural and remote areas, often suffers from construction and design problems. These problems may result in the need for the occupants to reside temporarily with friends or relatives, which can cause overcrowding and increased stress on infrastructure and facilities (Commonwealth, State and Territory Housing Ministers' Working Group on Indigenous Housing 1999). Similarly, visitors to a household or community can cause temporary overcrowding. Results from the 1999 CHINS showed that 79% of discrete Indigenous communities, with reported usual resident populations of 50 or more, reported population increases in the previous 12 months due to visitors for periods of two weeks or more. A quarter of all communities reported increases of a size similar to, or greater than, their usual population. The most common reasons given for these increases were cultural or ceremonial obligations and visiting during holiday periods (ABS 2000f).

In the absence of a universally accepted standard for the measurement of overcrowding, methods vary from survey to survey (see Glossary). The 1999 AHS employed the Canadian National Occupancy Standard, which is based upon the number of bedrooms in a dwelling, the number of usual residents in the household, and factors such as the age, gender and the relationships of the occupants. The AHS reported 13% of Indigenous households in non-sparsely settled areas did not have enough bedrooms to meet their needs, compared with 4% of non-Indigenous households (see graph 2.2).

2.2 HOUSING UTILISATION



Source: ABS 2001c.

Housing tenure

Home ownership is not always relevant to the needs of Aboriginal and Torres Strait Islander people, particularly those living in remote communities, where housing is often community owned. However, the 1999 AHS found that even in non-sparsely settled areas, Indigenous people are less likely than other Australians to own their own homes. The survey found that 58% of Indigenous households in non-sparsely settled areas were renting their home, while 39% were home owners. In comparison, 27% of non-Indigenous households rented and 70% were home owners. Indigenous households were more likely to rent from a State housing commission than a private landlord, whereas the opposite was true for non-Indigenous renter households.

Home ownership in Australia generally increases with age and, since the Indigenous population has a younger age structure than the non-Indigenous population, it is necessary to age-standardise the data before comparing housing tenure in the two populations.

Graph 2.3 presents age-standardised data, based on the age of the household reference person (see Glossary). It shows that non-Indigenous households in non-sparsely settled areas were over 1.5 times more likely to be home owners than Indigenous households (71% and 45%, respectively), and that non-Indigenous households were twice as likely as Indigenous households to be owners without a mortgage. Indigenous households were over 1.5 times more likely to rent their homes (44%, compared with 27% of non-Indigenous households).

2.3 HOUSEHOLDS BY TENURE TYPE(a)(b)

(a) Indirectly age-standardised data.
(b) Non-sparsely settled areas.
(c) State or Territory housing authority.
(d) Includes other renters.

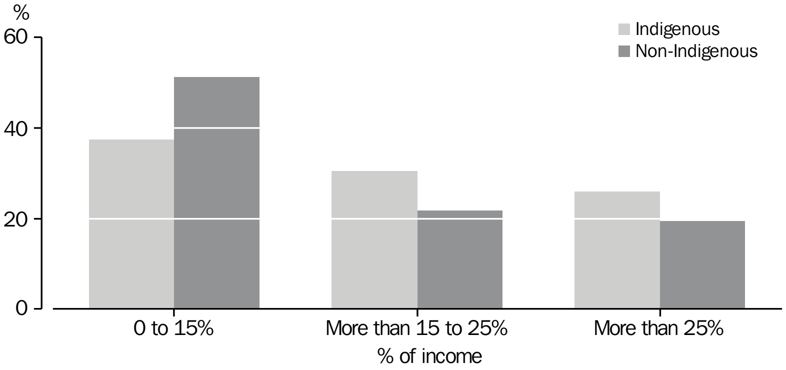
Source: ABS 2001c.

The 1999 CHINS reported a total of 16,159 permanent dwellings in 1,291 discrete Indigenous communities, predominantly located in remote and very remote areas of Australia. Most (91%) of these dwellings were owned or managed by Indigenous community organisations. Of the remainder, 6% were rented from a State housing authority and 3% were privately owned or owned and managed by non-Indigenous organisations (ABS 2000f).

Housing costs

Housing-related financial stress results when housing costs are high relative to household income. Clearly, when a high proportion of income is needed to secure housing, the ability to purchase other essential goods or services is reduced. The 1999 AHS collected information on housing costs, including rent, mortgage repayments, rates, land tax and body corporate fees, and found that the Indigenous households surveyed spent, on average, a higher proportion of their income on housing than non-Indigenous households. More than a quarter of Indigenous households spent more than a quarter of their income on housing, compared with just under one fifth of non-Indigenous households (graph 2.4). The survey also found that the average weekly housing cost for Indigenous households was $139, compared with $129 for non-Indigenous households, reflecting the higher proportion of non-Indigenous home owners without a mortgage.

2.4 PROPORTION OF INCOME SPENT ON HOUSING COSTS



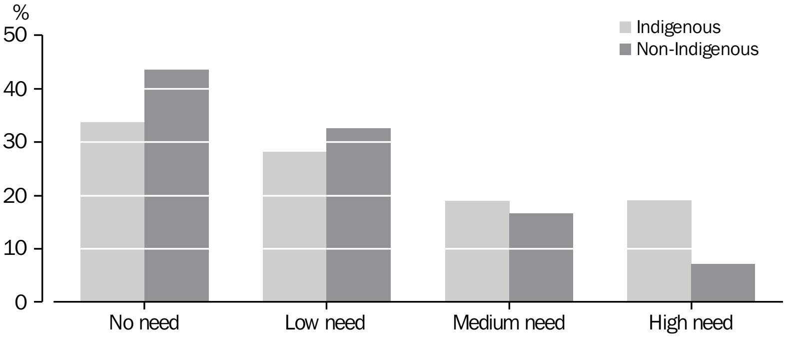
Source: ABS data available on request, Australian Housing Survey 1999.

Dwelling condition

Findings from the 1999 CHINS indicate that the housing conditions of Indigenous people are generally poorer in rural and remote communities than in urban areas, with a third of the 14,667 community-owned or managed permanent dwellings in discrete Indigenous communities requiring major repairs (23%) or replacement (10%).

Results from the 1999 AHS, presented in graph 2.5, show that Indigenous households were almost three times more likely than non-Indigenous households to report their homes to be in high need of repair (19% versus 7%). A higher proportion of non-Indigenous households reported no need for repairs (44% versus 34%).

2.5 DWELLING CONDITION(a)



(a) Need for repairs.

Source: ABS 2001c.

INFRASTRUCTURE IN INDIGENOUS COMMUNITIES

Inadequate and poorly maintained infrastructure are major issues affecting Aboriginal and Torres Strait Islander communities, particularly those in remote and rural areas of Australia. It is recognised that improving basic environmental health conditions, such as access to clean water, safe food and adequate sanitation, are critical issues that need to be addressed if better health outcomes for Aboriginal and Torres Strait Islander people living in these communities are to be achieved (CDHAC 2000). The following section presents information on the infrastructure of discrete Indigenous communities in Australia, collected by the 1999 Community Housing and Infrastructure Needs Survey (CHINS) (see inset 2.1).

Population

Of the 1,291 discrete Indigenous communities identified in the 1999 CHINS, more than half were in the Northern Territory (53%). Western Australia and Queensland accounted for 22% and 12%, respectively.

The combined reported usual population (see inset 2.1 for definition) of all discrete Indigenous communities was 109,994 persons. More than two-thirds of all people living in discrete Indigenous communities lived in communities with a population of 200 or more (table 2.6).

2.6 COMMUNITY SIZE, ALL COMMUNITIES(a)

	Communities with a population of			
	Less than 50	*50–199*	*200 or more*	*Total*
New South Wales	9	37	21	67
Victoria	—	2	—	2
Queensland	105	9	35	149
South Australia	79	18	9	106
Western Australia	200	65	20	285
Tasmania	—	1	—	1
Northern Territory	550	67	64	681
Australia	**943**	**199**	**149**	**1 291**
Persons (no.)	14 571	19 544	75 879	109 994
Community population (%)	13.2	17.8	69.0	100.0

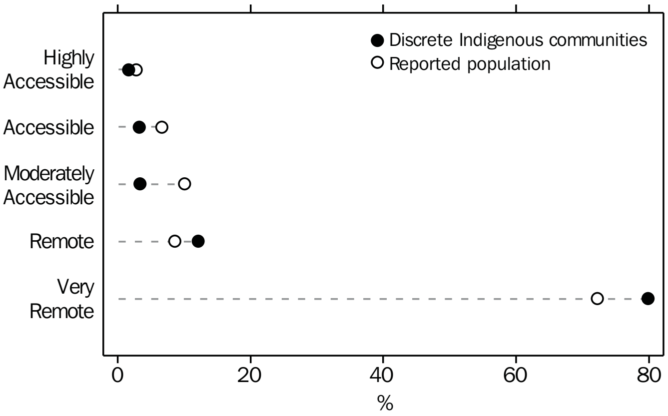
(a) There were no discrete Indigenous communities located in the Australian Capital Territory.

Source: ABS 2000f.

Population *continued*

Based on the Accessibility/Remoteness Index of Australia (ARIA—see Glossary), most (92%) discrete Indigenous communities were located in remote and very remote areas of Australia (graph 2.7). The reported usual population of these communities accounted for 81% of all people living in discrete Indigenous communities.

2.7 ALL COMMUNITIES AND REPORTED POPULATION BY ARIA(a)



(a) See glossary for definitions of ARIA categories of accessibility/remoteness.

Source: ABS data available on request, CHINS 1999.

Water supply

Water is a basic necessity, and ready access to safe drinking water is an essential requirement for the sustainability of any community. An adequate supply should meet domestic needs for drinking, food preparation, bathing and general hygiene. The consumption of unsafe water can lead to serious illness and long term health consequences. The most common and widespread health risks associated with drinking water result from the presence of micro-organisms, which can cause diseases such as gastroenteritis, diarrhoea, hepatitis and typhoid fever (NHMRC 1996).

Water supply *continued*

A total of 184 discrete Indigenous communities, with a combined population of 19,814, had access to a town water supply that was maintained by a water authority or shire council (table 2.8). Most communities obtained their drinking water from sources for which they had responsibility for maintenance and continuity of supply. Bore water was the main supply of drinking water for 791 communities, with a combined population of 63,942. Rivers or reservoirs supplied drinking water to 98 communities (18,571 people) and about 1% of communities, with a combined population of 115 people, reported no organised water supply.

Of the 348 communities with populations of 50 or more, 35% reported that they had experienced water restrictions in the 12-month period prior to the CHINS survey. Equipment breakdown was reported as the main reason for restrictions, and was more commonly reported than climatic reasons such as dry season shortages and drought. Of the 121 communities affected by water restrictions, over a third (36%) reported water restrictions on five or more occasions in the previous 12-month period.

2.8 MAIN SOURCE OF DRINKING WATER, ALL COMMUNITIES

	Communities with a population of				
	Less than 50	*50–199*	*200 or more*	*Total*	*Reported population*
	no.	*no.*	*no.*	*no.*	*no.*
Type of water supply					
Town supply	69	82	33	184	19 814
Bore water	611	96	84	791	63 942
Rain water tank	93	14	12	119	5 961
River or resevoir	73	7	18	98	18 571
Well or spring	62	—	2	64	1 363
Other organised supply	12	—	—	12	148
All communities with an organised supply	*920*	*199*	*149*	*1 268*	*109 799*
No organised supply	16	—	—	16	115
All communities(a)	**943**	**199**	**149**	**1 291**	**109 994**

(a) Includes 'not stated'.

Source: ABS 2000f.

Water treatment and regular water testing are essential to ensure that water is free from micro-organisms hazardous to human health. Information on water treatment and testing was collected from 233 communities with populations of 50 or more, which were not connected to a town water supply, representing a combined population of 76,964. Just over half these communities stated that their water was treated, with chlorination being the most common type of treatment reported. The water of 169 communities had been subjected to chemical, physical and microbiological testing in the past 12 months. Of these, 58

Water supply *continued*

(total population 25,322) provided samples which failed testing at least once. A further 64 communities which were not connected to a town water supply, representing 11,135 people, had not had their water tested in the 12-month period prior to the survey (table 2.9).

2.9 WATER TESTING, COMMUNITIES NOT CONNECTED TO TOWN WATER SUPPLY(a)

	Communities with a population of			
	50–199	*200 or more*	*Total*	*Reported population*
Water tested				
Failed testing	14	44	58	25 322
Did not fail testing	47	53	100	36 918
All communities with water testing(b)	*68*	*101*	*169*	*65 829*
Water not tested	50	14	64	11 135
Total communities	**118**	**115**	**233**	**76 964**

(a) Communities with population of 50 or more.

(b) Includes 'not stated'

Source: ABS 2000f.

Sewerage and drainage

Of the 1,291 discrete Indigenous communities surveyed by the 1999 CHINS, 1,192 reported having a sewerage system, although a high proportion of these reported sewerage problems. Of the 348 communities which reported a population of 50 or more, 204 (59%) reported overflows or leakages in the previous 12 months, with 34 of these reporting 20 or more overflows, indicating chronic sewerage problems. Dwellings were affected in 181 of the communities experiencing sewerage problems (ABS 2000f).

Sewage overflows or leakages were experienced by all communities, but were more prevalent in larger communities. Overflows or leaks affected 2,428, or 15%, of all community dwellings. The most commonly reported equipment and infrastructure problems were blocked drains (55%), equipment failure (39%) and insufficient capacity of the septic system (26%) (ABS 2000f).

The method of disposal of waste water from bathrooms, laundries and kitchens (grey water) was recorded for 206 communities with a population of 50 or more and which were not connected to a town sewerage system or community maintained full water-borne sewerage system. The grey water disposal method was considered to be undesirable by Australian public health authorities in 41 of these communities (ABS 2000f).

Communities with a population of 50 or more were asked whether areas within the community had been affected by ponding in the previous 12-month period. Ponding refers to areas where large pools of stagnant water collect and remain for more than a week. A major health risk associated with ponding is the increased risk of vector-borne diseases (i.e. diseases spread by insects, such as mosquitoes). Restriction of access and contamination by sewage are other important associated problems.

Sewerage and drainage *continued*

Problems with ponding were reported by 141 discrete Indigenous communities, and 1,414 permanent dwellings were affected in 107 of these. Of all communities which experienced ponding, 56 with a total reported population of 13,550, had experienced problems on five or more occasions in the previous 12 months. The most commonly reported causes of ponding were rain (87%), overflow from blocked drains (27%) and sewage overflows and leakages (17%) (ABS 2000f).

Electricity

The 1999 CHINS collected information about electricity supply from all 1,291 discrete Indigenous communities. One in ten communities, with a combined population of 1,378, or 1% of the survey population reported that they were without an electricity supply, although the majority of these communities had a population of less than 20 (ABS 2000f).

In communities with an electricity supply, domestic generators were the main source of power (26% of all communities), followed by community generators (23%) and State grids (22%). Nearly all (96%) communities which relied on domestic generators had populations of less than 50 people. Larger communities were more likely to have access to community generators or State grids (ABS 2000f).

Information on power interruptions was collected for 348 discrete Indigenous communities with a population of 50 or more. Most communities (80%) reported interruptions at some time during the 12 months prior to the survey. Over a third (38%) of these communities reported 10 or more power interruptions in the same period. A total of 57 communities reported 20 or more power interruptions, affecting 18,490 people, or 19% of the total population of all discrete Indigenous communities. Equipment breakdown, storms and planned outage for maintenance were the main reasons cited for power interruptions (ABS 2000f).

Rubbish collection

Almost all (93%) of the 1,291 discrete communities reported some form of organised rubbish disposal. Fenced or unfenced tips located on community land were the most commonly reported form of rubbish disposal (62% of communities). A further 18% used rubbish tips located outside community land, and 10% of communities incinerated their rubbish (ABS 2000f).

Of the 348 communities with a population of 50 or more which were asked about household rubbish collection, 322 reported that they had organised collections, and rubbish was collected at least once a week for the majority (98%) of these (ABS 2000f).

Environmental health workers

An environmental heath worker is usually an Indigenous person from within the community whose role is to inspect community infrastructure and report any environmental concerns to relevant government authorities (e.g. local government).

The 1999 CHINS asked the 348 communities with a population of 50 or more whether there was an environmental health worker working within the community. Of these communities, 250 reported that they did not have an environmental health worker either working or training within the community. In 22 communities, the environmental health worker was undergoing training and had not commenced duties. The most common activities undertaken by environmental health workers were in relation to dog control, rubbish disposal and sewerage systems.

SUMMARY

Compared with other Australians, Aboriginal and Torres Strait Islander people are disadvantaged in relation to housing. They are more likely to be in need of housing, are less likely to own their own homes, and spend a greater proportion of their income on housing, than the rest of the population. While community ownership of housing may partly explain the differences in tenure that exist between the Indigenous and the non-Indigenous populations, the relative socioeconomic disadvantage of Aboriginal and Torres Strait Islander people is also a contributing factor.

Many Aboriginal and Torres Strait Islander people, particularly those in remote areas, live in overcrowded and poorly maintained houses. This places the occupants at increased risk of disease and ill health. Poorly maintained water and sewerage systems are also potentially major causes of ill health for those living in discrete Indigenous communities.

CHAPTER 3 COMMUNITY SERVICES

INTRODUCTION

Community services form part of a public service delivery program designed to address individual and societal needs, in conjunction with other service sectors such as employment, income support, education and health. They are provided by Commonwealth, State, Territory and local government agencies, and community organisations.

This chapter presents information about the delivery of community services to Aboriginal and Torres Strait Islander clients in the areas of housing assistance, child care, child protection, adoption, disability services and aged care. Where possible, comparisons with the non-Indigenous or general population are included. Unlike previous editions, this publication does not include information about income support, or the levels of imprisonment of Aboriginal and Torres Strait Islander people in the adult and juvenile justice systems. The Australasian Juvenile Justice Administrators and the National Community Services Information Management Group are planning the pilot testing of a national minimum dataset for juvenile justice, which will include enhanced data on juvenile justice, including Indigenous identification. Information about this development and the adult justice system will be covered in an ABS publication on the social and economic wellbeing of Indigenous Australians, planned for release in 2002.

It is often difficult to obtain accurate information from the administrative databases of community service providers about the number of Aboriginal and Torres Strait Islander people who have been assisted. These difficulties occur because the Indigenous status of clients is not always recorded by the service provider, or, in cases where Indigenous status is recorded, inconsistencies in recording methods often result in data that are not comparable between jurisdictions (see Chapter 9).

HOUSING ASSISTANCE

Housing assistance through programs such as the Commonwealth-State Housing Agreement (CSHA), the Rent Assistance Program, the Supported Accommodation Assistance Program (SAAP) and the Crisis Accommodation Program is available to both Indigenous and non-Indigenous Australians. People assisted under these schemes are not always asked about their Indigenous status and, consequently, complete numbers of Aboriginal and Torres Strait Islander people participating are not known. Additional housing assistance is available exclusively to Indigenous people and/or communities from a number of special programs, including the Aboriginal and Torres Strait Islander Commission (ATSIC), Community Housing and Infrastructure Program, ATSIC Home Ownership Program, CSHA Aboriginal Rental Housing Program, and hostels run and/or funded by Aboriginal Hostels Limited (ABS & AIHW 1999).

HOUSING ASSISTANCE
continued

In May 2001, Commonwealth, State and Territory Housing Ministers adopted a new policy of 'safe, healthy and sustainable housing for Indigenous Australians'. The Ministers noted the high levels of Indigenous homelessness presently experienced in Australia and the environmental health problems associated with inadequate housing, and called upon all governments to adopt Indigenous housing as a priority issue of national importance.

3.1 PROGRAMS DESIGNED TO ADDRESS HOUSING NEED

- The Aboriginal and Torres Strait Islander Commission Home Ownership Program is a self-funding program that provides home loans to low-income Indigenous people who are unlikely to be able to secure financing from commercial lenders (ATSIC 2000).
- The Aboriginal and Torres Strait Islander Commission Community Housing and Infrastructure Program is aimed at 'identifying housing needs, patterns and priorities', in some cases providing grants, as well as supplementing and monitoring programs operated by Commonwealth, State, Territory and local governments in discrete Indigenous communities (see Glossary). Among the projects funded under this program are several related to the National Aboriginal Health Strategy, including Health Infrastructure Priority Projects and the ATSIC/Army Community Assistance Projects (ATSIC 2000).
- The Aboriginal Rental Housing Program (ARHP) funds public and community housing specifically for Indigenous people in non-urban areas. (The needs of Indigenous households in urban areas are expected to be met through mainstream CHSA programs, or other public or community housing programs). States and Territories administer the ARHP, in conjunction with advisory groups such as Indigenous Housing Organisations (AIHW 1999a).

Programs for homeless people

The Supported Accommodation Assistance Program (SAAP), jointly funded and managed by the Commonwealth and State governments, is one community services program that reports information about its Indigenous clients. SAAP provides temporary accommodation and support services, such as domestic violence counselling, employment assistance and living skills development, to homeless people, and aims to help them achieve self-reliance and independence. Families, single people, young people, and parents and children who are escaping domestic violence, are assisted under the program (AIHW 2000j).

In the year 1999–2000, Aboriginal and Torres Strait Islander people made up 14% of all adults assisted under the SAAP program. The number of Indigenous clients of SAAP services constitutes a substantial over-representation of this population group, which was about 2% of the total Australian adult population during this period (see table 3.2).

3.2 SAAP CLIENTS IDENTIFIED AS INDIGENOUS—1999–2000

State or Territory(a)	*Clients identified as Indigenous*	*Clients identified as Indigenous as a % of all SAAP clients aged 15 years or more*	*Indigenous adults as a % of total adult population(b)*
New South Wales	3354	14.9	1.4
Victoria	1110	4.3	0.4
Queensland	2182	15.6	2.5
South Australia	2387	12.3	1.2
Western Australia	823	31.1	2.5
Tasmania	261	8.4	2.7
Northern Territory	1216	45.0	24.2
Australian Capital Territory	163	9.1	0.9
Australia(c)	**11496**	**13.6**	**1.7**

(a) Client figures for States and Territories include multiple uses of the program.

(b) Aged 15 years or more, accessing SAAP services 1999-–2000.

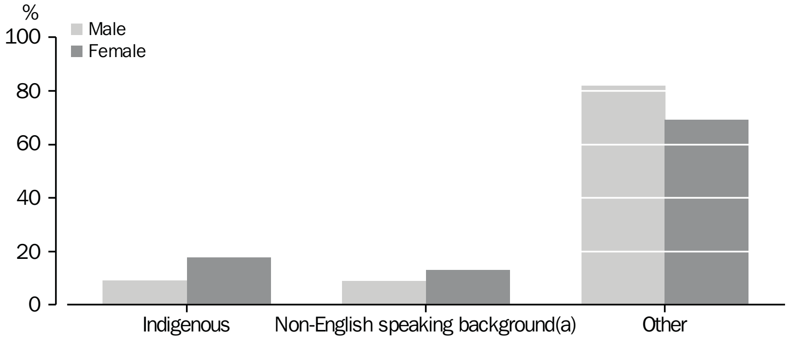
(c) Australian total figures record first visits only.

Source: AIHW SAAP Database; ABS 3231.0; ABS 3201.0.

Programs for homeless people *continued*

During the 1999–2000 reporting period, 55% of all SAAP clients were females. Clients who identified as Aboriginal or Torres Strait Islander made up 18% of all female clients and 9% of all male clients (AIHW 2000j).

3.3 SAAP CLIENTS BY ETHNICITY, GENDER—1999–2000



(a) Excludes Indigenous people.

Source: AIHW 2000j, ABS 1998d & ABS 2001d.

In 1999–2000, just over 45% of Indigenous clients who accessed services under the SAAP program were reported to be escaping domestic violence. The comparable figure for the rest of the population was 28% (AIHW SAAP Database).

Programs for homeless people *continued*

SAAP aims to assist clients in re-establishing their capacity to live independently once they cease to receive assistance under the program. To evaluate the program's success in achieving this objective, information is collected about clients' living arrangements after their use of SAAP services (AIHW 2000j). In 1999–2000, around 80% of clients were living in independent housing after SAAP support (table 3.4). Of all clients who received support, a higher percentage of Indigenous clients were in public housing (30%) than clients from non-English speaking backgrounds (18%) or other clients (16%), and fewer Indigenous clients (13%) were living in privately rented accommodation, compared with clients from non-English speaking backgrounds (23%) or other clients (26%).

3.4 TYPE OF HOUSING AFTER SAAP SUPPORT(a)—1999–2000

	Indigenous	*Non-English speaking background(b)*	*Other*
	%	%	%
Independent housing			
Private rental(c)	12.6	22.8	26.2
Public housing	30.0	17.9	15.5
Inadequately housed(d)	21.2	18.1	21.7
Other(e)	16.4	20.7	16.7
Non-independent housing(f)	19.8	20.5	19.9
Total	**100.0**	**100.0**	**100.0**

(a) For closed support periods (see Glossary).

(b) Excludes Indigenous people.

(c) Renting independently in the private rental market only.

(d) Includes renting a caravan, living in a rooming house/hostel/hotel and boarding in a private home.

(e) Includes owner-occupied and other independent housing.

(f) Includes SAAP crisis, short-term, medium and long-term housing, non-SAAP emergency accommodation, living in a car/tent/park/squat or street, residing at a hospital, prison or rehabilitation centre and other non-independent housing.

Source: AIHW SAAP Database.

Aboriginal Hostels Limited (AHL) provides temporary, affordable accommodation for Aboriginal and Torres Strait Islander people, in hostels located throughout Australia. At the end of the 1999–2000 financial year, AHL was operating 48 company hostels and funding 85 community hostels. There were 3,092 beds per night available for Indigenous clients nationally. The daily occupancy rate for the company hostels averaged 70%, a decrease of 2% from the previous year, while community hostels showed a decrease from 73% to 67% (Aboriginal Hostels Limited Annual Report 2000).

Table 3.5 shows an overall increase of 6% in the numbers of available beds, in 1999–2000. No beds were available for prison release and diversionary programs.

3.5 HOSTELS FUNDED BY ABORIGINAL HOSTELS LIMITED(a)—1998–99 & 1999–2000

	1998–99		*1999–2000*	
	Hostels	*Beds*	*Hostels*	*Beds*
	no.	*no.*	*no.*	*no.*
Category of accommodation				
Transient(b)	36	1 016	36	1 080
Medical transient(c)	8	144	8	144
Homeless(d)	11	156	11	156
Substance abuse rehabilitation	26	468	29	511
Prison release and diversion	1	12	—	—
Tertiary education and training	10	210	10	215
Secondary education	17	581	16	584
Primary education	2	40	2	40
Aged care	17	287	21	362
Total	**128**	**2 914**	**133**	**3 092**

(a) Includes hostels run by Aboriginal Hostels Limited and hostels funded by Aboriginal Hostels Limited but operated by community organisations.

(b) Short term accommodation in towns and cities for people and families seeking permanent housing and employment.

(c) Accommodation and care in towns and cities for patients and families who must leave their home communities to access medical treatment. This category includes facilities for people requiring renal dialysis treatment.

(d) Homeless people may also use hostels designated as providing transient accommodation.

Source: Aboriginal Hostels Limited 2000.

CHILD CARE

The target group for child care is usually children aged between 0 and 12 years. In 2000, there were a projected 144,000 Aboriginal and Torres Strait Islander children in this age group, representing just over 34% of the total Indigenous population. The comparable figure for the total population was 3,393,000 children, comprising 18% of all Australians. The younger age structure of the Indigenous population means that Indigenous children were projected to comprise 4.2% of all children in the 0–12 year age group, whereas, in 1999, 1.5% of children using child care services funded under the Children's Services Program (CSP) were Indigenous (table 3.6).

Many Aboriginal and Torres Strait Islander families do not want, or need, formal child care, preferring to make use of informal arrangements with family and friends when the need arises (ABS 1995). For those who do seek child care, the available options for children under school-age include long-day care (in purpose-built centres), family day care (in private homes) and occasional care, while for school-aged children, before-school care, after-school care and vacation care are available. Most of these services are funded, at least in part, by the Commonwealth Government under the Child Care Program (CCP). Most Commonwealth-funded programs give highest priority to children whose parents are working, seeking work, or undertaking study or training (ABS & AIHW 1999).

CHILD CARE *continued*

There are two child care programs which were originally funded by the Commonwealth outside joint agreements with the States and Territories. These are Multifunctional Services and Multifunctional Aboriginal Children's Services (MACS). Multifunctional Services are located in rural areas and provide services for children aged 0–12 years, while MACS are located in areas of special needs and are designed to provide culturally appropriate care for children in both rural and urban Aboriginal communities. Services to mothers, nutrition programs and playgroups may also be provided under MACS. Both programs are referred to as 'multifunctional' because they incorporate a number of different services, such as long-day care for pre-school age children and after-school care and vacation care for school-aged children.

It is important to note that Aboriginal and Torres Strait Islander children attend child care services other than MACS, and that not all children attending MACS are Indigenous (table 3.6). Although 78% of the children who attended MACS in 1999 were Indigenous, only 17% of all Indigenous children in CSP-funded child care attended that service. Over half of the Aboriginal and Torres Strait Islander children in funded services (54%) attended non-MACS long-day care.

3.6 CHILDREN USING CSP-FUNDED SERVICES—1999(a)

	Indigenous children		*Total children*		
Service type	*no.*	*%*	*no.*	*%*	*% of children using this service who are Indigenous*
Long-day care centres	3 766	54.0	270 235	58.1	1.4
Family day care	792	11.4	81 418	17.5	1.0
Occasional care	89	1.3	8 424	1.8	1.1
Multifunctional Aboriginal Children's Services	1 207	17.3	1 541	0.3	78.3
Multifunctional Children's Services	57	0.8	1 014	0.2	5.6
Mobiles and Toy Library Services	199	2.9	2 358	0.5	8.4
Before/after-school care	858	12.3	99 902	21.5	0.9
Total	**6 968**	**100.0**	**464 892**	**100.0**	**1.5**

(a) Estimates are derived from the 1999 Commonwealth Childcare Census, Department of Family and Community Services. The table does not include 1,149 children recorded attending Aboriginal playgroups. The data are unweighted.

Source: DFaCS 2000.

Table 3.7 shows that 1,200 of the 443,400 child care places available in Australia in 2000 were in MACS. The number of places in MACS increased by 100 (9%) between 1998 and 2000, a lower rate than for the total number of child care places, which increased by 44,000 (11%) over the same period.

3.7 CHILD CARE PLACES BY SERVICE TYPE AS AT 30 JUNE 2000

	1998		1999		2000	
Service type	*no.*	*%*	*no.*	*%*	*no.*	*%*
Community long-day care centres	51 700	12.9	50 600	12.0	50 400	11.4
Private	129 700	32.5	127 100	30.1	128 400	29.0
Employer and non-profit	13 200	3.3	12 600	3.0	12 100	2.7
Family day care	63 700	15.9	64 000	15.2	66 300	15.0
Occasional care	5 000	1.3	5 000	1.2	4 700	1.1
Multifunctional	600	0.2	600	0.1	600	0.1
Multifunctional Aboriginal child care services(a)	1 100	0.3	1 100	0.3	1 200	0.3
Outside school hours care(b)	134 400	33.7	161 000	38.1	179 700	40.5
Total	**399 400**	**100.0**	**422 100**	**100.0**	**443 400**	**100.0**

(a) Indigenous children may attend other types of services.

(b) The large increase in outside school hours care places between 1998 and 1999 was due to the inclusion of previously block granted vacation care places for the first time and a change to a consistent counting methodology.

Source: DFaCS 2000.

CHILD PROTECTION

Child protection services are the responsibility of community services departments or their equivalent, in each State or Territory. External agencies, such as community organisations, may be contracted by the departments to provide services that range from family support to the placement of children in out-of-home care.

Each State and Territory has its own legislation, policies and practices regarding child protection, and as a result the data collected are not comparable across all jurisdictions. This difficulty is illustrated by the different definitions used by States and Territories. For example, ‘substantiations’ can be defined differently. A substantiation refers to a situation where, after investigation, the department concludes that the child concerned has been, or is at risk of being, abused, neglected or otherwise harmed. Some jurisdictions substantiate harm, or risk of harm to a child, while others substantiate actions or incidents that cause harm. In addition, some jurisdictions will classify abuse by a stranger as a child protection notification, while others include only abuse or neglect from within families (AIHW 1999b). The rates reported for substantiations vary between States and Territories, and between the Indigenous and non-Indigenous populations. Significant variations between States and Territories may be partly attributable to the different definitions and practices used to record both substantiations and Indigenous status (AIHW 2000d, AIHW 1999b).

Nationally, child protection data are collected under three broad categories: notifications, investigations and substantiations; children on care and protection orders; and children in supported overnight out-of-home care (AIHW 2000d). Initially, children who are seen to be in need of protection come to the government’s attention through a report by an individual or organisation, or the children themselves. These reports are assessed by the relevant department and those found to be valid are classified as ‘child protection notifications’. These notifications are then re-examined to determine whether the notification should be ‘investigated’, dealt with by other means or whether no further action is required. Once an investigation is completed, the notification will be classified as either ‘substantiated’ or ‘not substantiated’, depending on the degree of risk or harm to the child. Departmental involvement may take the form of service provision to the child and his/her family, a referral to another agency, or direct intervention on the child’s behalf (AIHW 2000d).

The department may apply to the relevant court to place a child under a care and protection order at any point in the process, but this is usually an intervention of last resort. Care and protection orders vary between States and Territories, but generally they provide for either a supervisory role or the transfer of legal guardianship to an authorised department. The issuing of a care and protection order is often a legal requirement if a child is to be placed in out-of-home care. This option can be used to protect a child from abuse or potential abuse, or when there is need to give the child ‘time-out’ from family conflict. It is also used in cases where the parents are ill, or for any other reason incapable of looking after the child.

In 1999–2000, Aboriginal and Torres Strait Islander children were subject to higher rates of substantiations than their non-Indigenous counterparts, in all States and Territories, excluding Tasmania. At 30 June 2000, there were 3,861 Indigenous children on care and protection orders, and 3,496 Indigenous children in out-of-home care. Relative to their share of the population, Indigenous children were more highly represented than other children on care and protection orders and in out-of-home care in all States and Territories (AIHW 2001b) (see table 3.9).

3.8 CHILDREN WHO WERE THE SUBJECT OF A SUBSTANTIATION—1999–2000(a)

	Indigenous		*Other (b)*		
	no.	*rate(c)*	*no.*	*rate(c)*	*Rate ratio(d)*
New South Wales(e)	761	14.6	5 054	3.5	4.2
Victoria	568	55.5	6 218	5.8	9.6
Queensland	502	9.9	4 303	5.4	1.8
South Australia	337	33.0	1 354	4.2	7.9
Western Australia	329	12.7	724	1.7	7.5
Tasmania	4	0.6	73	0.7	0.9
Northern Territory	172	7.6	179	5.3	1.4
Australian Capital Territory	6	4.2	184	2.5	1.7

(a) Children aged 0–16 years. Numbers refer to children subject to a substantiation, not the number of substantiated notifications. A child may have been the subject of more than one substantiated notification.

(b) Includes children for whom Indigenous status was not stated.

(c) Rate per 1,000 children aged 0–16 years. Rates are not comparable to data from earlier years due to changes in population estimates after the 1996 Census and changes in policy and practice in jurisdictions over time.

(d) Rate ratio is equal to the rate for Indigenous children divided by the rate for other children.

(e) These data exclude children on final supervisory orders.

Source: AIHW 2001b.

3.9 CHILDREN ON CARE AND PROTECTION ORDERS AND IN OUT-OF-HOME CARE AS AT 30 JUNE 2000(a)

	Care and protection orders(b)			*Out of home placements(b)*		
	Indigenous	*Other(c)*		*Indigenous*	*Other(c)*	
	rate(d)	*rate(d)*	*Rate ratio(e)*	*rate(d)*	*rate(d)*	*Rate ratio(e)*
New South Wales	33.1	3.8	8.7	32.9	3.4	9.7
Victoria	41.4	3.8	10.9	27.5	3.2	8.6
Queensland	15.9	3.2	5.0	11.0	2.4	4.6
South Australia	19.9	2.9	6.9	19.5	2.7	7.2
Western Australia	12.0	1.7	7.1	15.4	2.0	7.7
Tasmania	4.2	3.9	1.1	5.1	4.5	1.1
Northern Territory	4.9	2.9	1.7	3.9	2.3	1.7
Australian Capital Territory	26.0	2.5	9.6	18.9	2.2	8.6
Australia	**20.2**	**3.4**	**5.9**	**18.3**	**3.0**	**6.1**

(a) Children aged 0–17 years.

(b) See Glossary.

(c) Includes children for whom Indigenous status was unknown.

(d) Rate per 1,000 children aged 0–17 years.

(e) Rate ratio is equal to the rate for Indigenous children divided by the rate for other children.

Source: AIHW 2001b.

CHILD PROTECTION *continued*

All States and Territories have adopted the 'Aboriginal Child Placement Principle' as part of their child protection policy. The principle, which is non-binding, states a preference for Aboriginal and Torres Strait Islander children to be placed with other Indigenous people if they are to be placed in care outside their immediate family. This requirement illustrates the importance of establishing a child's Indigenous origin at the earliest possible stage (AIHW 2001b).

ADOPTION

The Aboriginal Child Placement Principle mentioned above also applies to adoptions. When these options are not available, Indigenous children may be adopted by other families. The formal adoption of Indigenous children, however, is not common—in most instances, when it is necessary, informal arrangements are made for children to live with a relative or other member of their community. Arrangements of this type are generally preferred, and adoption orders are made only when informal alternatives are judged to be not in the best interests of the child. In 1999–2000, only two Indigenous children were adopted, and in each case by Indigenous parents. This reporting period was the first in the past 10 years in which no Indigenous children were adopted by non-Indigenous parents (AIHW 2000a).

DISABILITY SERVICES

Accurate information about the prevalence of disability in the Aboriginal and Torres Strait Islander population is not currently available. This is partly because the term 'disability' may be interpreted differently by people in the Indigenous and non-Indigenous populations. It is important that the terminology used in disability collections is uniformly understood so that comparability between the data collected for both the Indigenous and non-Indigenous populations can be maintained. Work is in progress to increase understanding of the type of characteristics Indigenous people refer to when identifying a disability.

Information about the types and levels of disability services provided to the Aboriginal and Torres Strait Islander population can be obtained from the Minimum Data Set collected by agencies funded under the Commonwealth/State Disability Agreement (CSDA). This dataset, which contains a question about Indigenous status, is collected and reported to the Australian Institute of Health and Welfare annually. It is based on a selected day, known as 'snapshot day', and includes questions about disability group, assistance needed, income and accommodation. The level of use of disability services is not necessarily an adequate reflection of the level of disability in a community, nor the need for assistance, since there may be significant numbers of people with disabilities who do not access the services available.

On snapshot day 2000, an estimated 62,341 people were provided with 74,929 CSDA-funded services. Of these people, 1,629 (3%) reported that they were of Indigenous origin, and the Indigenous status of 4,492 (7%) was not known.

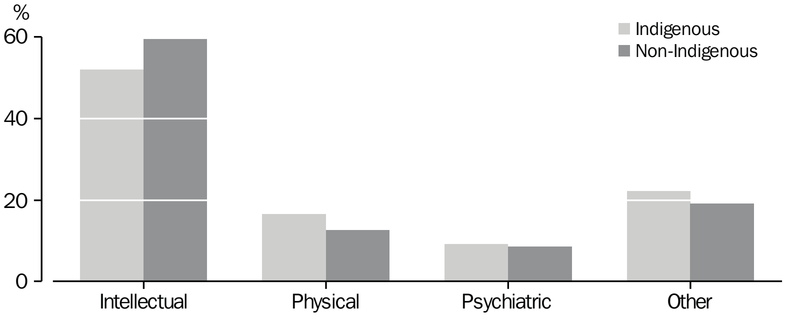
Services funded under the CSDA are grouped into the broad categories of accommodation support, employment services, community support, community access and respite. The level to which these services are utilised on snapshot day gives a national picture of an 'average' or 'typical' day for CSDA service providers, although it may not be a true picture for an individual agency, particularly one affected by regular variations (e.g. providers of school holiday programs).

DISABILITY SERVICES
continued

The CSDA figures show that the percentage of all clients identified as Aboriginal and Torres Strait Islander, varied across the five major service types from 2% for employment to 6% for respite (AIHW 2001c). (Queensland data were excluded because the 'not known' response rate for Indigenous status in that state was 29%.)

The most common type of disability reported among both Indigenous and non-Indigenous recipients of CSDA services in 2000 was intellectual disability, with proportions of 52% of Indigenous clients and 59% of non-Indigenous clients (graph 3.10). The next most common type for both groups was physical disability, with proportions of 17% and 13%, respectively. Psychiatric disability was reported for similar proportions of Indigenous and non-Indigenous clients (about 9%). Aboriginal and Torres Strait Islander people using disability services also had, on average, a higher need for support or assistance in activities of daily living than other disability services clients (AIHW 2001c).

3.10 RECIPIENTS OF CSDA-FUNDED SERVICES 2000, By Type of Disability(a)



(a) Consumer data are estimates derived from the number of individuals who received services on snapshot day.

Source: AIHW 2001c.

Open employment services

Employment services are categorised under national legislation as either open employment services or supported employment services. Open employment services are provided to clients with a disability who are self-employed or employed within a wide range of industries. Supported employment services assist those whose employment contracts are made with the outlet providing the service. The information provided here relates to open employment services only.

In 1998–99, 1.7% of the recipients of open employment services were identified as Aboriginal or Torres Strait Islander people (579 of a total of 34,347). However, Indigenous people assisted under this program achieved outcomes that were often poorer than those experienced by clients from the general population. Indigenous clients had lower mean hourly rates of pay ($9.80 per hour compared with $10.13 per hour), a lower mean number of hours of work per week (15.4hrs compared with 17.9hrs) and a lower mean weekly income ($141 per week compared with $179) than the general population (AIHW 2000h).

AGED CARE

Aged care is provided through both residential and community care. In many instances, older people also make use of services that are available to the general population, and younger people make use of services commonly associated with the elderly. The latter situation occurs more frequently among Aboriginal and Torres Strait Islander people than in the general population, because a shorter life expectancy and the earlier onset of chronic disease in the Indigenous population mean there is a greater proportion of Aboriginal and Torres Strait Islander people becoming ill and needing care at an earlier age. The Commonwealth recognises the differences between the two population groups in this regard and uses population estimates for people aged 50 years and over when planning aged care for Indigenous people. The comparable age used for calculating planning ratios for the general population is 70 years and over (CDHAC 2001b).

Community aged care packages

Community aged care packages are designed to assist elderly people who are living at home and who would otherwise be eligible for a low level of residential care. The number of packages increased from 1,227 in 1994, to 18,149 at 30 June, 2000, reflecting the Commonwealth government's policy of providing care for aged people in a home environment, where possible. Out of a total of 16,617 people receiving community aged care packages, 426 (2.6%) identified as being of Aboriginal or Torres Strait Islander origin. Just over 7% of Indigenous people receiving assistance were in the 0–49 year age group compared with less than 1% of non-Indigenous people. In addition, the Commonwealth Government provides assistance for Indigenous people under the Aboriginal and Torres Strait Islander Aged Care Strategy. At 30 June, 2000, there were 21 services operating under the strategy, providing 267 residential places and 81 community places to Indigenous clients (AIHW 2000i, and AIHW 2000e).

The home and community care program

The Home and Community Care Program (HACC) is jointly funded by Commonwealth and State and Territory governments, and includes home nursing services, delivered meals, home help, home maintenance services, transport and shopping assistance, paramedical services, home and centre-based respite care, and advice and assistance of various kinds (DFaCS 2000). These services are targeted at people living in the community with a disability, regardless of their age (ABS & AIHW 1999). A new Minimum Data Set (MDS) has been developed to meet this expanding program's data requirements. The dataset, which collects Indigenous status using the ABS standard question, was implemented in 2001. The first data are not yet available for release.

Aged care homes

In 1997, nursing homes and hostels were amalgamated into a single system of residential care, and the combined data have been used in this publication (AIHW 2000i). The Resident Classification Scale was introduced during 1997–98. It was designed to determine the level of payment required from each resident based on their level of dependence, as well as accommodating other changes to financial arrangements, such as means and asset-testing.

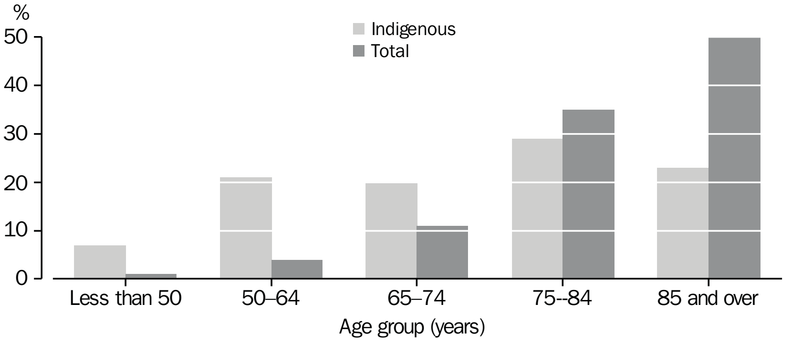
Aged care homes *continued*

Admissions to aged care homes are recorded under two categories: permanent care and respite care. Permanent care was provided for 45,476 (52%) of those admitted to aged care homes in 1999–2000. The mean length of stay for a permanent resident was 137 weeks. (AIHW 2001i).

A total of 735 permanent residents (0.6% of all permanent residents) and 25 of those in respite care (1.0% of the total of those in respite care) were identified as Aboriginal or Torres Strait Islander. The number of Indigenous people recorded in aged care homes is likely to be an undercount because Indigenous status was not reported for 10% of permanent residents and 9% of those in respite care, although the proportion of these residents who are Indigenous is likely to be small (AIHW 2001i).

Graph 3.11 shows that, of those who were receiving permanent care, relatively higher proportions of Indigenous people were in the lower age groups (50–74 yrs), while those in the total population were more likely to be aged 75 years and above.

3.11 AGE DISTRIBUTION OF PERMANENT AGED CARE RESIDENTS—2000



Source: AIHW 2001d.

SUMMARY

The data which are available on Aboriginal and Torres Strait Islander people show they are over-represented in several areas of community services, reflecting the higher levels of need in that section of the community for the types of assistance available. Indigenous people are more highly represented in SAAP than the general population, Indigenous children are more likely to be placed under care and protection orders or in out-of-home care, outcomes in open employment services are poorer than those for the non-Indigenous population, and Indigenous people enter aged care homes at younger ages than the rest of the Australian population.

It is difficult to accurately measure the extent to which Aboriginal and Torres Strait Islander people use community services nationally because the administrative data collections of service providers do not always contain questions about the Indigenous status of clients. Even when this information is sought, it is often done inconsistently across jurisdictions, and therefore meaningful comparisons cannot be made.

In 1999, the National Community Services Information Management Group (NCSIMG) requested the development of principles and standards to address the issues surrounding the identification of Indigenous clients of community services. A report on the principles and standards, which will include an information plan, will be published later in 2001, and it is anticipated that it will lead to an improvement in the way Indigenous status is collected in community services administrative datasets (see Chapter 9).

CHAPTER 4 HEALTH SERVICES: PROVISION, ACCESS AND USE

INTRODUCTION

This chapter focuses on the provision of health services, their level of accessibility, and the extent to which they are used. Health services include primary care and public health services such as those provided by general practitioners, nurses and allied health professionals, as well as acute care provided in hospitals, and specialist services, such as those provided by obstetricians and eye specialists. These services may be provided in a range of settings including community health centres and clinics, doctors' rooms and hospitals.

Health expenditure patterns are used to examine health service provision by governments and utilisation of services by clients, while aspects of access to health services are examined in relation to the distances clients must travel to access services and facilities. A range of other factors that affect access are also addressed, including the composition of the health and community service workforce. A section on the use of health services provides information on the activity of Aboriginal and Torres Strait Islander community-controlled health services, and services provided by general practitioners. Detailed information is presented in Chapter 3 about community services while information about the use of hospital services in presented in Chapter 6.

There are a number of difficulties in quantifying the provision of, access to and use of health services by Aboriginal and Torres Strait Islander people. The quality of administrative data sources is affected by the accuracy with which Indigenous people are identified in health service records (see Chapter 9). Administrative data are collected by all providers of health services including Commonwealth, State and local governments, community organisations and some private sector providers. The reasons for data collections are as diverse as the providers themselves. Generally there is a lack of comparability and consistency across collection methods and data items, which makes a comprehensive examination of service use difficult.

The 1999 edition of this publication included information about the availability of cars and proficiency in English, factors likely to influence access to health services. New information on these factors will not be available until after the 2001 Census. Data from the 1995 National Health Survey (NHS) regarding the use of health services was also included in the previous edition. It will be possible to update this information when the results of the 2001 National Health Survey (Indigenous) become available.

PROVISION OF HEALTH SERVICES

Expenditure on health services

Examining expenditure on health services is one way of understanding the way health services are delivered and used. Expenditure reflects not only differing client needs, but differing levels of access and modes of delivery that have developed in response to various policies and strategies. In 1998–99, an estimated $1,245 million was spent on health

Expenditure on health services *continued*

services by, and for, Aboriginal and Torres Strait Islander people (AIHW 2001e). This amount was for expenditure by Commonwealth, State and local governments as well as expenditure from private sources such as by patients or through private health insurance. It represents 2.6% of health expenditure for all Australians and translates into $3,065 for each Indigenous person, compared with $2,518 for each non-Indigenous person (AIHW 2001e). The figures are regarded as estimates, mainly because of the incomplete identification of Indigenous people in many administrative data sources (see Chapter 9). It is not possible to compare the 1998–99 figures directly with estimates previously published because of differences in the methodologies used in estimation.

In 1998–99, the pattern of health expenditure varied between Indigenous and non-Indigenous people. More money per person was spent on Indigenous people, compared with non-Indigenous people, in community and public health, patient transport, public hospital services (both admitted and non-admitted patient services), mental health institutions and government administration and research, but less was spent on private hospitals, Medicare, the Pharmaceutical Benefits Scheme and high level residential aged care (table 4.1)

4.1 ESTIMATED GOVERNMENT AND PRIVATE EXPENDITURE ON HEALTH SERVICES(a)—1998–99

	Indigenous				*Non-Indigenous*				
	$m			*$*	*$m*			*$*	
	Govt funding	Private funding	Total expenditure	Per Person	Govt funding	Private funding	Total expenditure	Per Person	Ratio(b)
Government programs									
Public hospitals—admitted patients	443	14	457	1 125	9 330	947	10 278	558	2.02
Public Hospitals—non-admitted patients	124	1	125	307	2 247	316	2 562	139	2.21
Mental health institutions	26	—	26	64	444	21	465	25	2.53
High level residential aged care(c)	34	7	40	99	3 025	828	3 853	209	0.47
Community and public health	340	15	355	874	2 970	168	3 137	170	5.14
Patient transport	40	3	43	106	244	333	577	31	3.39
Medicare and other medical	66	7	73	179	7 490	1 146	8 632	468	0.38
PBS medicines	20	4	25	61	3 014	597	3 611	196	0.31
Administration and research	37	4	41	101	1 162	159	1 324	72	1.40
Total government program expenditure	1 130	55	1 185	2 917	29 927	4 514	34 439	1 868	1.56
Non-government programs									
Private hospitals	2	8	10	25	1 052	3 040	4 092	222	0.11
Dental and other professional	1	16	17	42	182	3 746	3 928	213	0.20
Non-PBS medicines & appliances	—	27	27	66	50	2 603	2 653	144	0.46
Medical (compensable, etc)	—	4	4	11	—	688	688	37	0.30
Administration	—	1	2	5	129	494	622	34	0.14
Total non-government program expenditure	*3*	*57*	*60*	*148*	*1 412*	*10 570*	*11 982*	*650*	*0.23*
Total	**1 133**	**113**	**1 245**	**3 065**	**31 339**	**15 085**	**46 421**	**2 518**	**1.22**

(a) Government program expenditures includes expenditure through programs managed by the Commonwealth, State and local governments.

(b) Ratio is equal to Indigenous expenditure per person divided by non-Indigenous expenditure per person.

(c) The level of residential aged care services described as nursing home care prior to the changes implemented by the 1997 Aged Care Act.

Source: AIHW Health Expenditure Database.

Expenditure on health services *continued*

Table 4.2 shows the ratio of expenditure per person, Indigenous to non-Indigenous, for each sector of government. Most government expenditure on Indigenous health is administered through local and State governments.

4.2 ESTIMATED HEALTH EXPENDITURE—1998–99

	Ratio(a)
Through State programs	2.40
Through Commonwealth programs	
MBS/PBS benefits	0.37
Other Commonwealth programs	0.50
Total Commonwealth (b)	0.74
Through local government programs	1.78
Through non-government programs	0.23
Total recurrent expenditure	**1.22**

(a) Ratio is equal to Indigenous expenditure per person divided by non-Indigenous expenditure per person.

(b) Excludes grants to States and includes Indigenous specific programs. Expenditure through government programs includes payments by patients as well as government funding of these programs.

Source: AIHW Health Expenditure Database.

ACCESS TO HEALTH SERVICES

The accessibility of health services for Aboriginal and Torres Strait Islander people is affected by a number of factors, involving both simple measures like proximity and availability of facilities and services, and complex issues, such as the degree of cultural appropriateness of service delivery.

Distance to and availability of health professionals, services and facilities

One measure of accessibility is taken by gauging where people live in relation to health services. Indigenous people are more likely to live outside urban areas than the total Australian population, 1 in 4 compared with 1 in 7 (ABS 1998b). Indigenous people are therefore more likely, as a population, to live further from health services than other Australians. In 1998, there were 144 medical practitioners per 100,000 population employed in rural and remote areas compared with 306 per 100,000 in capital city and other metropolitan areas (AIHW 2000g).

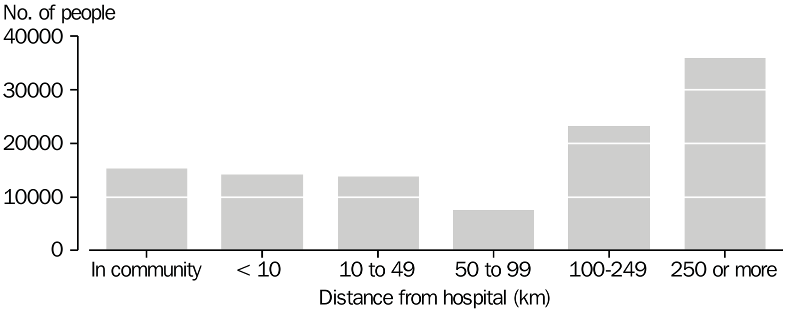
The 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) showed that Indigenous people living in rural areas were less likely than their urban counterparts to live within 25 km of a range of health services and facilities (ABS & AIHW 1997).

Distance to health services in Aboriginal and Torres Strait Islander communities

Detailed information about the distance to, and the availability of, health services for people living in discrete Indigenous communities was collected by the 1999 Community Housing and Infrastructure Needs Survey (CHINS) (see inset 2.1). The 1999 CHINS collected data concerning a total of 1,291 discrete communities with a combined population of approximately 110,000 (ABS 2000f). Approximately 80% of these people lived in remote or very remote areas as classified by the Accessibility/Remoteness Index of Australia (see Glossary). Drawing from the CHINS data collection, the following section illustrates the number of people in discrete communities and the distances these communities are located from specified health facilities and services.

Of the 1,291 communities surveyed in CHINS, 59,056 Indigenous people, living in 895 discrete communities, were located 100 km or more from the nearest hospital. Of this group, almost 36,000 were located 250 km or more from the nearest hospital (graph 4.3).

4.3 DISTANCE TO NEAREST HOSPITAL(a), Persons Living in Discrete Indigenous Communities



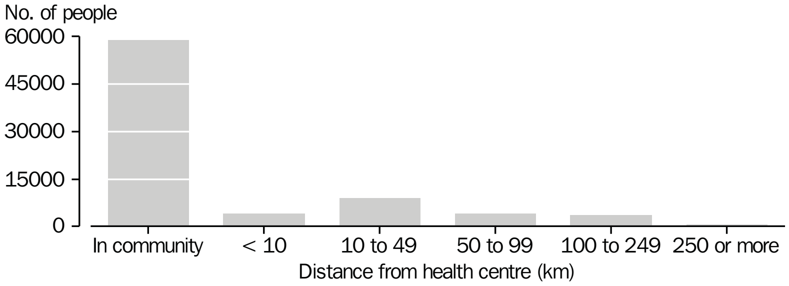
(a) Excludes communities that did not state distance.

Source: ABS 2000f.

The following graphs show the distance to community health centres (4.4), first aid clinics (4.5) and chemists or dispensaries (4.6) for communities that were located 10 km or more from the nearest hospital. This represented 1,142 of the communities surveyed in the CHINS, a total population of 80,341. Results previously published in *Housing and Infrastructure in Aboriginal and Torres Strait Islander Communities, Australia, 1999* (ABS 2000f) differ slightly from the results below because the previously published results included data derived for communities that had a hospital, or were less than 10 km from one, on the assumption that such communities had access to the types of services offered by first aid clinics or chemists or dispensaries.

Data collected in the CHINS found 62,944 people (living in 296 communities) either had a health centre within their community, or were located within 10 km of a community health centre. There were 433 communities (9,005 people) located between 10 km to 49 km from a health clinic. A further 199 communities, representing a total of 4,231 people, were located 100 km or more from a health clinic (graph 4.4).

4.4 DISTANCE TO NEAREST COMMUNITY HEALTH CENTRE(a), Persons Living in Discrete Indigenous Communities



(a) Excludes 'not stated' and communities that have a hospital located in or within 10 kms of the community. Some data values too small to graph.

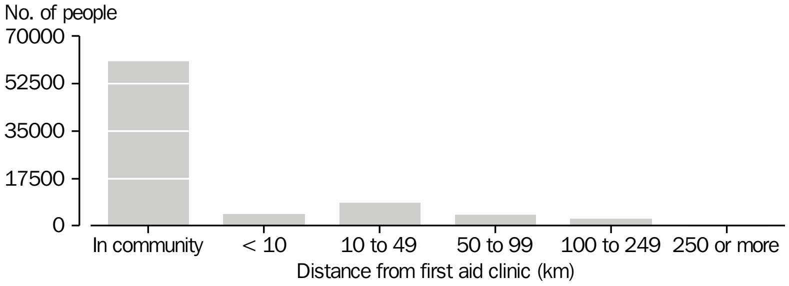
Source: ABS data available on request, CHINS 1999.

Distance to health services in Aboriginal and Torres Strait Islander communities *continued*

There were 846 communities, with a total population of 17,397 that were located 10 km or more from either a hospital or a community health centre. Of these, 199 communities (4,231 people) were located 100 km or more away from either a hospital or a community health centre.

CHINS data found that, for those communities that were 10 km or more from a hospital, first aid clinics were located in, or less than 10 km from 321 discrete Indigenous communities. These communities had a combined population of 64,669 people. There were 167 communities, with a total population of 3,038, located 100 km or more from the nearest first aid clinic (graph 4.5).

4.5 DISTANCE TO NEAREST FIRST AID CLINIC(a), Persons Living in Discrete Indigenous Communities

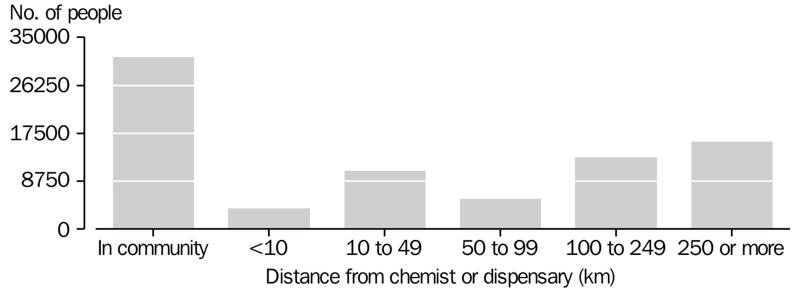


(a) Excludes 'not stated' and communities that have a hospital in or within 10 kms. of the community. Some data values too small to graph.

Source: ABS data available on request, CHINS 1999.

For those communities that were 10 km or more from the nearest hospital, a total of 35,008 people in 160 communities were located less than 10 km from a chemist or dispensary. A total of 29,068 people in 523 communities were located 100 km or more from the nearest chemist or dispensary (graph 4.6), although it should be noted that some health centres also act as dispensaries.

4.6 DISTANCE TO NEAREST CHEMIST OR DISPENSARY(a), Persons Living in Discrete Indigenous Communities



(a) Excludes 'not stated' and communities that have a hospital in or within 10 kms of the community.

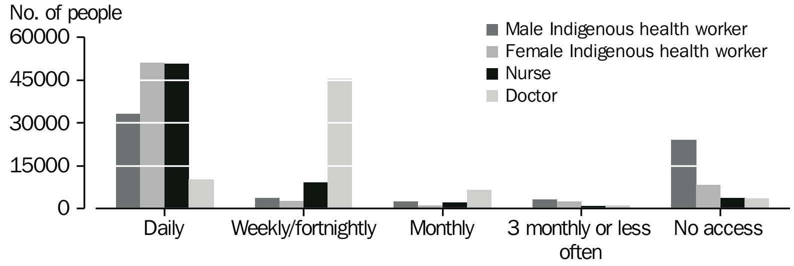
Source: ABS data available on request, CHINS 1999.

Health professionals and health promotion programs in remote communities

The 254 communities surveyed by the 1999 CHINS which reported a population of 50 or more and were located 10 km or more from the nearest hospital were asked how frequently a range of health professionals visited or worked in the community. These communities had a total population of 66,825. The following graphs refer to these communities. If a health professional visited or worked in a community this is referred to as ‘access to’. ‘No access’ means the communities in question did not receive any visits from relevant health professionals, and that there were none working in the community.

Graph 4.7 shows that, for people in 132 of these communities (total population 50,771), a registered nurse was available daily. Very few communities (24 with a total population 10,132) had daily access to a doctor, although in 138 communities (total population 45,504) a doctor was available either weekly or fortnightly. In 152 communities (total population 51,049) there was daily access to a female Indigenous health worker. In 32 communities (total population 3,726) there was no access to a nurse and in 120 (total population 23,996) no access to a male Indigenous health worker. Access to a health professional of the same sex has been found to be an important factor in ensuring that health services provided are culturally appropriate (Ivers et al. 1997).

4.7 ACCESS TO HEALTH PROFESSIONALS(a), Persons Living in Discrete Indigenous Communities(b)



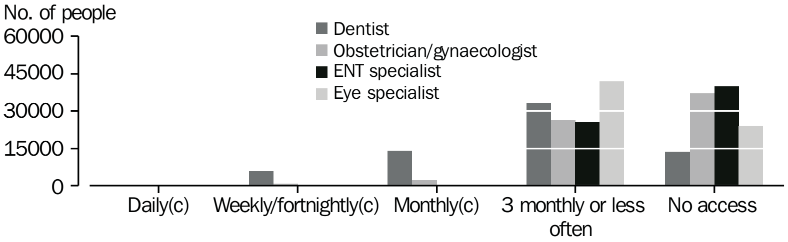
(a) Health professionals who worked in or visited communities.
(b) Communities with a population of 50 or more located 10 km or more from the nearest hospital. Excludes 'not stated'.

Source: ABS data available on request, CHINS 1999

Health professionals and health promotion programs in remote communities *continued*

Graph 4.8 shows how frequently people living in the 254 communities surveyed by CHINS, that had 50 or more people and were 10 km or more from the nearest hospital had the services of dentists, obstetricians or gynaecologists, ear, nose and throat (ENT) specialists, and eye specialists. There were 105 communities (total population 13,619) with no access to a dentist, and 191 (total population 39,681) with no access to an ENT specialist.

4.8 ACCESS TO HEALTH PROFESSIONALS(a), Persons Living in Discrete Indigenous Communities(b)

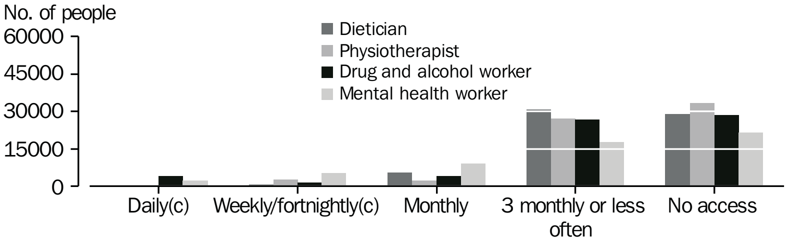


(a) Health professionals who worked in or visited communities.
(b) Communities with a population of 50 or more located 10 km or more from the nearest hospital. Excludes 'not stated'.
(c) Some data values=0

Source: ABS data available on request, CHINS 1999.

Graph 4.9 shows how frequently people in the 254 larger communities that were located 10 km or more from the nearest hospital had access to dietitians, physiotherapists, drug and alcohol workers, and mental health workers. A number of communities had no access to mental health workers (143 communities), drug and alcohol workers (149 communities), dieticians (151 communities) or physiotherapists (168 communities).

4.9 ACCESS TO HEALTH PROFESSIONALS(a), Persons Living in Discrete Indigenous Communities(b)



(a) Health professionals who worked in or visited communities.
(b) Communities with a population of 50 or more located 10 km or more from the nearest hospital. Excludes 'not stated'.
(c) Some data values=0

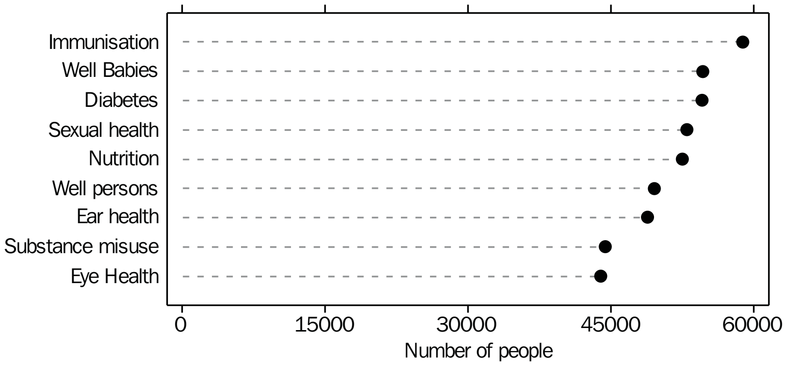
Source: ABS data available on request, CHINS 1999.

Health professionals and health promotion programs in remote communities *continued*

Of the 254 communities with a population of 50 or more, that were 10 km or more from the nearest hospital, 54 communities (total population 5,591) were also 10 km or more from a community health centre. Of these communities over 40 had no access to either a dentist, obstetrician/gynaecologist, ENT specialist, eye specialist, dietician, physiotherapist, drug and alcohol worker or mental health worker within their communities. Many of these 54 communities also had no access to a male Indigenous health worker (27 communities), female Indigenous health worker (16 communities), registered nurse (17 communities) or a doctor (21 communities) (ABS data available on request, CHINS 1999).

Graph 4.10 shows the number of people in communities with a population of 50 or more, that were located 10 km or more from the nearest hospital, who had access to health promotion programs in operation. The most commonly conducted were immunisation, diabetes and 'well babies' programs.

4.10 HEALTH PROMOTION PROGRAMS(a), Persons Living in Discrete Indigenous Communities



(a) Communities with a population of 50 or more located 10km or more from the nearest hospital. Excludes 'not stated'.

Source: ABS data available on request, CHINS 1999.

A reduced range of questions about health professionals was asked of communities with populations of less than 50 people. There were 943 of these communities, representing a total population of 14,571. Over 8,000 of the people living in these communities had no access to either a male or female Indigenous health worker, an environmental health worker, a registered nurse or a doctor. Approximately 3,800 people were in communities that had access to a registered nurse one day a month or more (ABS data available on request, CHINS 1999).

Of the 943 communities with fewer than 50 people, 792 (total population 11,806) were located more than 10 km or more from either a hospital or a community health centre. Many of these communities had no access within the community to a male Indigenous health worker (586 communities), a female Indigenous health worker (531 communities), environmental health worker (653 communities), registered nurse (556 communities) or doctor (626 communities) (ABS data available on request, CHINS 1999).

Health professionals and health promotion programs in remote communities *continued*

As outlined in inset 4.11, in some areas, new ways of delivering health services in Indigenous communities are being explored through 'coordinated care trials'.

4.11 COORDINATED CARE TRIALS IN FOUR ABORIGINAL COMMUNITIES

In 1997, a new model of service delivery was tested in four Aboriginal communities across Australia. Termed 'coordinated care trials' they were based on pooling funds across government sectors and involving community members in the development of innovative methods of delivering health services within their own communities. The trials, which took place in the Tiwi Islands (NT), Katherine West (NT), Wilcannia (NSW) and Perth/Bunbury (WA), aimed to integrate multiple levels and types of health care in ways that were flexible and responsive to community needs, including health promotion and preventive health measures.

An evaluation of the trials has recently been completed. It focussed on:

- access to, and appropriateness of, a range of health services;
- organisational capacity, appropriate funding and administrative arrangements; and
- client and community empowerment.

Some of the key findings of the evaluation were:

- taking local circumstances into account is essential;
- enhanced organisational and financial capacity are essential; and
- community-based organisations are an effective means of implementing health system reform.

Source: CDHAC 2001a.

Other factors affecting access

Access to medical services is also affected by factors such as the availability of transport, the affordability of private health insurance and clients' proficiency in English. Results of the 1996 Census show that Indigenous households were generally larger than other households, and less likely to have a motor vehicle (ABS & AIHW 1999), potentially restricting their access to health services. Overall, results from the 1995 NHS show 11% of Indigenous adults in non-remote areas had private insurance, compared with 43% of the non-Indigenous population (ABS 1999c), reducing the access of Aboriginal and Torres Strait Islander people to specialist care as a private patient in a hospital.

Measurement of the accessibility of health services involves other factors besides the distance people must travel and the financial costs incurred (Ivers et al. 1997). The perception of cultural barriers may cause Indigenous people to travel substantial distances in order to access health services delivered in a more appropriate manner than those available locally (Ivers et al. 1997). The willingness of Indigenous people to access health services may be affected by such factors as community control of the service, the gender of health service staff, and the availability of Aboriginal and Torres Strait Islander staff, particularly where the degree of proficiency in spoken and written English is limited (Ivers et al. 1997). Aboriginal and Torres Strait Islander people who speak English as a second language and those who speak Aboriginal English—a separate dialect from Standard Australian English—often experience difficulty in approaching services such as hospitals to obtain information and treatment (House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs, 1993).

THE CURRENT AND FUTURE INDIGENOUS HEALTH WORKFORCE

This section presents information about the participation of Indigenous people in the health, welfare and community service workforce, and in higher education courses in health and welfare related fields. As discussed above, the availability of Aboriginal and Torres Strait Islander staff is an important factor in whether or not Indigenous people are able to effectively access services (Ivers et al. 1997).

Information about the number of Indigenous people employed in the health and welfare field was examined in detail in the 1999 edition of this publication. More recent information will be available when the results of the 2001 Census are published. In 1996, 0.7% of those employed in occupations classified as 'health professional or paraprofessional' (aged 15 years and over) were Indigenous (ABS & AIHW 1999). Of those employed, Indigenous adults (15 years and over) were less likely (1.1%) than non-Indigenous adults (2.3%) to be employed in health related occupations (ABS & AIHW 1999). Over 3% of those employed in community and welfare service-related occupations identified as Indigenous, and employed Indigenous adults were more likely than other adults to be employed in community and welfare related occupations (3.5% compared with 2.0%)(ABS & AIHW 1999).

In 1998–99, 68% of the full-time equivalent positions in Commonwealth-funded Aboriginal primary health care services were held by Aboriginal and Torres Strait Islander people. Nearly all Aboriginal health workers (98%), field officers and drivers (97%), environmental health workers (95%) and substance misuse workers (92%), were Aboriginal or Torres Strait Islander people, whereas nearly all doctors (99%), and dentists (94%) were non-Indigenous (OATSIH & NACCHO 2000).

Undergraduate studies in health and welfare-related courses

Table 4.12 presents information about tertiary students who completed, or enrolled in, a course in a health or welfare field in 1999–2000. Indigenous students made up a larger proportion of all undergraduate students enrolled in welfare-related courses (2.6%) than those enrolled in health-related courses (1.4%). In the health-related field, most Indigenous enrolments were in health support activities (e.g. health administration and health counselling) (41%) and nursing (33%). Most enrolments of Indigenous students in welfare-related courses were in the field of early childhood education (49%), social work (26%) and welfare studies (25%). Overall in 1999, 113 Indigenous students completed health-related undergraduate courses, and 40 completed welfare-related courses, representing 1.0% and 1.3% respectively, of all students completing undergraduate courses in these fields. In 1999, eight Indigenous students completed a degree in medicine, and 57 were enrolled in a medical undergraduate course in 2000.

The numbers of Indigenous students enrolling in and completing health and welfare related courses have fallen since 1997–98 (see appendix table A16), although increases have been recorded for medicine, medical science and rehabilitation services, and for commencements in welfare studies.

4.12 UNDERGRADUATE COMMENCEMENTS, ENROLMENTS AND COMPLETIONS(a)

	1999 Completions		*2000 Commencements*		*2000 Enrolments*	
	no.	*Indigenous as % of total*	*no.*	*Indigenous as % of total*	*no.*	*Indigenous as % of total*
Health						
Health, general(b)	—	—	3	0.9	5	0.7
Dentistry(c)	1	0.4	2	0.7	5	0.4
Health support activities(d)	56	8.0	156	9.3	300	8.1
Health sciences and technologies(e)						
Nursing (basic or post-basic)	30	0.5	85	1.1	241	1.1
Other	10	0.6	27	0.8	67	0.7
Total	*40*	*0.5*	*112*	*1.0*	*308*	*1.0*
Medical science, medicine						
Medical science	1	0.2	3	0.3	4	0.2
Medicine	8	0.7	13	1.6	57	1.2
Total medical science, medicine	*9*	*0.6*	*16*	*0.9*	*61*	*0.9*
Allied health(f)	7	0.4	10	0.4	50	0.6
Total health	113	1.0	299	1.7	729	1.4
Welfare						
Counselling(g)	1	5.0	—	—	—	—
Social work	20	1.8	30	1.6	95	1.8
Welfare studies	6	1.8	64	9.9	91	5.6
Early childhood education(h)	13	1.0	76	3.1	181	2.6
Special education(i)	—	—	2	0.8	4	0.6
Total welfare	40	1.3	172	3.3	371	2.6

(a) For students identified as Indigenous.

(b) Courses that prepare, or develop further the abilities of, individuals to assist in and support the operations of health care facilities.

(c) Includes dentistry and dental therapy.

(d) Includes health support activities (general), health administration, health counselling, health surveying and environmental health, and health support activities (other).

(e) Includes health sciences and technologies (general), nursing (basic), nursing (post-basic), medical radiography, medical technology, nutrition and dietetics, optometry, pharmacy, podiatry, and health sciences and technologies (other).

(f) Includes rehabilitation services, occupational therapy, physiotherapy, and speech pathology/audiology.

(g) Includes educational counselling and other counselling (excluding health or educational).

(h) Includes early childhood education and post-initial early childhood education.

(i) Includes initial special teacher education and post-initial special teacher education.

Source: Department of Education, Training and Youth Affairs.

USE OF HEALTH SERVICES

Self-reported health actions

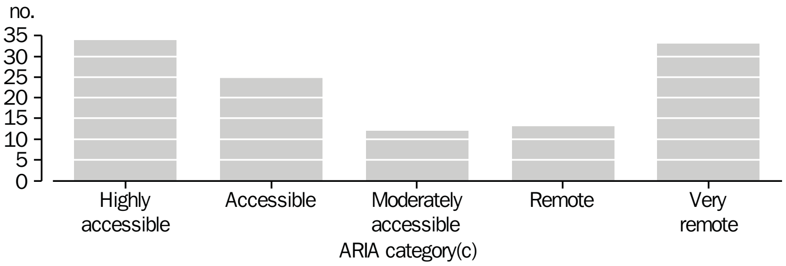
Self-reported information on the use of health services is available from the 1995 NHS and the 1994 NATSIS (ABS 1999c, ABS 1996b). In each survey, respondents were asked about health-related actions they had taken in the previous two weeks. Age-standardised results from the NHS showed that Indigenous people in non-remote areas were slightly less likely to report taking a health-related action than non-Indigenous people. The types of actions taken varied considerably. Indigenous people were more likely to attend hospital, either as inpatients or outpatients, or to seek emergency or day clinic services, than non-Indigenous people, but were less likely to visit a dentist. Results from the 1994 NATSIS showed broadly similar levels of service use to those reported in the 1995 NHS (ABS & AIHW 1999).

Community-controlled health services

Health services that are initiated, controlled and operated by the Indigenous community have the potential to increase the level of access to health services for Aboriginal and Torres Strait Islander people by providing holistic and culturally appropriate care. A study by Keys Young (1997) found that some of the reasons for this might include the provision of services at no cost, a sense of ownership, the staff being likely to speak the local language, the centres playing a social role and the provision of a wide range of services. In 1998–99, the Office for Aboriginal and Torres Strait Islander Health (OATSIH) in the Commonwealth Department of Health and Aged Care funded 117 Aboriginal health organisations which had responsibility for providing or facilitating access to primary health care.

Graph 4.13 shows the location of these services throughout Australia. (See Chapter 1 for more information on the distribution of the Aboriginal and Torres Strait Islander population).

4.13 LOCATION OF ABORIGINAL PRIMARY HEALTH CARE SERVICES(a)(b)—1998–99

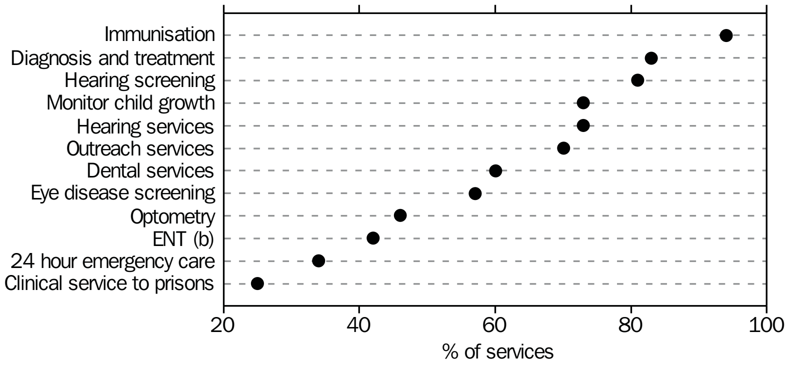


(a) Commonwealth funded.
(b) No. of services.
(c) See Glossary for definitions relating to ARIA.

Source: OATSIH (1998--99) administrative data.

Graph 4.14 shows the proportion of services offering various types of clinical care and preventative health care activities. In addition to these roles and activities, Aboriginal primary health care services provide health promotion activities, social and emotional wellbeing services, substance misuse services, counselling and health-related community support roles such as men’s and women’s support groups, transport to medical appointments, and school based activities.

4.14 ABORIGINAL PRIMARY HEALTH CARE SERVICES(a), Roles and Activities—1998–99



(a) Commonwealth funded.
(b) Ear, Nose and Throat specialist services.
Source: OATSIH & NACCHO 2000.

Community-controlled health services *continued*

In 1998–99 an estimated 1,060,000 episodes of health care were provided by community controlled health services, 91% of which were to Aboriginal and Torres Strait Islander clients. Of these, approximately 40% were provided to men and 60% to women (OATSIH & NACCHO 2000).

General practice

Some information about the extent to which general practitioners (GPs) are used by both Indigenous and non-Indigenous people is available from a survey being undertaken by the University of Sydney and the Australian Institute of Health and Welfare (AIHW). Known as Bettering the Evaluation And Care of Health (BEACH), the survey is a study of general practice activity in Australia.

BEACH is conducted through a random sample of about 1,000 general practitioners, each of whom records the details of 100 consecutive GP-patient encounters. Details include patient reasons for each consultation, problems managed, medications and other treatments, referrals made, and tests ordered. Patient demographic information is also recorded, including each patient's Indigenous status. The GPs also record information about themselves and their practice.

The results presented here are for April 1998 to December 2000. There were 277,600 encounters, of which 2,783 (1%) were for patients who identified as Aboriginal and/or Torres Strait Islander (table 4.15). This is low, relative to the proportion of Indigenous people in the total population (2.2% at 30 June 1999), and may be the result of lower use of private GP services by Indigenous people, failure by GPs to record the Indigenous status of patients, or reluctance of patients to identify as Indigenous. The quality of Indigenous identification in the collection is unknown, although a change in the design of the form between 1998–99 and 1999–2000 appears to have had a negative impact on the extent to which GPs recorded Indigenous status. This may have resulted in an under-estimation, for the 1999–2000 data, of the numbers of Indigenous people visiting general practitioners (Britt et al. 2000). This issue has been addressed for the 2001–02 collection.

4.15 PATIENT ENCOUNTERS IDENTIFIED AS INDIGENOUS—1998–2000

	Encounters for patients identified as Indigenous	*Encounters for patients identified as Indigenous as a % of all State/Territory encounters*	*Indigenous people as a % of total State/Territory population*
New South Wales	695	0.7	1.8
Victoria	254	0.4	0.5
Queensland	825	1.6	3.2
South Australia	265	1.1	1.6
Western Australia	509	2.2	3.2
Tasmania	33	0.5	3.4
Northern Territory	183	6.8	28.3
Australian Capital Territory	19	0.4	1.1
Australia	**2783**	**1.0**	**2.2**

(a) Based on postcode of the practising GP. Data are for April 1998 to December 2000.

Source: BEACH data supplied by the AIHW General Practice Statistics and Classification Unit (GPSCU); ABS 2000a, ABS 1998d.

General practice *continued*

Of those identified in the survey, Indigenous patients were on average younger than other patients, with 27% of encounters being for children aged less than 15 years, compared with 14% for non-Indigenous children. Only 6% of encounters were for Indigenous patients aged 65 years or over, compared with 25% for non-Indigenous patients. This reflects the younger age structure of the Indigenous population (see Chapter 1). Indigenous patients were more likely to hold a Health Care Card (57%) than non-Indigenous patients (39%) (GPSCU).

Upper respiratory infection, diabetes, hypertension, asthma, acute bronchitis/bronchiolitis and acute otitis media/myringitis were the six most frequent problems managed by GPs for Indigenous people. The six most common problems managed for non-Indigenous patients were hypertension, upper respiratory infection, immunisation, depression, asthma and acute bronchitis/bronchiolitis (GPSCU).

SUMMARY

A range of factors that could affect Indigenous people's access to, and use of, health services have been presented in this chapter. Indigenous people are more likely to live outside urban areas than non-Indigenous people and are therefore more likely to live further from health services than other Australians. Community controlled health services, operating in many parts of the country, including remote areas, go some way to addressing the gaps in health service provision.

Expenditure on health services is another area which may reflect levels of access to, and use of particular services. In 1998–99, more was spent on Indigenous people compared with non-Indigenous people in some areas, such as community and public health, patient transport, and public hospital services but less was spent on private hospitals, Medicare, the Pharmaceutical Benefits Scheme and high level residential aged care.

SUMMARY *continued*

The provision of culturally appropriate health services, and the employment of Indigenous staff in services, may also affect the likelihood of an Indigenous person seeking assistance. The 1999 CHINS showed that male Indigenous health workers were not available in many remote communities, which could affect the willingness of Indigenous men to seek help for their health problems.

The future involvement of Indigenous people in health and welfare services will be influenced by their current participation in health and welfare-related education. However, the numbers of Indigenous students enrolled in and completing undergraduate courses has not increased in recent years.

CHAPTER 5

MOTHERS AND BABIES

INTRODUCTION

This chapter provides information about Indigenous mothers and their babies. The two main sources of this information are State and Territory perinatal collections (also known as the Midwives Collections) and the records of births from the Registrars of Births, Deaths and Marriages in each jurisdiction.

Perinatal statistics provide information about mothers and their babies, including details of antenatal care, complications of pregnancy and labour, and neonatal health. They do not, however, record any information about the father. This leads to an underestimation of the number of Indigenous births in cases where the child has an Indigenous father and non-Indigenous mother. Birth registrations, on the other hand, provide information about both parents' Indigenous status, but not details about the health of the mother and the baby. It is required by law that all births be registered, but this does not always occur, or may be limited by incomplete, late or missing registrations. Similarly, some births are registered without a perinatal report being lodged. As a result, discrepancies exist between the information held in perinatal collections and births registration records. Indeed, both underestimate the number of Indigenous births because Indigenous status is not always recorded, as demonstrated by a study conducted in Victoria, linking the 1998 perinatal collection, births registrations, and hospital admissions. The study showed that there were many mothers identified as Koori in one collection but not in others (Department of Human Services 2000; see also Chapter 9 and Day et al. 1999, for more information).

It should also be noted that because some Indigenous babies are born to non-Indigenous women, measures of the fertility of Indigenous women inevitably underestimate the impact of births on the growth of the Indigenous population (see Chapter 9 for more information on the transmission of Indigenous status between parents and children). Based on birth registrations and population projections, Indigenous fertility for 1998 was estimated to be at least 2.2 babies per woman, compared with 1.8 babies for all Australian women (ABS 1999a).

This chapter presents data from the perinatal collections of all States and Territories, for the period 1996–98 combined. These data have been provided by the AIHW National Perinatal Statistics Unit, which collates a national dataset from information derived from State and Territory perinatal collections. Data for 1991–93 and 1994–96 have previously been published by the NPSU (see Plunkett et al. 1996, Day et al. 1999). For this publication, three years of data have been combined to smooth out yearly fluctuations in the number of births to Indigenous mothers, which may cause volatility in rates such as the perinatal mortality rate. Information on the hospitalisation of Indigenous women for pregnancy and childbirth is presented in Chapter 6. Data on Queensland's Torres Strait Islander mothers and their babies are included in this chapter, as Queensland is the only State to report this information separately.

MOTHERS

Indigenous women have babies, on average, at younger ages than non-Indigenous women. The mean age of Indigenous mothers for 1996–98 was 24.4 years (AIHW National Perinatal Statistics Unit, perinatal collection, 2001), a slight increase from 23.7 years in 1991–93 (Plunkett et al. 1996). The mean age of non-Indigenous mothers has also increased, from 28.2 years in 1991–93, to 28.9 for the 1996–98 period.

Indigenous mothers comprised 3.2% of all mothers who gave birth in Australia during 1996–98 (table 5.1). The proportion by jurisdiction varied greatly, ranging from less than 1% in Victoria to 35% in the Northern Territory. The reported number of Indigenous mothers was highest in Queensland (7,823), followed by NSW (5,597), Western Australia (4,454) and the Northern Territory (3,655).

5.1 INDIGENOUS MOTHERS—1996–98

	no.	*%(a)*
New South Wales	5 597	2.2
Victoria	1 272	0.7
Queensland	7 823	5.5
South Australia	1 153	2.1
Western Australia	4 454	5.9
Tasmania(b)	397	2.1
Northern Territory	3 655	35.0
Australian Capital Territory	201	1.4
Australia	**24 552**	**3.2**

(a) Proportion of total mothers in each jurisdiction.

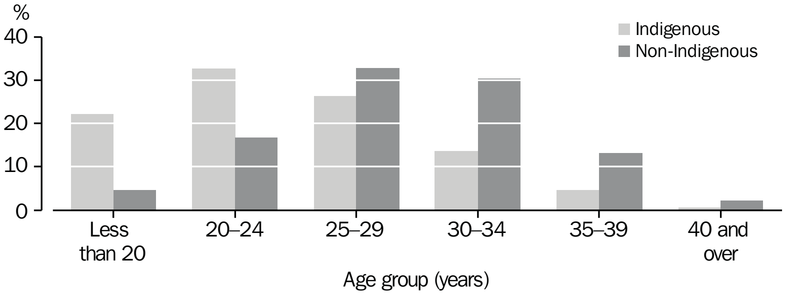
(b) Data for Tasmania were unavailable for 1996 and 1998. Data from 1995 and 1997 have been used as an estimate.

Source: AIHW National Perinatal Statistics Unit, perinatal collection, 2001.

Maternal age differences by Indigenous status for the whole of Australia are shown in graph 5.2. Over 80% of Indigenous mothers who gave birth during the period 1996–98 were under 30, compared with 54% of non-Indigenous mothers. A breakdown of maternal age by State and Territory is presented in table 5.3. In the Northern Territory, 30% of all Indigenous women who gave birth in 1996–98 were under 20 years of age.

The age distribution of Torres Strait Islander mothers in Queensland for 1996–98 was similar to that of all Indigenous mothers in Australia. Nearly 18% of Torres Strait Islander mothers were under 20 years of age, and 7% were aged 35 years or more (Perinatal Data Collection, Queensland Health).

5.2 MATERNAL AGE, BY INDIGENOUS STATUS(a)—1996–98



(a) Data for Tasmania were unavailable for 1996 and 1998. Data from 1995 and 1997 have been used as an estimate.

Source: AIHW National Perinatal Statistics Unit, perinatal collection, 2001.

5.3 MATERNAL AGE BY INDIGENOUS STATUS—1996–98

	Under 20 years		*20–34 years*		*Over 34 years*		***Total(a)***	
	no.	*%*	*no.*	*%*	*no.*	*%*	***no.***	***%***
New South Wales								
Indigenous mothers	1 161	21	4 143	74	288	5	**5 597**	**100**
Non-Indigenous mothers	11 546	5	200 244	80	39 728	16	**251 697**	**100**
Victoria								
Indigenous mothers	174	14	996	78	102	8	**1 272**	**100**
Non-Indigenous mothers	6 072	3	146 519	80	30 545	17	**183 138**	**100**
Queensland								
Indigenous mothers	1 523	19	5 831	75	469	6	**7 823**	**100**
Non-Indigenous mothers	8 002	6	107 861	80	18 344	14	**134 207**	**100**
South Australia								
Indigenous mothers	260	23	835	72	58	5	**1 153**	**100**
Non-Indigenous mothers	2 779	5	43 823	80	7 843	14	**54 445**	**100**
Western Australia								
Indigenous mothers	1 111	25	3 132	70	211	5	**4 454**	**100**
Non-Indigenous mothers	3 373	5	56 982	80	10 530	15	**70 885**	**100**
Tasmania(b)								
Indigenous mothers	76	19	301	76	20	5	**397**	**100**
Non-Indigenous mothers	1 442	8	15 205	81	2 047	11	**18 713**	**100**
Northern Territory								
Indigenous mothers	1 082	30	2 401	66	169	5	**3 655**	**100**
Non-Indigenous mothers	389	6	5 405	80	979	14	**6 780**	**100**
Australian Capital Territory								
Indigenous mothers	35	17	153	76	13	6	**201**	**100**
Non-Indigenous mothers	505	4	10 984	79	2 358	17	**13 853**	**100**
Australia								
Indigenous mothers	5 422	22	17 792	72	1 330	5	**24 552**	**100**
Non-Indigenous mothers	34 108	5	587 023	80	112 374	15	**733 718**	**100**

(a) Total includes mothers for whom age was not stated.

(b) Data for Tasmania were unavailable for 1996 and 1998. Data from 1995 and 1997 have been used as an estimate.

Source: AIHW National Perinatal Statistics Unit, perinatal collection, 2001.

Inset 5.4 describes a successful antenatal program for Indigenous women in Perth, the early phases of which were described in a previous edition of this publication (ABS & AIHW 1999).

5.4 BIBBULUNG GNARNEEP ('SOLID KID') PROJECT — HEALTH IN PREGNANCY AND ANTENATAL CARE

Bibbulung Gnarneep is a collaborative project which involves the Derbarl Yerrigan Health Service, the TVW Telethon Institute for Child Health Research, and the Perth Aboriginal community. The project commenced in 1994 and is now providing information which is being used for the design and implementation of programs to improve maternal, child and family health. The initial project comprised a series of five interviews with a population-based cohort of 270 Aboriginal mothers residing in the Perth area. The data were collected when the infants were aged 6 to 12 weeks, with a final interview when the children were aged about two years.

Information on mothers' health in pregnancy and on the use of antenatal care was collected at the first interview. Of the 270 mothers, 98% had seen a doctor at least once during their pregnancy, 65% had their first antenatal visit with a doctor during the first 12 weeks of pregnancy, 65% had at least 6 antenatal visits and 26% reported more than 10 visits. Pre-existing medical problems were common, with 50% of mothers reporting at least one. The major conditions reported were anaemia, asthma or bronchitis and kidney conditions. Some 76% of mothers experienced at least one significant complication during pregnancy, including anaemia, hypertension, urinary tract infections, bleeding, threatened premature labour and prolonged rupture of membranes.

With such high levels of health problems and pregnancy complications, good antenatal care is necessary. A significant proportion of mothers reported being unable to access care when they needed to, largely because of transport and distance difficulties. Around 40% of mothers said that an antenatal home visiting service would help to overcome some of these problems. In response to these results, the project team commenced a pilot research program of home visiting for Aboriginal women in the Perth area. Women are being enrolled, antenatally where possible, with visits continuing until the child reaches two years of age. Advocacy and support for the mothers are major aspects of the program.

The project continues to provide feedback to the community covering many aspects of maternal, child and family health. Current work is focussing on the nutrition of the children and their health outcomes, and on important factors in the rearing of 'Bibbulung Gnarneep' (solid kids).

Source: The Bibbulung Gnarneep Team, personal communication.

BABIES

Babies born with a birthweight of less than 2,500 grams are classified as being of 'low birthweight'. Low birthweight may be a result of pre-term birth, fetal growth retardation, or a combination of the two (Alberman 1994). Factors influencing a baby's birthweight may include socioeconomic disadvantage, the size and age of the mother, the number of babies previously borne, the mother's nutritional status, smoking and other risk behaviours, illness during pregnancy, and the duration of pregnancy. Low birthweight babies are more prone to ill health during childhood, and may be more vulnerable to illness in adulthood (Alberman 1994, Barker & Clark 1997).

Table 5.5 shows that in the period 1996–1998, babies of Indigenous mothers were about twice as likely to be of low birthweight as babies born to non-Indigenous mothers. Since 1991, there appears to have been little change in both the proportion of low birthweight babies born to Indigenous mothers and these babies' mean birthweight (see Plunkett et al. 1996, Day et al. 1999, ABS & AIHW 1997, ABS & AIHW 1999).

BABIES *continued*

In 1996–98, in Queensland, the proportion of low birthweight babies born to Torres Strait Islander mothers (10%) was slightly lower than that recorded for babies born to Aboriginal mothers (12%), but higher than that recorded for babies born to non-Indigenous mothers (7%)(Perinatal Data Collection, Queensland Health). Coory (2000) has queried the use of birthweight as an appropriate measure of the health of babies born to Torres Strait Islander mothers. By using ten years of combined Queensland perinatal data on live births, he found that even though the recorded birthweights of babies of both Torres Strait Islander and non-Indigenous mothers were similar, babies born to Torres Strait Islander mothers experienced higher rates of neonatal mortality than babies born to non-Indigenous mothers. The study suggests that this result may be related to the high prevalence of diabetes among Torres Strait Islander mothers. More research is needed to explore these findings.

5.5 BIRTHS BY BIRTHWEIGHT AND MOTHER'S INDIGENOUS STATUS—1996–98

	Low birthweight (under 2500g)		*Normal or high birthweight (2500g or more)*		***Total(a)***	
	no.	*%*	*no.*	*%*	***no.***	*%*
New South Wales						
Babies of Indigenous mothers	626	11	5 023	89	**5 649**	**100**
Babies of non-Indigenous mothers	15 059	6	240 159	94	**255 218**	**100**
Victoria						
Babies of Indigenous mothers	153	12	1 137	88	**1 290**	**100**
Babies of non-Indigenous mothers	12 104	7	173 955	94	**186 059**	**100**
Queensland						
Babies of Indigenous mothers	926	12	6 982	88	**7 908**	**100**
Babies of non-Indigenous mothers	8 888	7	127392	94	**136 280**	**100**
South Australia						
Babies of Indigenous mothers	185	16	986	84	**1 171**	**100**
Babies of non-Indigenous mothers	3 839	7	51 508	93	**55 347**	**100**
Western Australia						
Babies of Indigenous mothers	595	13	3 903	87	**4 498**	**100**
Babies of non-Indigenous mothers	4 547	6	67469	94	**72 016**	**100**
Tasmania(b)						
Babies of Indigenous mothers	32	8	371	92	**403**	**100**
Babies of non-Indigenous mothers	1 172	6	17 786	94	**18 958**	**100**
Northern Territory						
Babies of Indigenous mothers	549	15	3 137	85	**3 686**	**100**
Babies of non-Indigenous mothers	504	7	6 359	93	**6 863**	**100**
Australian Capital Territory						
Babies of Indigenous mothers	28	14	174	86	**202**	**100**
Babies of non-Indigenous mothers	1 039	7	13 069	93	**14 108**	**100**
Australia						
Babies of Indigenous mothers	3 094	13	21 713	88	**24 807**	**100**
Babies of non-Indigenous mothers	47 152	6	697 697	94	**744 849**	**100**

(a) Total includes births for which birthweight was not stated.

(b) Data for Tasmania were unavailable for 1996 and 1998. Data from 1995 and 1997 have been used as an estimate.

Source: AIHW National Perinatal Statistics Unit, perinatal collection, 2001.

PERINATAL MORTALITY

Over the period 1996–98, the national perinatal mortality rate (see Glossary) for babies born to Indigenous women was twice as high as that for babies born to non-Indigenous women (table 5.6). While it is difficult to assess trends, due to uncertainties about the extent to which women are identified as Indigenous in the perinatal collections, the overall perinatal mortality rate for this period is similar to that for 1994–96. In the Northern Territory, the perinatal mortality rate fell from 27.0 perinatal deaths per 1,000 births in 1994–96 to 22.5 per 1,000 in 1996–98, suggesting that improvements seen in that jurisdiction over the decade from 1986 to 1995 may be continuing (ABS & AIHW 1999, Markey et al. 1998). Despite the decrease, however, the Northern Territory perinatal death rate is still amongst the highest in Australia.

In 1996–98, there were 36 perinatal deaths of babies born to Torres Strait Islander mothers in Queensland. The perinatal death rate for babies born to Torres Strait Islander mothers (21.8 per 1,000 births) was similar to that for babies born to Aboriginal mothers (22.6 per 1,000 births), but twice as high as the rate for babies born to non-Indigenous mothers (10.6 per 1,000 births) (Perinatal Data Collection, Queensland Health).

Perinatal deaths may be underestimated because the number of neonatal deaths may not be accurately ascertained, particularly deaths occurring among babies transferred, or readmitted to hospital, and those dying at home. This is a result of some States and Territories having no linkage between registered perinatal deaths and the birth records of these babies in the perinatal data collections (Nassar et al. 2000). In recent years a number of States and Territories have linked their perinatal data collections to the registered perinatal deaths of their respective Registries of Births, Deaths and Marriages, in an effort to improve the extent to which neonatal deaths are ascertained. This has led to improved information about perinatal deaths in those States and Territories and apparent reporting of higher numbers of neonatal deaths. Valid comparisons between the neonatal data of States and Territories are therefore not always possible in these circumstances. Improved standardisation and linkage of perinatal deaths by all States and Territories will allow valid comparisons and interpretation of perinatal mortality in the future.

5.6 PERINATAL MORTALITY(a), BY MOTHER'S INDIGENOUS STATUS—1996–98

	Fetal deaths		Neonatal deaths(b)		Perinatal deaths(c)	
	no.	*rate(d)*	*no.*	*rate(e)*	*no.*	*rate(d)*
New South Wales						
Babies of Indigenous mothers	65	11.5	32	5.7	97	17.2
Babies of non-Indigenous mothers	1 662	6.5	607	2.4	2 269	8.9
Victoria						
Babies of Indigenous mothers	10	7.8	9	7.0	19	14.7
Babies of non-Indigenous mothers	1 303	7.0	623	3.4	1 926	10.4
Queensland						
Babies of Indigenous mothers	102	12.9	78	10.0	180	22.8
Babies of non-Indigenous mothers	954	7.0	530	3.9	1 484	10.9
South Australia						
Babies of Indigenous mothers	23	19.6	11	9.6	34	29.0
Babies of non-Indigenous mothers	369	6.7	164	3.0	533	9.6
Western Australia						
Babies of Indigenous mothers	69	15.3	23	5.2	92	20.5
Babies of non-Indigenous mothers	464	6.4	162	2.3	626	8.7
Northern Territory						
Babies of Indigenous mothers	54	14.7	29	8.0	83	22.5
Babies of non-Indigenous mothers	34	5.0	23	3.4	57	8.3
Australia(f)						
Babies of Indigenous mothers	328	13.2	185	7.6	513	20.7
Babies of non-Indigenous mothers	5 055	6.8	2 219	3.0	7 274	9.8

(a) Data for Tasmania and the Australian Capital Territory are not presented due to small numbers.

(b) Based on live births only. May exclude neonatal deaths within 28 days of birth for babies transferred or readmitted to hospital and those dying at home, for selected States and Territories. See text for more information.

(c) Perinatal deaths include fetal deaths and neonatal deaths. See Glossary for definitions.

(d) Rate per 1,000 total births.

(e) Rate per 1,000 live births.

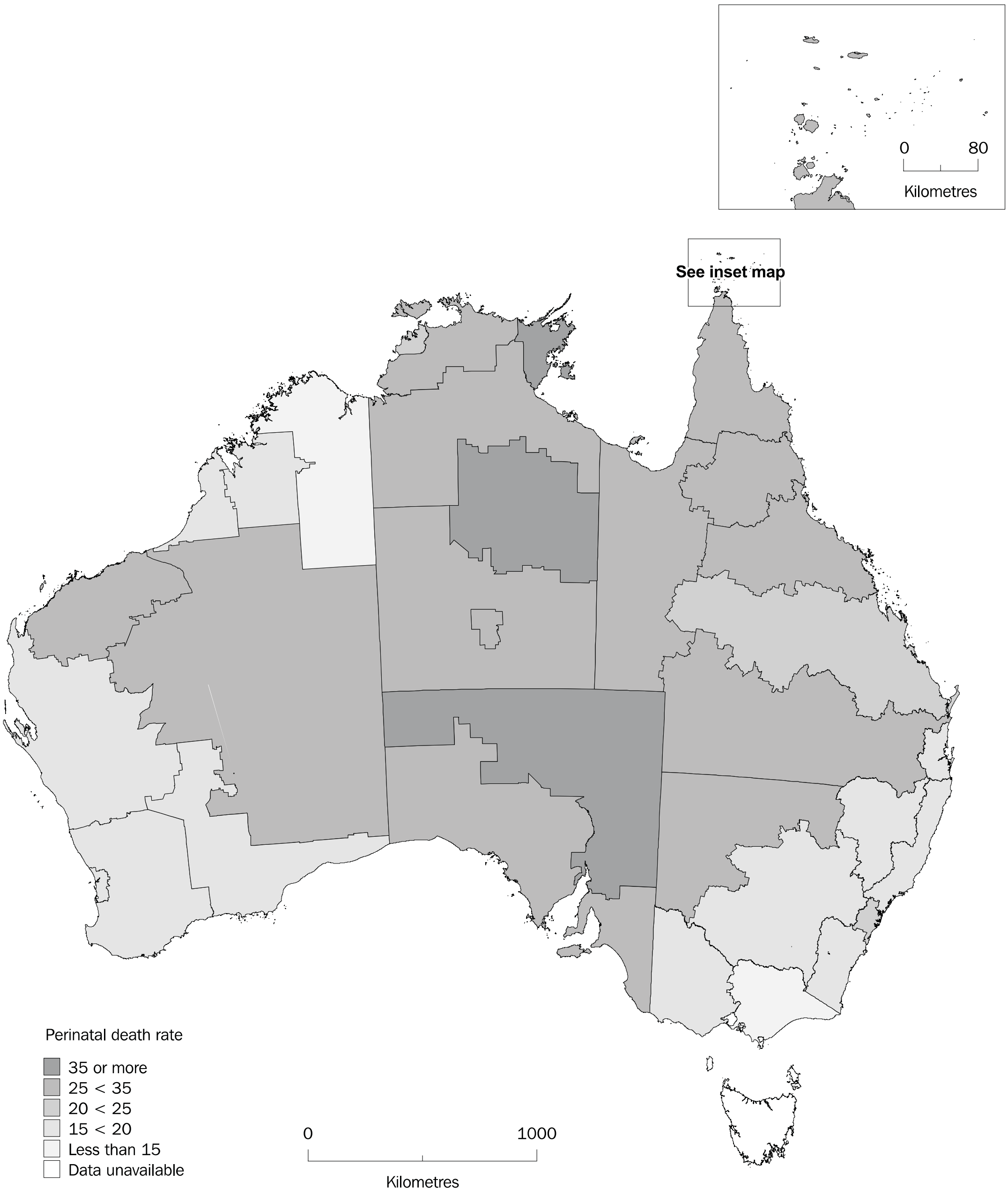
(f) Includes Australian Capital Territory and Tasmania.

Source: AIHW National Perinatal Statistics Unit, perinatal collection, 2001.

PERINATAL MORTALITY *continued*

Map 5.7 shows the variation in Indigenous perinatal death rates across ATSIC regions over the period 1991–96. Over this period, there was a total of 1,030 reported perinatal deaths (Day et al. 1999). These data are based on the usual residence of the mother (either postcode or Statistical Local Area). Because of different practices in coding the mother's place of residence, not all mothers were able to be assigned to an ATSIC region (see Day et al. 1999 for more information). In addition, regional differences in perinatal death rates may, in part, reflect regional differences in the identification of babies of Indigenous mothers. Data have been combined for six years to smooth out fluctuations. The focus should be on general patterns rather than precise numbers and rates.

5.7 PERINATAL MORTALITY—1991–96(a)(b)



(a) Excludes births that occurred outside the mother's usual state of residence and births with unknown place of residence.

(b) No data were available for the Hobart ATSIC region.

Source: Day et al. 1999.

SUMMARY

Indigenous mothers are more likely to have their babies at younger ages than non-Indigenous mothers, and to have a low birthweight baby. The national perinatal mortality rate for babies of Indigenous mothers remains at about twice the rate for babies of non-Indigenous mothers, but varies considerably across regions. Local programs, such as the 'Bibbulung Gnarneep' program, are providing Indigenous mothers with support and care throughout the antenatal and postnatal periods, which should have a positive impact on the health of these mothers and their babies.

CHAPTER 6 ILL HEALTH

INTRODUCTION

This chapter draws on information from a range of health-related data collections, and aims to provide an overview of the health status of Aboriginal and Torres Strait Islander peoples. It begins with a section on health risk factors, including poor nutrition, smoking, alcohol consumption and other substance use. This is followed by sections examining mental health conditions, the illnesses and conditions for which Indigenous people are admitted to hospital, and the medical procedures they undergo. Subsequent topics include kidney disease, communicable diseases, cancer and dental health. While some information is available about each of these topics, the quality and completeness of the data are often unknown and may vary from topic to topic, and from one jurisdiction to another. These issues mean that any interpretation of the information presented here should be undertaken with caution.

RISK FACTORS FOR ILL HEALTH

The relative socioeconomic disadvantage experienced by Aboriginal and Torres Strait Islander Australians compared with other Australians places them at greater risk of ill health. A review of research literature indicates that one reason for this is that health risk behaviours such as cigarette smoking and excessive alcohol consumption are more likely to occur among socioeconomically disadvantaged groups. Winkleby et al. (1990) found that lower levels of education, a key indicator of socioeconomic status, were associated with a higher prevalence of health risk factors such as smoking and obesity. Results of the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) showed that Indigenous people aged 18 and over who had completed at least year 12 were less likely to report that they smoked than those who left school earlier (ABS & AIHW 1999). While an association between socioeconomic status and an increased level of health risk behaviour is apparent, the reasons why socioeconomically disadvantaged people are more likely to take health risks than others are complex, and the subject of ongoing research.

The health and welfare of Indigenous Australians is also likely to be affected adversely by exposure to other health risk factors such as poor housing and inadequate environmental health infrastructure (see Chapter 2). Violence is not always taken into account as a risk factor for poor health, even though personal safety is an essential element of wellbeing. In 1998–99, assault was the most common cause of injury resulting in the hospitalisation of Indigenous people (see the section in this chapter on hospitalisation for more details).

There is little recent information relating to Indigenous people and behavioural health risk factors. A summary of the information presented in the 1999 edition is included here. Readers are also directed to the appendix for summary tables on smoking and alcohol consumption (tables A17 and A18), and to previous editions of this publication for a more detailed discussion of data from sources such as the 1993–94 National Drug Strategy Household Survey (NDSHS), the 1994 NATSIS and the 1995 National Health Survey (NHS). Data on levels of physical activity, which were reported on in the 1999 edition, are discussed in

RISK FACTORS FOR ILL HEALTH *continued*

relation to diabetes (see Chapter 7). Information about the health risk behaviours of Indigenous people in Tasmania is presented in inset 6.1, along with other findings of the 1998 Tasmanian Healthy Communities Survey.

A number of international comparisons have been included in this chapter. Because survey and research methods vary between countries, comparisons should be restricted to general patterns rather than exact figures, and should only be made between indigenous and non-indigenous populations within a particular nation, rather than between different countries.

6.1 HEALTH AND WELLBEING IN TASMANIA

In 1998, the Department of Health and Human Services conducted a mail-back survey on the health and wellbeing of Tasmanians aged 18 and over. Of the 15,000 respondents, 1.9% (287) were Indigenous. Projections of the Aboriginal and Torres Strait Islander population (low series) estimate that 2.4% of Tasmania's population aged 18 and over was Indigenous in 1998. It should be noted that the results have not been adjusted for differences in the age structures of the Tasmanian Indigenous and non-Indigenous populations. The Tasmanian Indigenous population is a younger population than the general Tasmanian population. For example, only 13% of the Indigenous population in Tasmania is aged 45 and over, compared with 35% of the total Tasmanian population. This should be taken into account when making comparisons between the two populations, as variables such as those relating to health and family relationships may be strongly associated with age.

Results of the survey showed that 42% of Indigenous people were smokers, compared with 25% of non-Indigenous people. These results are similar to findings in the 1994 NATSIS and the 1995 NHS. Indigenous people were more likely to report that they didn't drink or only rarely drank alcohol (46%) than non-Indigenous people (40%), and 31% said they drank at least once a week, compared with 43% of non-Indigenous people. Similar proportions of Indigenous (12%) and non-Indigenous people (13%) considered themselves to be in excellent health, while 24% of Indigenous people reported having fair or poor health compared with 18% of non-Indigenous people.

Indigenous people were more likely than non-Indigenous people to rate themselves at the lower end of many of the health and wellbeing indicators. Over 10% reported that they had had 'almost more strain or pressure than they could bear', in the year prior to the survey. This compared with 5% for the non-Indigenous population. Nearly a quarter of Indigenous people (24%) reported having experienced depression, and 8% said they had seriously contemplated taking their own life. Indigenous people were more likely to feel that people in power did not act in their interests (46%, compared with 28% for non-Indigenous people). Over 6% considered their future to be worse than that of other Australians, and a similar proportion reported their 'quality of life' to be inferior to that of other Australians, compared with 2% and 1% respectively for non-Indigenous people.

Indigenous and non-Indigenous people were equally likely to report that they were highly satisfied with their relationship with their partners (close to 80%) and agreed that family members showed affection and tenderness towards each other (63%). However, about 13% of Indigenous people reported feeling that household members were threatened by each other, and 13% reported that there was a lot of anger between family or household members, compared with 7% and 8% respectively for non-Indigenous people. Some 10% of Indigenous people also reported that household members were abusive to each other, an experience reported by 6% of the non-Indigenous population.

Source: Department of Health and Human Services, Tasmania, in press.

Nutrition

The importance of the roles played by diet and nutrition in health is universally acknowledged. Less well understood are the complex interrelationships between nutrition and health risk factors. For example, diet-related diseases may be associated with environmental, behavioural, biological and genetic factors, making it difficult to determine the extent to which diet contributes to disease (AIHW 2000b).

Many Aboriginal and Torres Strait Islander people live in remote areas of Australia and do not have the same opportunities as other Australians to obtain affordable, healthy food. For example, the 2000 Healthy Food Access Basket survey in Queensland confirmed that the cost of basic food was considerably higher in rural and remote communities than in metropolitan and regional centres, and noted that 'the food supply and delivery system is structured to favour metropolitan areas' (Public Health Services, Queensland Health 2001, p. 38). Stores in remote locations were also less likely to have basic food items or 'better nutritional choices' (such as reduced fat milk, wholemeal bread and lean meat) available, and had the least variety of fresh fruit and vegetables. The price of tobacco and take-away food items also rose with increasing remoteness, but the relative cost increase was not as high as that for healthy food (Public Health Services, Queensland Health 2001).

Even when healthy food is available, factors such as competing priorities for limited family incomes, restricted access to traditional foods, lack of knowledge of the nutritional value of certain foods, and lack of culturally appropriate nutrition information can lead to inadequate or inappropriate nutrition. A healthy living environment is also important and reduces the chances of gastrointestinal infection and diarrhoeal diseases, which may cause or exacerbate malnutrition in infants (NHRMC 2000).

The diet of many Aboriginal and Torres Strait Islander people has undergone rapid change, from a fibre-rich, high protein, low saturated fat 'traditional' diet, to one in which refined carbohydrates and saturated fats predominate (O'Dea 1992b). As has been found in other indigenous populations undergoing a similar change in diet and lifestyle, Australia's Indigenous people are prone to a group of conditions known collectively as Syndrome X, or the 'insulin resistance syndrome' (NHMRC 2000). This syndrome includes obesity, Type 2 diabetes, cardiovascular disease and renal disease (NHMRC 2000). All these conditions are more common in Indigenous Australians than in non-Indigenous Australians. (Obesity and diabetes are discussed in Chapter 7, and more information about cardiovascular disease and renal disease is presented in later sections of this chapter. Chapter 8 presents mortality data relating to these conditions.)

Diet and nutrition during pregnancy and the child's early life may have life-long effects. Breastfeeding is associated with reduced infant and child illness and mortality (see NHRMC 2000 for a discussion of the health benefits of breastfeeding). Maternal undernutrition is one factor linked to low birthweight, which is about twice as common among babies born to Indigenous mothers as it is among babies born to non-Indigenous

Nutrition *continued*

mothers (see Chapter 5), and is a risk factor for infant death and ill health in childhood. In addition, Barker (1999a, 1999b) proposes that undernourishment of the fetus may predispose the person to diseases such as heart disease, stroke, high blood pressure and Type 2 diabetes in later life. However, more research is necessary to confirm these findings.

Detailed information about diet and nutrition for the Indigenous population is not available at the national level. Information about body mass index (BMI—see Glossary), an indicator of nutritional status, is available both from the NATSIS and the NHS, and is outlined in Chapter 7. The 2001 National Health Survey, for which field work is currently under way, includes several questions on nutrition. The questions will be asked of respondents, including respondents who identify as Indigenous, living in non-sparsely settled areas (see Chapter 9 for more information on the survey). Breastfeeding questions will be asked of female respondents in both sparsely settled and non-sparsely settled areas.

Alcohol consumption

The hazardous use of alcohol is related to conditions such as alcohol dependence syndrome, alcoholic liver disease, high blood pressure, stroke and some cancers (Anderson 1996). Alcohol is frequently a contributing factor to injuries from traffic accidents, assault and self-harm (Unwin, Thomson & Gracey 1994), and may contribute to social problems such as family breakdown, domestic violence, and financial and legal problems (Davis 1998 in Hamilton et al. 1998).

While several surveys have shown that Indigenous people are less likely than non-Indigenous people to drink alcohol (ABS & AIHW 1999), those who do so are more likely to consume it at hazardous levels (see Glossary for guidelines on alcohol consumption). The 1995 NHS found that over 20% of Indigenous male drinkers were in the high risk category for alcohol consumption, compared with 8% of non-Indigenous male drinkers. Indigenous females were less likely to be in the high risk category than Indigenous males, but were still more likely than non-Indigenous women drinkers to be consuming alcohol at hazardous levels (see also ABS & AIHW 1999). There are no new national data on alcohol consumption in the Indigenous population since the 1999 edition of this publication. The forthcoming 2001 NHS and the 2002 Indigenous Social Survey will provide updated information on alcohol and smoking in the Indigenous population.

International data indicate that drinking at hazardous levels is more common among the indigenous populations of New Zealand and Canada. In the 1996–97 New Zealand Health Survey, Maori adults were twice as likely as non-Maori adults to report that they had not drunk any alcohol in the previous year but one in three Maori drinkers were consuming alcohol at hazardous levels compared with one in five non-Maori drinkers (Ministry of Health 1999). Canadian data indicate that Aboriginal youths are two to six times more at risk than non-Aboriginal youths for every alcohol-related problem examined (Health Canada 1999).

Smoking

While the effects of excess alcohol consumption on individuals, families and communities can be clearly identified, the effects of smoking, a major cause of preventable ill health and death, may take many years to appear (Unwin et al. 1994). Tobacco use is estimated to have been responsible for 10% of the total burden of disease in Australia in 1996 (Mathers et al. 1999). A previous edition of this publication included a feature chapter on tobacco smoking, highlighting the associated heavy burden of chronic disease and premature death experienced by Indigenous people (ABS & AIHW 1997).

Cigarette smoking is associated with the increased incidence of and mortality from various types of cancer, including lung, cervical, bladder and pancreatic cancers, coronary heart disease, stroke, chronic respiratory tract diseases, and pregnancy-related conditions (English et al. 1995). The effects of passive smoking are also associated with higher rates of lung cancer and heart disease in adults, asthma and lower respiratory tract illness such as bronchitis and pneumonia in children (NHMRC 1997), and higher rates of sudden infant death syndrome (Scragg et al. 1993, Mitchell et al. 1997). In addition, smoking is a risk factor for low birthweight (Sayers & Powers 1997), which, as noted above, is a risk factor for both childhood and long-term diseases.

Surveys have revealed a high prevalence of smoking among Aboriginal and Torres Strait Islander people, with the rate being about twice that for non-Indigenous people (see Appendix table A17). A recent study has also found this to be the case among Aboriginal Health Workers in Adelaide (Kerdel & Brice 2000). High rates of smoking have also been found among other indigenous groups. In New Zealand, the proportion of Maori people who smoke has decreased over the last 15 years but remains high, with almost half of all Maori adults aged 15 and over reporting that they were smokers in the 1996–97 National Health Survey, compared with 23% of non-Maori adults (Ministry of Health 1999). Over 60% of Canada's Aboriginal population over the age of 15 reported that they were smokers in 1997, more than twice the rate of the general Canadian population (Health Canada 1999).

Other drugs and substances

Indigenous people are also at risk of ill health through the use of substances such as marijuana, heroin, amphetamines and inhalants (e.g. petrol, glue, aerosols). Although there are no comprehensive national data for Indigenous people on this topic, previous editions of this publication have reported the results of the 1993–94 NDSHS, which included a supplementary sample of Indigenous people living in urban areas (see ABS & AIHW 1997, 1999).

The National Drug and Alcohol Research Centre (NDARC) conducts a census of agencies providing treatment for drug and alcohol problems in Australia. The census is conducted over a 24-hour period on one day of each census year. Censuses were conducted in 1990, 1992, 1995 and 2001, and results have been published for the first three. Over the period 1992–95, Indigenous people made up about 10% of clients using treatment services on census day. They were more likely than non-Indigenous clients to be receiving treatment for problems related to alcohol, cannabis or solvents, but less likely to be receiving treatment for opiates, amphetamines or benzodiazepines. Indigenous clients were also much less likely than non-Indigenous clients to report having injected drugs in the 12 months prior to the census (Webster et al. 1991, Chen et al. 1993, Torres et al. 1995).

Injecting drugs is a risk factor for blood-borne diseases such as hepatitis B and C, and HIV. A study of the prevalence of hepatitis C among injecting drug users using needle exchanges in 1995–96 found that about 70% of Indigenous and non-Indigenous injecting drug users were infected with the virus (ANCARD 1997). Over the period 1992–99, 140 cases of HIV among the Indigenous population were notified to the National HIV Surveillance Centre. Eight of these cases were reported in conjunction with injecting drug use, while a further 14 cases were reported in conjunction with exposure to both injecting drug use and male homosexual contact. More information about HIV is presented elsewhere in this chapter.

Petrol sniffing continues to be a major problem in some Indigenous communities, and particularly affects young people. Petrol sniffing can cause confusion, aggression, lack of coordination, hallucinations, respiratory problems, and chronic disability including mental impairment (see D’Abbs & MacLean 2000).

Inset 6.2 describes reasons for and problems associated with petrol sniffing, as well as interventions that may be successful in reducing its prevalence and impact.

6.2 PETROL SNIFFING IN ABORIGINAL COMMUNITIES: A REVIEW OF INTERVENTIONS

A review of literature relating to petrol sniffing in Aboriginal communities examines the prevalence and causes of petrol sniffing, and associated problems and potential interventions (D'Abbs & MacLean 2000).

In the view of the authors, 'the presence of petrol sniffing in indigenous communities of a number of developed nations suggests that social dislocation and acculturation and the suffering that these have brought are critical to the production of an environment in which petrol sniffing is attractive to young people'. They concluded that petrol sniffing appeared to offer young people 'some kind of identity, albeit a negative one, amidst the massive change experienced by Aboriginal communities' (p. 13).

The review notes that petrol sniffing causes problems for families as well as for the sniffers themselves. Families may experience loss of control over sniffers, feel shame and grief, and experience hardship through caring responsibilities and fear of violence. Communities may suffer property damage, social disruption and the loss of a proportion of their young people. Demands on hospitals, other health care services and the criminal justice system, are problems that may be experienced by the wider community as a result of petrol sniffing addiction.

Since earlier reviews in 1989 and 1991, the authors report ongoing fluctuations in the presence of petrol sniffing in Aboriginal communities. While the problem has spread to communities which had previously been unaffected, the success of interventions in some communities with long term petrol sniffing problems indicates that certain attempts to reduce the incidence of the behaviour may be successful over time.

The review concludes that effective intervention may require a combination of measures, including the employment of youth workers in communities, the introduction of culturally sensitive recreational and educational programs, the provision of appropriate school, employment and training opportunities, the substitution of petrol with AVGAS (aviation fuel), and the relocation of petrol sniffers to outstations. Skilled counselling, appropriate resources, support teams and night patrols may all be of benefit, while legal sanctions seem to offer little prospect of inducing change.

Source: D'Abbs & MacLean 2000.

Other drugs and substances *continued*

Substance misuse is also a problem for indigenous communities in other parts of the developed world. A survey in 1996 in the Northwest Territories of Canada found that Aboriginal people aged over 15 years were about 11 times more likely than non-Aboriginal respondents to report having sniffed aerosols or solvents (Health Canada 1999). Aboriginal Canadians 15 years of age were approximately three times more likely than non-Aboriginal people to report having used marijuana or hashish in the past year, and three-and-a-half times more likely to report having used LSD, speed, cocaine, crack or heroin (Health Canada 1999).

In the United States, the 1991–93 National Household Survey on Drug Abuse found that Native Americans tended to report higher rates of illicit drug use and the need for illicit drug treatment than people in the general population. For example, 20% of Native Americans over the age of 12 reported the use of illicit drugs in the previous year compared, with 12% of the total population. Native Americans also had the highest reported rate of marijuana use at 15%, compared with 9% in the total population (Substance Abuse and Mental Health Services Administration 1998).

MENTAL HEALTH

Traditionally, Aboriginal and Torres Strait Islander people perceive their health not only in terms of the physical health of the individual, but rather in regard to the social, emotional and cultural wellbeing of the whole community (National Aboriginal Health Strategy 1989).

This holistic view makes the measurement of mental health as a separate area of study a complex process, and to date there has been little agreement on which data definitions, standards, and data collection instruments could adequately address these issues (see inset 9.12).

There are, however, data available on the hospitalisation and mortality of Indigenous people which result from mental illness. Some data are also available on self-harm and assault (see below), child abuse and neglect (see Chapter 2), substance misuse (see previous section of this chapter), and incarceration. These factors may be indicators of social and emotional distress, but the data, which are recorded separately in each case, do not provide information about the cause of the patient's mental illness or behavioural problem. Nevertheless, the available data indicate that Indigenous people suffer a higher burden of emotional distress and possible mental illness than that experienced by the wider community.

Data recorded under the category, 'mental and behavioural disorders' are available for Indigenous people who were hospitalised over the period 1998–99. Although the data are likely to underestimate the number of Aboriginal and Torres Strait Islander people, it is evident that Indigenous people were more likely than non-Indigenous people to be hospitalised for these disorders (table 6.3). There were more hospital separations for Indigenous people than expected, based on all-Australian rates, for most types of mental and behavioural disorders.

6.3 HOSPITAL SEPARATIONS FOR MENTAL AND BEHAVIOURAL DISORDERS(a)—1998–99

	Indigenous males			*Indigenous females*		
	Observed separations			*Observed separations*		
	no.	%(b)	Age-standardised hospital separation ratio(c)	no.	%(b)	Age-standardised hospital separation ratio(c)
Organic mental disorders(d)	136	0.2	3.1	107	0.1	2.6
Mental disorders due to psychoactive substance use(e)	1 848	2.7	4.1	936	1.0	3.5
Schizophrenia, schizotypal & delusional disorders	862	1.3	1.8	569	0.6	2.0
Mood and neurotic disorders	922	1.3	1.3	1 483	1.6	1.2
Other mental disorders(f)	234	0.3	0.8	255	0.3	0.6
All mental and behavioural disorders	**4 002**	**5.8**	**2.0**	**3 350**	**3.7**	**1.5**

(a) Data are for public and most private hospitals. Categories are based on the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD–10-AM) (National Centre for Classification in Health 2000).

(b) Percentage of all hospital separations in 1998–99.

(c) Age-standardised hospital separation ratio is equal to observed separations divided by expected separations, based on all-Australian rates.

(d) Includes brain disorders due to brain damage and dysfunction, such as dementia.

(e) Includes a variety of disorders due to the use of pyschoactive substances, which may or may not have been medically prescribed, such as alcohol, opioids, sedatives, and volatile substances.

(f) Includes eating disorders, sleeping disorders, disorders of personality and behaviour, mental retardation, disorders of psychological development, and unspecified mental disorders.

Source: AIHW National Hospital Morbidity Database.

In 1997–99, deaths from mental disorders were more common among Indigenous people in the jurisdictions of Queensland, South Australia, Western Australia, and the Northern Territory combined, than in the general population. Comparable rates could not be calculated for the other States and the ACT because data of sufficient quality were not available (see Chapter 8). Based on all-Australian rates, there were over twice as many deaths from mental disorders for Indigenous people as expected (table 8.6). The majority of these deaths (78%) were attributed to psychoactive substance use.

Rates of intentional injury, whether self-inflicted or caused by assault, may be an indicator of psychological illness and distress in the community. Hospitalisation data from 1998–99 show that there were about six times as many hospital separations as expected for assault among Indigenous males, and nearly 19 times as many for Indigenous females, based on all-Australian rates. There were also about twice as many hospital separations as expected for self-harm, for both Indigenous males and females.

Based on all-Australian rates, the jurisdictions of Queensland, South Australia, Western Australia, and the Northern Territory combined, recorded about five times more deaths than expected from assault for Indigenous males, and ten times as many for Indigenous females.

Suicides accounted for 2.6 times more deaths than expected for Indigenous males and twice as many deaths as expected for Indigenous females. The age-specific death rates from suicide for Indigenous males were highest in the 15–24 year age group at 108 per 100,000 and in the 25–34 year age group (96 per 100,000). This compared with 27 per 100,000 for all males aged 15–24 and 38 per 100,000 for all males aged 25–34. For Indigenous females, the rate was highest in the 15–24 year age group at 18 per 100,000 compared with 6 per 100,000 for all females.

Tatz (1999) found high rates of suicide among Aboriginal youth in New South Wales for the years 1996–98, noting that these were among the highest recorded in the international literature he reviewed. He describes Aboriginal suicide as having ‘unique social and political contexts’ (p. 10), and stresses that any attempt to identify the causes of and possible remedies for Aboriginal suicide needs an understanding of the differences that distinguish Aboriginal suicide from non-Aboriginal suicide.

The National Inquiry into the Human Rights of People with Mental Illness (HREOC 1993) found that anti-social and self-destructive behaviour, often the result of undiagnosed mental and social distress, brought Indigenous people into frequent contact with the criminal justice system. In the year 2000, Indigenous males aged 17 and over were imprisoned at the rate of 3,318 per 100,000 compared with 280 per 100,000 for all males (ABS 2001f). The rate for Indigenous females aged 17 and over was 251 per 100,000, compared with 19 per 100,000 for all females. Although the rates are not adjusted for the younger age structure of the Indigenous population, this would only account for a small part of the very large differences in the rates. Indigenous people aged 10 to 17 were also at high risk of imprisonment. At 30 June 1999, 42% of all detainees in juvenile corrective institutions were of Aboriginal and/or Torres Strait Islander origin (Australian Institute of Criminology 2001).

Incarceration may be both a risk factor for, and a result of, emotional distress and mental illness. The 1991 Royal Commission into Aboriginal Deaths in Custody found that Aboriginal people who were imprisoned 'often experience depressive symptoms and unresolved anger which sometimes leads them to attempt or commit suicide whilst in custody' (HREOC 1993, p. 698). The incarceration of young Indigenous men and juveniles during their formative years left them 'permanently alienated from their communities', so that on release from prison, they were likely to turn to substance abuse and violence (HREOC 1993, p. 698).

HOSPITALISATION

Hospitalisation data provide useful information about the reasons for which people are hospitalised and the procedures they may undergo in hospital. While the data can provide insights into the health of the population they represent, they are not necessarily good indicators of the health of the total community. Hospitalisation statistics are limited to information about the conditions for which people are admitted to hospital, thereby excluding information regarding those who have made use of other health services, such as general practitioners and community health clinics, and those who have not accessed health care at all. Hospitals may also vary in their decisions about whether to admit patients or treat them as outpatients, and information about outpatients is not routinely reported. Other factors, such as the availability of and access to other medical services, may influence hospital utilisation, and consequently the data reported may not be good indicators of the true levels of need and ill health in a community. A rising rate of hospitalisation, for example, could mean that health status is deteriorating, or that access to hospitals has improved, or both.

Hospital separation (see Glossary) records are reported to the National Hospital Morbidity Database, and provide a count of episodes of hospital care, rather than of the numbers of patients. A 'separation record' refers to a patient's record on discharge, and includes details of diagnosis and procedures performed. A person may be admitted to, and separated from, hospital many times in a year. Each of these separations will appear in the hospital separations dataset as a separate record. Where this occurs for people with conditions such as end stage renal disease, which requires admission for dialysis treatment several times a week, many hospital separations are recorded each year for each individual patient.

The analysis of hospital separation data for Indigenous people is complicated by difficulties in estimating both the numbers of Indigenous people in hospital and the numbers in the overall population. Information about the numbers of Indigenous people in hospital is limited by the accuracy with which they are identified in hospital records.

In some cases, Indigenous status is not recorded at all. For example, although only about 4% of national hospital records for 1998–99 lacked information on patients' Indigenous status, this varied considerably for each jurisdiction (AIHW 2000c). In addition, hospitals may use a variety of methods to capture and record information about Indigenous status (see Chapter 9). Tables 6.4 and 6.14 show that, in 1998–99, some States recorded a smaller proportion of Indigenous people receiving hospital treatment than their proportion of the general population while others recorded a very similar proportion (note that Victoria, Tasmania, and the Australian Capital Territory are not shown in the table). While this could suggest that Indigenous people were either healthier, or that they were accessing other types of health services in a particular jurisdiction, the known poorer health status of the Indigenous population does not support the former conclusion. It is probable that not all Indigenous patients were identified in the hospital records of these jurisdictions. In fact, studies in a number of hospitals across Australia have indicated that records of patients' Indigenous status varied from as few as 44% complete in some hospitals, to 100% in others (Shannon, Brough & Haswell-Elkins 1997, Lynch & Lewis 1997, Condon et al. 1998, ATSIHWIU 1999). This indicates that the number of hospital separations recorded as Indigenous is an underestimate of the true number of Indigenous hospital separations, and the numbers presented in this chapter will, therefore, underestimate the true level of hospital utilisation by Indigenous people. The extent of this underestimation is unknown nationally. The exceptions are the Northern Territory and Western Australia, which have assessed the completeness with which Indigenous status is recorded in their public hospitals. The Northern Territory study showed that 94% of Indigenous patients had their Indigenous status correctly recorded (Condon et al. 1998). Results for Western Australia are expected to be published in the near future (Young, forthcoming). (See Chapter 9 for information on progress in other jurisdictions.)

The accuracy of the Indigenous population estimates and projections, used in the denominator of the calculation of hospitalisation rates, will also affect the accuracy of the rates presented here. Rates presented in this chapter are based on low series projections, that is, conservative estimates of the Indigenous population. Refer to Chapter 9 for information on the difficulties associated with estimating and projecting the Indigenous population.

Uncertainties regarding the accuracy of methods used to gather information about Indigenous people also make it difficult to draw conclusions about changes occurring over time. Improvements in the identification of Indigenous people in hospital records, for example, can lead to higher apparent rates of hospitalisation. It is not currently possible to ascertain whether a rise in hospitalisation is a result of improved Indigenous identification, or whether it reflects a real increase in hospital utilisation.

HOSPITALISATION *continued*

Difficulties in comparing hospitalisation data also arise due to recent changes to the way in which diagnoses and procedures are classified in Australia. Reasons for hospitalisation and types of hospital procedures are classified according to the International Statistical Classification of Diseases and Related Health Problems. The tenth revision of this classification with Australian modification (ICD-10-AM), is now in use in Australia (NCCH 2000). Hospital data for 1998–99 were provided in ICD-10-AM format by New South Wales, Victoria, the Australian Capital Territory and the Northern Territory. The remaining states provided the data in the previous format, ICD-9-CM. To allow the data to be combined in a national dataset, the data provided in ICD-9-CM format were mapped to that of ICD-10-AM by the AIHW (see Explanatory Notes). The data presented below for main causes of hospitalisation and principal procedures are based on ICD-10-AM, and are therefore not directly comparable with those of previous editions of this publication, which presented data based on ICD-9-CM.

In this publication, hospital separations by principal diagnosis and principal procedure for the 1998–99 reporting period are presented for all States and Territories. With the exception of the Northern Territory, where only public hospital data were available, information from both public and private hospitals has been included in the National Hospital Morbidity Database. Complete information was not obtained from all private hospitals (see AIHW 2000c).

Overview

In 1998–99 there were over 5.7 million hospital separations recorded nationally, of which 159,292 (2.8%) were for people identified as Indigenous. More than 98% of separations for people identified as Indigenous were recorded in public hospitals, compared with 66% of other separations. After adjusting for age, Indigenous people nationally were about twice as likely to be hospitalised as other people (table 6.4).

6.4 HOSPITAL SEPARATIONS IDENTIFIED AS INDIGENOUS—1998–99(a)

	Separations identified as Indigenous		*Other separations(b)*				
	no.	*age-standardised rate per 1,000(c)*	*no.*	*age-standardised rate per 1,000(c)*	*rate ratio(d)*	*Proportion of separations identified as Indigenous %*	*Proportion of the population identified as Indigenous(e) %*
			MALES				
New South Wales	13 259	332	847 951	268	1.2	1.5	1.8
Queensland	19 677	550	495 809	296	1.9	3.8	3.2
South Australia	4 885	669	224 844	295	2.3	2.1	1.5
Western Australia	15 122	724	235 583	273	2.7	6.0	3.1
Northern Territory(f)	13 212	811	12 224	210	3.9	51.9	26.8
Australia(g)	**68 837**	**512**	**2 571 520**	**279**	**1.8**	**2.6**	**2.1**
			FEMALES				
New South Wales	18 060	404	995 057	297	1.4	1.8	1.8
Queensland	25 188	615	558 469	321	1.9	4.3	3.3
South Australia	6 812	834	264 886	331	2.5	2.5	1.6
Western Australia	19 798	886	273 666	302	2.9	6.7	3.2
Northern Territory(f)	16 925	856	12 769	225	3.8	57.0	30.0
Australia(g)	**90 455**	**596**	**3 004 151**	**308**	**1.9**	**2.9**	**2.2**

(a) Based on State/Territory of usual residence. Excludes separations for which age and sex was not stated.

(b) Includes separations for people identified as non-Indigenous and those for whom Indigenous status was not reported.

(c) Directly age-standardised using the total Australian population as at 30 June 1991.

(d) Rate ratio is the rate of separations for persons identified as Indigenous divided by the rate of other separations.

(e) As estimated at 31 December 1998.

(f) Public hospitals only.

(g) Includes Victoria, Tasmania and the A.C.T. Includes those usually resident in other Australian territories or overseas, and those for whom State/Territory of usual residence was not stated.

Source: AIHW National Hospital Morbidity Database.

Reasons for hospitalisation

In 1998–99, the most common principal diagnosis for Indigenous males and females was for a group of reasons called ‘Factors influencing health status and contact with health services’ (table 6.5). The majority of these (87%) were for ‘care involving dialysis’. Indigenous males were also commonly hospitalised for injury and poisoning (13%), respiratory diseases (12%), digestive diseases (7%) and mental and behavioural disorders (6%). For Indigenous females, pregnancy and childbirth were important reasons for hospitalisation (17% of separations), followed by respiratory diseases (9%), injury and poisoning (8%) and digestive diseases (5%). These major causes of hospitalisation are described in more detail below.

As indicated by the age-standardised hospital separation ratios (see inset 8.1) in table 6.5, for many principal diagnoses, separations for people identified as Indigenous were higher than expected, based on the hospitalisation rates for the total Australian population. If all separations for Indigenous persons had been correctly recorded, these ratios would, in all probability, have been higher. Despite these limitations, the data available indicate that the Indigenous population experiences a higher burden of illness and disease resulting in hospitalisation than does the rest of the population.

6.5 HOSPITAL SEPARATIONS IDENTIFIED AS INDIGENOUS, BY CAUSE—1998–99(a)

	Separations identified as Indigenous		*Age-standardised hospital separation ratio(b)*		*Proportion of total separations*	
	Males	*Females*	*Males*	*Females*	*Males*	*Females*
	no.	*no.*	*ratio*	*ratio*	*%*	*%*
Certain infectious and parasitic diseases	2 504	2 492	2.1	2.1	3.6	2.8
Neoplasms	861	1 405	0.5	0.6	1.3	1.6
Diseases of the blood & blood-forming organs & certain diseases involving the immune mechanism	252	479	0.5	1.0	0.4	0.5
Endocrine, nutritional & metabolic disease	1 247	1 601	3.4	3.0	1.8	1.8
Mental and behavioural disorders	4 002	3 350	2.0	1.5	5.8	3.7
Diseases of the nervous system	1 779	1 111	1.8	1.2	2.6	1.2
Diseases of the eye and adnexa	572	682	1.0	1.0	0.8	0.8
Diseases of the ear and mastoid process	959	943	0.9	1.2	1.4	1.0
Diseases of the circulatory system	3 151	3 026	1.7	2.1	4.6	3.5
Diseases of the respiratory system	8 072	7 986	2.0	2.4	11.7	8.8
Diseases of the digestive system	4 806	4 601	1.0	0.9	7.0	5.1
Diseases of the skin and subcutaneous tissue	2 717	2 419	2.9	3.0	4.0	2.7
Diseases of the musculoskeletal system and connective tissue	1 764	1 667	0.8	0.9	2.6	1.8
Diseases of the genitourinary system	1 509	4 686	1.0	1.1	2.2	5.2
Pregnancy, childbirth and the puerperium	. .	15 018	. .	1.4	. .	16.6
Certain conditions arising in the perinatal period	1 054	934	0.9	1.0	1.5	1.0
Congenital malformations, deformations and chromosomal abnormalities	407	262	0.6	0.5	0.6	0.3
Symptoms, signs and abnormal clinical & laboratory findings, nec(c)	3 453	3 921	1.6	1.5	5.0	4.3
Injury, poisoning and certain other consequences of external causes	9 039	7 077	1.8	2.4	13.1	7.8
Factors influencing health status and contact with health services(d)						
Care involving dialysis	18 215	22 871	6.6	10.9	26.5	25.3
Other	2 447	3 918	0.7	0.9	3.6	4.3
Total	*20 662*	*26 789*	*3.3*	*4.3*	*30.0*	*29.6*
All causes (excluding dialysis)(e)	**50 625**	**67 585**	**1.4**	**1.4**	**73.5**	**74.7**
All causes (including dialysis)(e)	**68 840**	**90 456**	**1.8**	**1.8**	**100.0**	**100.0**

(a) Includes data from public and most private hospitals. Exclude separations for which sex was not stated. Categories are based on the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD–10-AM) (National Centre for Classification in Health 2000).

(b) Age-standardised hospital separation ratio is calculated as hospital separations for persons identified as Indigenous divided by expected separations, based on all-Australian rates.

(c) Includes signs, symptoms and abnormal results of clinical or other investigative procedures that do not point conclusively to a specific diagnosis.

(d) Includes hospitalisation for care involving dialysis, chemotherapy, radiotherapy, circumstances related to reproduction, organ donation, vaccination, convalescence, or for discussion of a problem that is affecting a person's health but not currently causing illness.

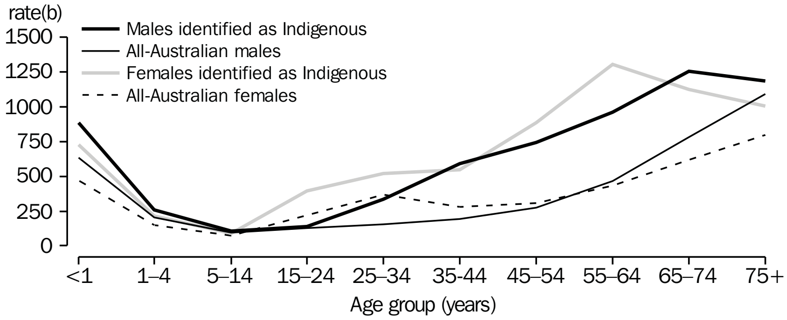
(e) Total includes separations for which information on principal diagnosis was not stated.

Source: AIHW National Hospital Morbidity Database.

Age-specific hospital separation rates

Hospital separation rates for Indigenous males and females exceeded the all-Australian rates in every age group (graph 6.6). After excluding separations involving dialysis, the differences were greatly reduced, particularly for the age groups 35–44 and above (graph 6.7).

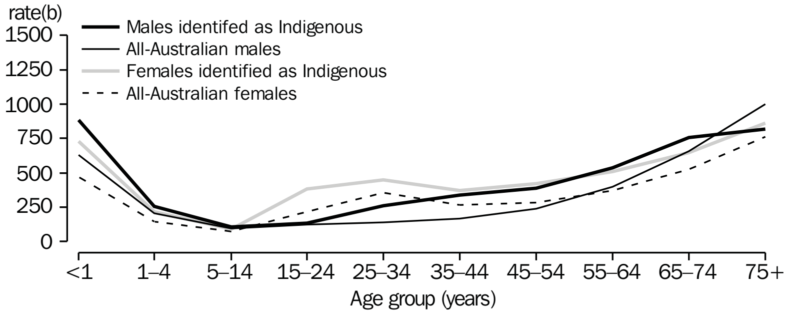
6.6 HOSPITAL SEPARATIONS, All Causes(a)—1998–99



(a) Data are from public and most private hospitals.
(b) Per 1,000 population.

Source: AIHW National Hospital Morbidity Database.

6.7 HOSPITAL SEPARATIONS, All Causes Excluding Dialysis(a)—1998–99



(a) Data are from public and most private hospitals.
(b) Per 1,000 population.

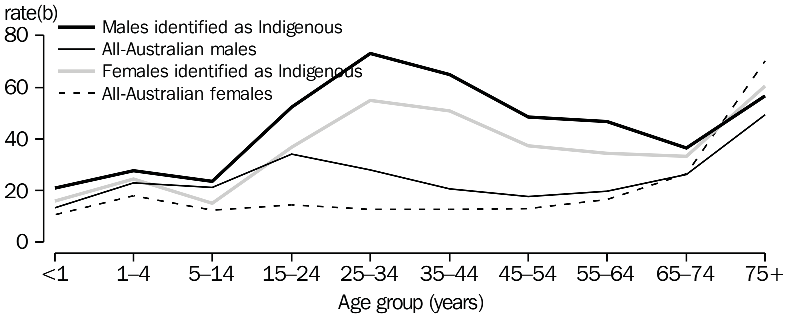
Source: AIHW National Hospital Morbidity Database.

Injury or poisoning

In 1998–99, there were over 16,000 separations among patients identified as Indigenous with a principal diagnosis of injury or poisoning (table 6.5). Graph 6.8 shows that the rates at which Indigenous people were hospitalised for injury or poisoning varied greatly with age, and that Indigenous people aged 25–34 were most at risk.

Separations with a principal diagnosis of injury or poisoning are generally accompanied by a code which indicates the external cause of the injury. In 1998–99, over 20% of injury separations for Indigenous males and almost 30% for Indigenous females were recorded with an external cause of assault (graph 6.9). There were six times as many separations for assault for Indigenous males as expected, based on hospitalisation rates for the total population, and nearly 19 times as many as expected for Indigenous females.

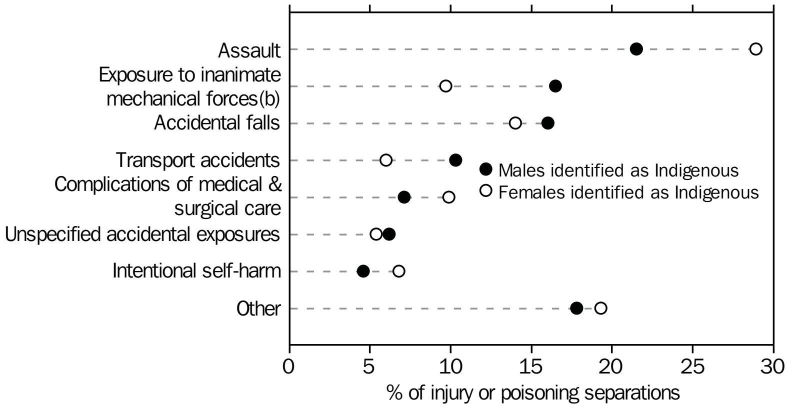
6.8 HOSPITAL SEPARATIONS, Injury or Poisoning(a)—1998–99



(a) Data are from public and most private hospitals.
(b) Per 1,000 population.

Source: AIHW National Hospital Morbidity Database.

6.9 HOSPITAL SEPARATIONS, Cause of Injury or Poisoning(a)—1998–99



(a) Data are from public and most private hospitals. Cause of injury is based on the first reported external cause where the principal diagnosis was 'Injury, poisoning and certain other consequences of external causes'.
(b) Includes injuries due to accidental contact with machinery or other objects, accidental discharge from firearms, explosions, & exposure to noise.

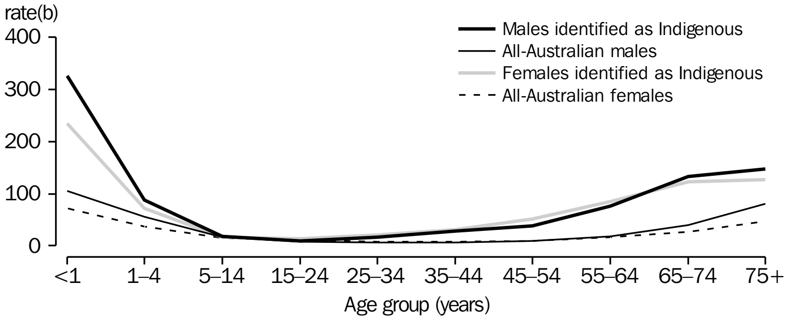
Source: AIHW National Hospital Morbidity Database.

Diseases of the respiratory system

In 1998–99, there were over 16,000 separations among patients recorded as Indigenous with a principal diagnosis of respiratory disease, about twice as many as would be expected based on rates for the total population (table 6.5). Hospitalisation for respiratory diseases affected the very young in both the Indigenous and the total population although the rates for infants identified as Indigenous were higher than those for all Australians. Indigenous people were also more likely to be hospitalised for respiratory diseases than the total population from the age of about 35 onwards (graph 6.10).

Influenza and pneumonia, and chronic lower respiratory tract diseases (including asthma) were the most common types of respiratory diseases resulting in hospital admission. There were about five times as many separations as expected for influenza and pneumonia for both Indigenous males and females, and about twice as many as expected for chronic lower respiratory disease.

6.10 HOSPITAL SEPARATIONS, Respiratory Disease(a)—1998–99



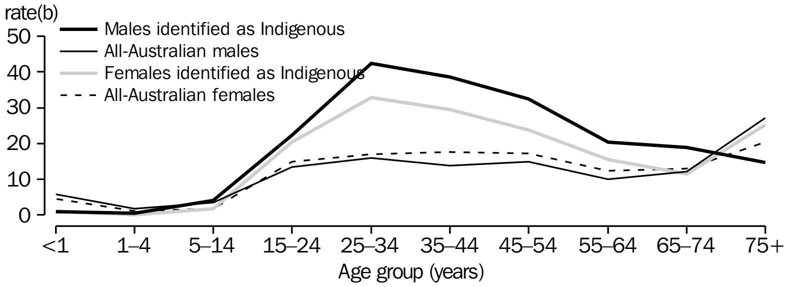
(a) Data are from public and most private hospitals.
(b) Per 1,000 population.

Source: AIHW National Hospital Morbidity Database.

Mental and behavioural disorders

There were about 7,400 separations for mental and behavioural disorders among patients identified as Indigenous, twice as many as expected for Indigenous males and 1.5 times as many as expected for Indigenous females (table 6.5). Admission to hospital for mental and behavioural disorders occurred most frequently among Indigenous people aged 25–34 years (graph 6.11). See the above section on mental health for more details.

6.11 HOSPITAL SEPARATIONS, Mental and Behavioural Disorders(a)—1998–99



(a) Data are from public and most private hospitals.
(b) Per 1,000 population.

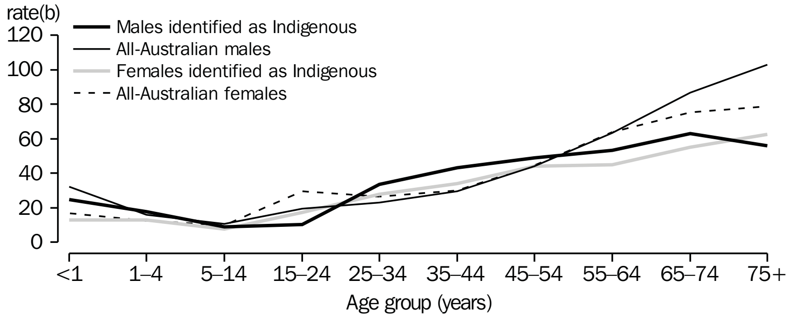
Source: AIHW National Hospital Morbidity Database.

Diseases of the digestive system

In 1998–99, diseases of the digestive system accounted for 9,400 separations among patients identified as Indigenous (table 6.5). Indigenous people were hospitalised for these conditions at rates similar to those experienced by the total population (graph 6.12).

Diseases of the gallbladder, biliary tract and pancreas, and diseases of the oesophagus, stomach and duodenum, were the most common types of digestive disease requiring hospital admission of Indigenous people.

6.12 HOSPITAL SEPARATIONS, Digestive Diseases(a)—1998–99

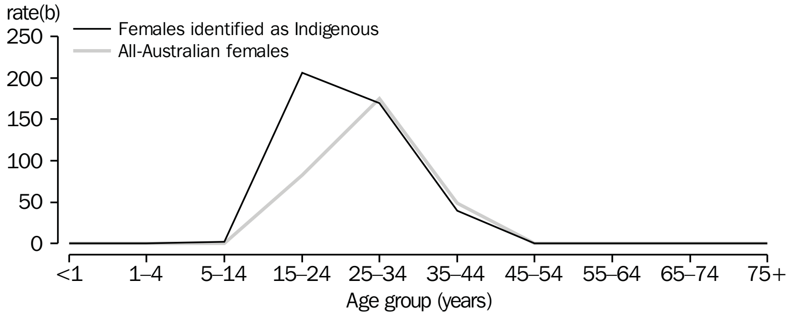


(a) Data are from public and most private hospitals.
(b) Per 1,000 population.
Source: AIHW National Hospital Morbidity Database.

Pregnancy and childbirth

There were 15,000 separations for pregnancy and childbirth among women identified as Indigenous in 1998–99, representing 17% of all separations for females identified as Indigenous (table 6.5). This was 1.4 times as many separations as expected for Indigenous females, based on rates for the total population. Graph 6.13 shows that Indigenous mothers have their babies at younger ages than mothers in the general population. Data presented here are for mothers who have their babies in hospital. For more information about Indigenous mothers and their babies, see Chapter 5.

6.13 HOSPITAL SEPARATIONS, Pregnancy and Childbirth(a)—1998–99



(a) Data are from public and most private hospitals.
(b) Per 1,000 population.
Source: AIHW National Hospital Morbidity Database.

Hospital procedures

There were 4.4 million principal procedures (see Glossary) performed in hospitals in 1998–99, of which 2.1% were recorded among patients identified as Indigenous (table 6.14).

On a population basis, the likelihood of an Indigenous person undergoing a principal procedure in hospital was greater nationally, and in the jurisdictions of Queensland, South Australia, Western Australia, and the Northern Territory than it was for other patients (table 6.14). However, Indigenous people who were hospitalised were less likely to undergo a principal procedure than other hospitalised people. Of the 159,292 hospital separations for people identified as Indigenous (table 6.4), 59% had a principal procedure recorded, compared with

Hospital procedures *continued*

78% for the rest of the population. This difference holds regardless of age, jurisdiction, or reason for hospitalisation (with the exception of dialysis). The reasons why Aboriginal and Torres Strait Islander people who entered hospital were less likely to have a principal procedure recorded are not known. This issue has been noted previously and needs further investigation (Cunningham & Beneforti 2000).

6.14 SEPARATIONS WITH A PRINCIPAL PROCEDURE RECORDED(a)—1998–99

	Separations identified as Indigenous		*Other separations(b)*			*Proportion of separations identified as Indigenous*	*Proportion of the population identified as Indigenous*
	no.	*age-standardised rate per 1,000(c)*	*no.*	*age-standardised rate per 1,000(c)*	*rate ratio(d)*	*%*	*%(e)*
			MALES				
New South Wales	6 224	176	653 619	205	0.9	0.9	1.8
Queensland	10 936	331	377 646	225	1.5	2.8	3.2
South Australia	2 911	448	172 518	224	2.0	1.7	1.5
Western Australia	8 396	429	186 254	215	2.0	4.3	3.1
Northern Territory(f)	9 928	670	8 989	158	4.2	52.5	26.8
Australia(g)	**39 998**	**327**	**2 001 290**	**216**	**1.5**	**2.0**	**2.1**
			FEMALES				
New South Wales	9 755	230	771 027	228	1.0	1.2	1.8
Queensland	14 266	371	426 861	244	1.5	3.2	3.3
South Australia	4 414	601	202 577	253	2.4	2.1	1.6
Western Australia	11 114	536	216 670	239	2.2	4.9	3.2
Northern Territory(f)	12 237	677	8 886	160	4.2	57.9	30.0
Australia(g)	**54 200**	**389**	**2 320 707**	**236**	**1.6**	**2.3**	**2.2**

(a) Based on State/Territory of usual residence. Excludes separations for which age and sex was not stated.

(b) Includes separations for people identified as non-Indigenous and those for whom Indigenous status was not reported.

(c) Directly age-standardised using the total Australian population as at 30 June 1991.

(d) Rate ratio is the rate of separations with a procedure among people identified as Indigenous divided by the rate of separations with a procedure for all others.

(e) As estimated at 31 December 1998.

(f) Public hospitals only.

(g) Includes Victoria, Tasmania and the A.C.T. Includes those usually resident in other Australian territories or overseas, and those for whom State/Territory of usual residence was not stated.

Source: AIHW National Hospital Morbidity Database.

Types of principal procedure

The most common types of principal procedure recorded for separations for persons identified as Indigenous in 1998–99 were procedures on the urinary system, the majority of which were for haemodialysis (table 6.15). Some 46% of principal procedures for Indigenous males, and 43% for Indigenous females, were for haemodialysis, a procedure which artificially performs the work of the kidneys in end stage renal disease patients. For more detail on haemodialysis procedures and end stage renal disease, see the section in this chapter on kidney disease.

Types of principal procedure *continued*

Other types of principal procedures commonly performed on Indigenous male patients were procedures on the musculoskeletal system (8%), 'non-invasive, cognitive and interventions not elsewhere classified' (7%), dermatological and plastic procedures (7%), and procedures on the digestive system (6%). For Indigenous females (after haemodialysis) obstetric procedures were the most commonly performed procedures, accounting for 12% of total separations with a principal procedure recorded. Other common types of procedures for Indigenous females were gynaecological procedures (7%), allied health interventions (6%), and procedures on the digestive system (5%).

6.15 TYPES OF PROCEDURES(a) RECORDED FOR SEPARATIONS IDENTIFIED AS INDIGENOUS(b)—1998–99

	Separations for patients identified as Indigenous		*Age-standardised hospital separation ratio(c)*		*Proportion of total separations*	
	Males	*Females*	*Males*	*Females*	*Males*	*Females*
	no.	*no.*	*ratio*	*ratio*	*%*	*%*
Procedures on the nervous system	554	559	0.8	0.7	1.4	1.0
Procedures on the endocrine system	15	60	0.5	0.6	—	0.1
Procedures on the eye and adnexa	534	601	0.9	0.9	1.3	1.1
Procedures on the ear and mastoid process	651	623	0.7	0.9	1.6	1.2
Procedures on the nose, mouth and pharynx	482	482	0.4	0.4	1.2	0.9
Dental Services	617	665	0.6	0.5	1.5	1.2
Procedures on the respiratory system	634	468	1.4	1.5	1.6	0.9
Procedures on the cardiovascular system	1 042	981	1.0	1.2	2.6	1.8
Procedures on blood and blood-forming organs	97	102	0.6	0.7	0.2	0.2
Procedures on the digestive system	2 474	2 846	0.6	0.6	6.2	5.3
Procedures on the urinary system						
Haemodialysis	18 261	23 148	6.6	11.0	45.6	42.7
Other	887	780	1.1	1.2	2.2	1.4
Total	*19 148*	*23 928*	*5.3*	*8.7*	*47.9*	*44.2*
Procedures on the male genital organs	659	. .	0.5	. .	1.7	. .
Gynaecological procedures	. .	3 967	. .	0.8	. .	7.3
Obstetric procedures	. .	6 240	. .	1.1	. .	11.5
Procedures on the musculoskeletal system	3 130	1 914	0.8	0.8	7.8	3.5
Dermatological and plastic procedures	2 833	2 354	1.4	1.3	7.1	4.3
Procedures on the breast	10	296	0.3	0.5	—	0.6
Chemotherapeutic and radiation oncology procedures	351	545	0.3	0.4	0.9	1.0
Non-invasive, cognitive and interventions n.e.c.(d)	2 865	2 822	1.0	1.1	7.2	5.2
Imaging services	1 564	1 619	1.2	1.4	3.9	3.0
Allied health interventions(e)	2 338	2 981	1.7	1.7	5.9	5.5
Total (excluding dialysis)	**21 737**	**31 052**	**0.9**	**0.9**	**54.3**	**57.3**
Total (including dialysis)	**39 998**	**54 200**	**1.4**	**1.5**	**100.0**	**100.0**

(a) Refers to the principal procedure performed.

(b) Includes data from public and most private hospitals. Categories are based on the International Statistical Classification of Diseases, 10th Revision, Australian Modification (ICD–10-AM) (National Centre for Classification in Health 2000).

(c) Age-standardised hospital separation ratio is calculated as separations with a principal procedure for people identified as Indigenous divided by expected separations with a principal procedure, based on all-Australian rates.

(d) Includes diagnostic assessments and investigations, counselling, alcohol and drug rehabilitation,skills training in relation to learning and movement, immunisations, and therapeutic interventions.

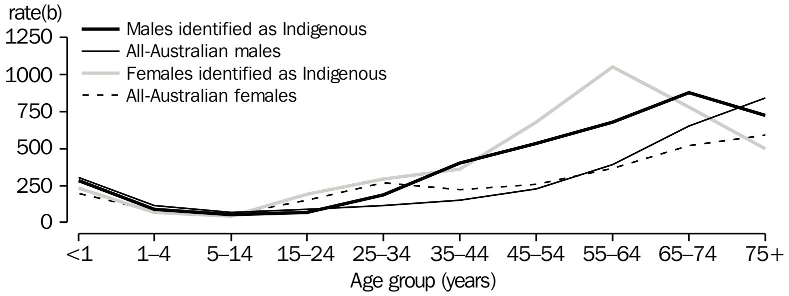
(e) Includes physiotherapy, social work and speech pathology among others.

Source: AIHW. National Hospital Morbidity Database.

Age-specific rates for principal procedures

The age-specific rates for principal procedures were higher for males and females identified as Indigenous than for all-Australians, in most adult age groups (graph 6.16). After excluding haemodialysis procedures, the differences were much reduced, particularly for the age groups 35–44 and above (graph 6.17).

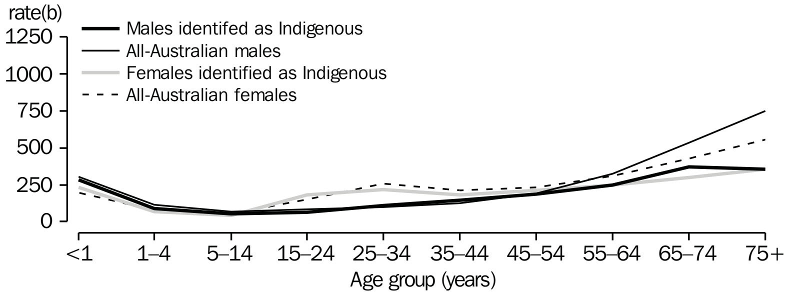
6.16 HOSPITAL PROCEDURES, All Causes(a)—1998–99



(a) Refers to separations with a principal procedure recorded. Data are from public and most private hospitals.
(b) Per 1,000 population.

Source: AIHW Natonal Hospital Morbidity Database.

6.17 HOSPITAL PROCEDURES, All Causes Excluding Dialysis(a)—1998–99



(a) Refers to separations with a principal procedure recorded. Data are from public and most private hospitals.
(b) Per 1,000 population.

Source: AIHW National Hospital Morbidity Database.

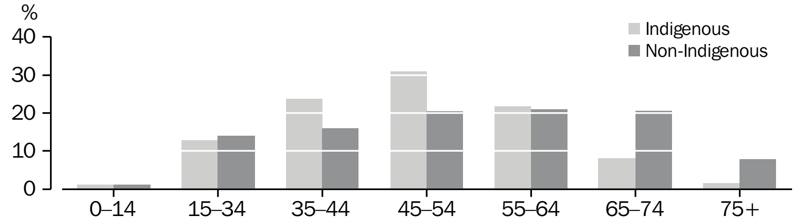
KIDNEY DISEASE

Risk factors for kidney disease include diabetes, high blood pressure, infections, low birthweight and obesity, all of which are more common among Indigenous people than among non-Indigenous people (ABS & AIHW 1999). Kidney disease affects a relatively small number of people, but has a severe impact on the quality of life of those affected and their carers. Also, the cost of treatment of kidney disease (e.g. haemodialysis) is very high. The 1999 edition of this publication included a special feature chapter on kidney disease. The current edition includes updated information about people with end stage renal disease (ESRD), as well as data on the mortality and hospitalisation of Indigenous people with renal failure.

People with ESRD require dialysis or a kidney transplant for survival. These patients are registered with the Australian and New Zealand Dialysis and Transplant Registry (ANZDATA). In 1999, there were 642 registrations for patients who identified as Aboriginal and/or Torres Strait Islander, including new and continuing patients (ANZDATA). Of these, 82% were receiving dialysis treatment, and the remainder (18%) had functioning transplants. In contrast, 46% of all patients registered had a functioning transplant. Some of the reasons Indigenous patients are less likely to receive a transplant include having multiple illnesses, being less likely to find a suitable donor, or being too ill to undergo the surgery required to receive a transplant (ABS & AIHW 1999).

Indigenous patients with ESRD are more likely to be younger than non-Indigenous patients with the disease (graph 6.18). Just under 70% of new and continuing Indigenous patients were under 55 years of age, compared with 51% of non-Indigenous patients (ANZDATA).

6.18 AGE DISTRIBUTION OF END STAGE RENAL DISEASE PATIENTS(a)—1999(b)



(a) Includes all types of dialysis, plus functioning transplants.
(b) Figures for 1999 updated 30 September 2000.

Source: *The data reported here have been supplied by the Australian and New Zealand Dialysis and Transplant Registry. The interpretation and reporting of these data are the responsibility of the authors and should not be seen as the official policy or interpretation of the Australia and New Zealand Dialysis and Transplant Registry.*

There were 1,735 new ESRD patients in 1999, of whom 8.7% (151) were identified as Indigenous (table 6.19) (ANZDATA). The total number of new patients has been increasing yearly (Disney et al. 2000) and the proportion of Indigenous patients continues to exceed the proportion of Indigenous people in the population. The median age of new Indigenous patients in 1999 was 50 years, compared with a median age of 61 years for all patients (ANZDATA, Disney et al. 2000). Nearly 64% of new Indigenous patients were female, compared with 40% of new non-Indigenous patients.

The Northern Territory and Queensland had the highest numbers of new Indigenous patients in 1999, followed by Western Australia (table 6.19). These three jurisdictions together accounted for 78% of all new Indigenous patients. As with other datasets, the level of identification of Indigenous status is likely to vary between jurisdictions, therefore comparisons between jurisdictions should be treated with caution.

6.19 END STAGE RENAL DISEASE—NEW PATIENTS IDENTIFIED AS INDIGENOUS —1999(a)

	NSW(b)	*Qld*	*SA*	*WA*	*NT*	***Australia(c)***
			MALES			
Total (no.)	339	158	88	112	15	**1 001**
Indigenous (no.)	10	16	5	11	12	**55**
Indigenous (%)	3	10	6	10	80	**6**
			FEMALES			
Total (no.)	232	149	53	86	37	**734**
Indigenous (no.)	8	26	5	20	33	**96**
Indigenous (%)	3	9	11	23	89	**13**

(a) Updated figures as at 30th September 2000.

(b) Includes Australian Capital Territory.

(c) Includes Victoria and Tasmania, due to small numbers of cases.

Source: The data reported here have been supplied by the Australia and New Zealand Dialysis and Transplant Registry. The interpretation and reporting of these data are the responsibility of the authors and should not be seen as the official policy or interpretation of the Australia and New Zealand Dialysis and Transplant Registry.

KIDNEY DISEASE *continued*

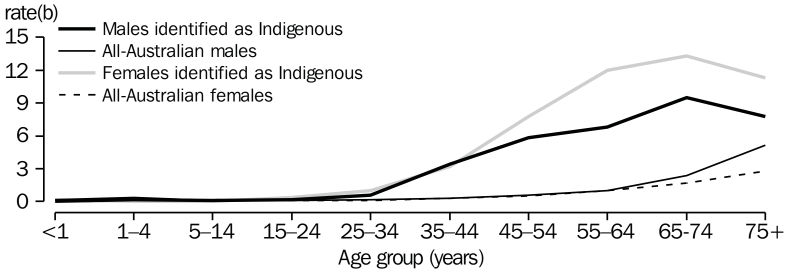
Research has shown that ESRD incidence among Indigenous people in remote areas is 30 times higher than the total national incidence of ESRD. In urban areas, the incidence of ESRD among Indigenous people is much lower, but still higher than the national incidence rate (Cass et al. 2001).

Hospital visits for renal failure

In 1998–99, there were 279 hospital separations of Indigenous males for renal failure, including ESRD. (This excludes hospital separations where the principal diagnosis was 'care involving dialysis'). After adjusting for age, the numbers of separations for renal failure for Indigenous males was about five times higher than expected. For Indigenous females, 420 separations were recorded for renal failure, which was seven times higher than expected, based on rates for the total Australian population. The higher numbers and ratios for Indigenous females compared with Indigenous males with renal failure reflect the higher numbers of Indigenous females on the ANZDATA registry.

Graph 6.20 shows that the rates of hospitalisation for renal failure among Indigenous males and females aged 25 and over greatly exceed those for the total Australian population.

6.20 HOSPITAL SEPARATIONS, Renal Failure(a)—1998–99



(a) Data are from public and most private hospitals. Based on principal diagnosis. Refers to acute and chronic renal failure, including end stage renal disease (ICD-10-AM codes N17-N19). Excludes separations where the principal diagnosis was 'care involving dialysis'.
(b) Per 1,000 population.

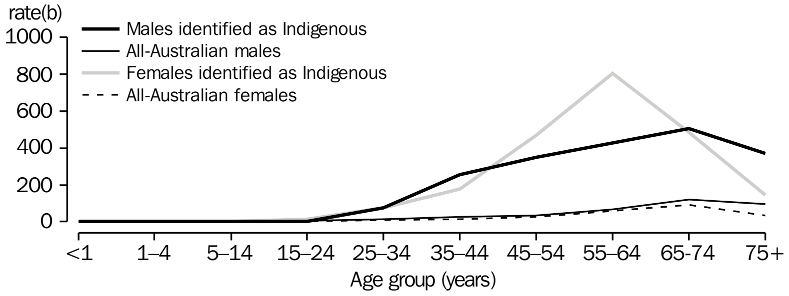
Source: AIHW National Hospital Morbidity Database.

Haemodialysis procedures

Some 44% of all principal procedures performed in hospital on Indigenous people in 1998–99 were for haemodialysis. There were over 41,000 separations for Indigenous persons with a haemodialysis procedure recorded (as a principal procedure), 56% of which were for Indigenous females. After adjusting for age, there were over six times as many procedures for haemodialysis as expected for Indigenous males, and eleven times as many for Indigenous females. The graph (6.21) depicts the sharp rise in rates for both Indigenous males and females for hospitalisation for haemodialysis from early adulthood. The highest rates were for Indigenous females, peaking in the 55–64 year old age group at around 800 procedures per 1,000 population. Patients with ESRD may be admitted several times a week for treatment. The majority of hospital admissions for haemodialysis are on a same-day basis.

Haemodialysis is not the only kind of dialysis performed, but it is by far the most common. In 1999, about 70% of all Indigenous dialysis patients on the ANZDATA registry were receiving haemodialysis treatment in either a hospital or a hospital satellite unit (ANZDATA). The remainder were receiving either home-based haemodialysis treatment (6%), peritoneal dialysis treatment (hospital or home-based)(2%), or continuous ambulatory peritoneal dialysis treatment (home or hospital based) (22%) (ANZDATA). (See Glossary for an explanation of the different types of dialysis.)

6.21 HAEMODIALYSIS PROCEDURES(a)—1998–99



(a) Data are from public and most private hospitals. Based on the principal procedure performed.
(b) Per 1,000 population. Patients may be admitted several times a week for haemodialysis treatment. Admission is usually on a same-day basis.

Source: AIHW National Hospital Morbidity Database.

Deaths from renal failure

In 1997–99, in Queensland, South Australia, Western Australia and the Northern Territory, there were 78 deaths of Indigenous people with an underlying cause of renal failure, 64% of which were of Indigenous females. There were about five times as many deaths due to renal failure as expected for males identified as Indigenous and eight times as many for females identified as Indigenous, based on rates for the total population. In addition, renal failure was reported as an associated cause of death in 440 other deaths of Indigenous people, 124 of which had an underlying cause of diabetes (see Chapter 8).

Inset 6.22 describes a program that has been successful in reducing rates of ESRD in the Indigenous population of Tiwi Islands, in the Northern Territory.

6.22 REDUCING PREMATURE DEATH AND RENAL FAILURE IN INDIGENOUS PEOPLE ON THE TIWI ISLANDS

There are very high rates of ESRD, cardiovascular disease (CVD), hypertension, and diabetes among the Indigenous population of the Tiwi Islands. To address these problems, a systematic treatment program was introduced in 1995. The aim of the program was to reduce the levels of hypertension in the population and modify the onset and progression of both renal and cardiovascular diseases.

The program has been run by the Tiwi people since soon after its inception, with support from medical practitioners, who make the initial assessments and decisions about treatment regimes, and with assistance from visiting nurses.

The program's non-medical methods include education about diet, exercise, health behaviours and medical treatment. Medical interventions consist of drug therapy for blood-pressure control and protection against hypertension and cardiovascular disease, as well as for blood glucose and lipid level reduction, where appropriate.

Approximately three years after its initiation, 29% (258) of all adults in the Tiwi Islands were enrolled in the program, of whom 227 are still participating. Participation was reported as 'enthusiastic', and compliance improved as the program continued, with 65% of participants taking at least 70% of their medication.

The program has led to significant improvements in blood pressure and stabilisation of renal function in those receiving treatment. Other associated outcomes have been a decrease in renal failure and death rates, compared with an historical control group. An increase in ESRD in other Aboriginal groups during the period of the study contrasted with the community-wide reduction of ESRD in the Tiwi Islands.

Source: Hoy et al. 2000.

NOTIFIABLE COMMUNICABLE DISEASES

Surveillance of communicable diseases (i.e. those that can be spread to others) is a crucial component of public health strategies for prevention and control of these diseases. For this reason, certain infectious diseases are classified as 'notifiable communicable diseases', and must be brought to the attention of health authorities. Since not all such cases of infectious disease lead to hospitalisation or death, notification data are also a valuable source of information on the presence of these conditions in the community.

Notifiable communicable diseases include tuberculosis, various types of hepatitis, malaria, leprosy, measles, Haemophilus influenzae type b, syphilis, gonococcal infection, arbovirus infections (such as Ross River virus), chlamydial infection, meningococcal infection, mumps, pertussis, rubella, salmonellosis, and other diseases. (See following section for information on HIV/AIDS.) State and Territory health authorities forward information about disease notifications to the National Notifiable Diseases Surveillance System (NNDSS). The proportion of disease cases notified to the health authorities (and therefore to the NNDSS) is unknown and is likely to vary for different diseases and from one jurisdiction to another (Hargreaves et al. 1995).

Table 6.23 presents information on notifications for selected diseases for South Australia, Western Australia and the Northern Territory combined, for the three-year period 1998–2000. Notifications from other jurisdictions have been excluded because a high proportion of their notifications lacked Indigenous status identification—as high as 100% for some diseases in some jurisdictions. It is not known how well the data represent the experience of Indigenous people living in other jurisdictions. Indigenous status was unknown for up to 28% of notifications for the diseases and infections listed in table 6.23, so it is likely that the notification rates for the Indigenous population in South Australia, Western Australia and the Northern Territory underestimate the true rates, to some extent. Territory Health Services notes that recording of Indigenous status has improved in the Northern Territory Notifiable Diseases Surveillance System. The proportion of notifications missing information on Indigenous status has nearly halved over the past decade.

Other potential biases in the data include differential access to medical services and specific screening and priority programs that may influence the likelihood of certain diseases being identified (and therefore notified).

In 1998–2000, the notification rates for people identified as Indigenous were higher than rates for the total population in South Australia, Western Australia and the Northern Territory for chlamydial infection, donovanosis, gonococcal infection, Haemophilus influenzae type b, hepatitis A, hepatitis B, hepatitis C, meningococcal infection, salmonellosis, shigellosis, syphilis and tuberculosis, but lower or very similar for measles, pertussis (whooping cough), mumps, rubella and Ross River virus (table 6.23).

The rates presented are crude rates, that is, they do not take into account differences in the age structures of the populations. Because the Indigenous population has a younger age structure than the total population (see Chapter 1), diseases and infections which are more common in children and young people could be expected to have relatively higher crude rates in the Indigenous population than in the total population, even if age-specific rates were similar. However, for most of the diseases presented in the table, differences in the age structures of the two populations do not explain the differences in the crude rates.

NOTIFIABLE COMMUNICABLE DISEASES *continued*

Despite shortcomings in the quality of the data, the greater burden of infectious disease (apart from some vaccine-preventable diseases such as measles) among Indigenous people in South Australia, Western Australia and the Northern Territory, relative to the total population living in those jurisdictions is apparent.

6.23 COMMUNICABLE DISEASE NOTIFICATIONS—1998–2000(a)

		Proportion of notifications identified as			*Crude rates per 100,000*	
	Notifications	*Indigenous*	*Non-Indigenous*	*Unknown*	*Notifications identified as Indigenous*	*Total*
	no.	*%*	*%*	*%*	*rate*	*rate(b)*
Campylobacterosis	12 275	4	70	26	115.3	115.3
Chlamydial infection	13 200	31	57	13	983.2	124.0
Donovanosis	44	98	2	—	10.4	0.4
Gonococcal infection	8 007	72	16	11	1405.0	75.2
Haemophilus influenzae type b	22	50	41	9	2.7	0.2
Hepatitis A	1 071	20	68	12	52.9	10.1
Hepatitis B (acute)	296	23	71	6	16.7	2.8
Hepatitis C (incident)	630	13	83	4	19.2	5.9
Measles	116	2	88	10	0.5	1.1
Meningococcal infection	320	19	77	4	14.8	3.0
Mumps	159	4	80	16	1.7	1.5
Pertussis	1 851	4	69	28	16.3	17.4
Ross River virus	2 936	3	77	20	19.4	27.6
Rubella	127	2	84	14	0.5	1.2
Salmonellosis	5 324	15	65	20	196.3	50.0
Shigellosis	871	52	37	11	109.4	8.2
Syphilis	1 228	78	16	5	233.2	11.5
Tuberculosis	585	15	71	14	21.4	5.5

(a) Data from South Australia, Western Australia and the Northern Territory combined.

(b) Rate for the total population of South Australia, Western Australia and the Northern Territory combined.

Source: Communicable Diseases Network — National Notifiable Diseases Surveillance System, personal communication.

HIV/AIDS

Information on HIV/AIDS is published by the National Centre in HIV Epidemiology and Clinical Research (NCHECR 2000). Between 1992 and 1999, a total of 140 notifications of HIV infection and 61 notifications of AIDS diagnosis were identified as being for Indigenous people. Indigenous status is now recorded for notifications in all jurisdictions, except the Australian Capital Territory, but the quality of identification of Indigenous people is unknown (NCHECR 2000). Most HIV notifications in Australia for 1992–99 were for men (94%). In the Indigenous population, a much higher proportion of notifications were for women (28%). The majority (82%) of HIV cases in the total population were attributable to male homosexual contact (some of these were in conjunction with injecting drug use). However, 38% of HIV notifications identified as Indigenous were attributed to heterosexual contact.

HIV/AIDS *continued*

Based on the available data, rates of HIV infection for Indigenous people and non-Indigenous people appear to be similar. However, Guthrie et al. (2000) notes that the incidence of new cases of HIV in non-Indigenous people has declined since peaking in 1994, while the rate of new infection among Indigenous people has been relatively stable. The study also cautions that data may underestimate actual numbers due to lack of uniformity across jurisdictions in the reporting of Indigenous status, and the possible fear of stigma associated with HIV/AIDS preventing some from seeking diagnosis.

The Working Party on Indigenous Australian's Sexual Health noted that higher rates of sexually transmitted diseases among Indigenous Australians (see table 6.23) may increase the likelihood of HIV transmission (ANCARD 1997).

CANCER

Cancers (malignant neoplasms) result from the growth and spread of abnormal cells throughout the body. This can occur in most cell types. Cancer is an important cause of death for Indigenous and non-Indigenous people alike. Mortality data from 1997–99 indicate that cancer caused 40% more deaths among Indigenous people in Western Australia, South Australia, Queensland and the Northern Territory combined, than would have been expected, if the disease occurred at the same rates as found in the total population (see Chapter 8).

Information on cancer incidence (i.e. new cases) comes from the State and Territory cancer registries. It is believed that there is considerable under-identification of Indigenous people in cancer registrations, although the exact extent of this has not been quantified. It is likely that even for the two jurisdictions for which information has been presented in this section (table 6.24), there is some level of under-identification. For this reason, and because the total numbers of cancers reported for Indigenous people are small, the numbers and rates in table 6.24 should be interpreted with caution. The focus should be on broad patterns rather than precise figures, and comparisons should be made within jurisdictions rather than between jurisdictions.

The incidence of cancers among Indigenous people appears to be lower than among non-Indigenous people, although data limitations make it difficult to draw this conclusion with any confidence. The risk of cancer is known to increase with age (AIHW & AACR 1999) and as Indigenous people die at younger ages than non-Indigenous people (see Chapter 8), they may be less likely to live long enough to develop some cancers. In addition, survival may be poorer among Indigenous cancer patients because of later diagnosis and higher rates of typically fatal cancers (South Australian Cancer Registry 1997). The cancer-related mortality rates presented in table 6.24 are generally higher for Indigenous people than for the rest of the population..

CANCER *continued*

The age-standardised incidence rates for cancers of the liver and pancreas in Western Australia and the Northern Territory, for 1994–98, were higher among Indigenous males than other males. Cancer of the cervix was twice as common among Indigenous females as it was among other females. However, the incidence rates of breast cancer, prostate cancer, colorectal cancer, and skin cancer (melanoma) were lower among Indigenous people than other people.

Among Indigenous females, breast, lung and cervical cancers were the most common, while Indigenous males were most commonly affected by lung, liver, prostate and pancreatic cancers.

6.24 CANCER INCIDENCE AND MORTALITY, SELECTED YEARS

	Incidence		*Mortality*	
	cases	*mean annual rate(a)*	*deaths*	*mean annual rate(a)*
Western Australia(b)(c)				
Indigenous males	131	197	110	168
Indigenous females	168	205	81	113
Other males(d)	18 718	351	8 168	147
Other females(d)	15 005	261	6 154	94
Northern Territory(b)				
Indigenous males	169	275	113	193
Indigenous females	175	226	88	127
Other males(d)	868	334	389	163
Other females(d)	627	258	247	127
All Australian(e)				
Total males	—	**352**	—	**150**
Total females	—	**264**	—	**97**

(a) Rate per 100,000. Directly age-standardised using the World Standard Population.

(b) Data from 1994–98.

(c) Rates may not match figures published by the Health Department (Western Australia) because of differences in the methodology used for estimating the Indigenous population.

(d) Includes those for whom Indigenous status information was missing.

(e) Data from 1996.

Source: Northern Territory Cancer Registry, Western Australian Cancer Registry; AIHW & AACR 1999.

DENTAL HEALTH

The consequences of poor dental health can be severe. Pain, infection, impaired speech, interference with eating habits, embarrassment about one's appearance, and the financial burden incurred when dental intervention is necessary, can all reduce quality of life. Factors that may affect dental health include age, fluoride exposure, dietary habits, smoking, alcohol consumption, stress, infection and preventive dental habits, such as regular tooth brushing and flossing. The level of access to dental treatment, as well as knowledge of, and attitudes towards, dental health, are also important factors (AIHW 2000b). Other health conditions such as diabetes may also affect dental health (Taylor et al. 1996, see below).

DENTAL HEALTH *continued*

Dental health is measured in terms of the number of decayed, missing or filled teeth (known as 'dmft' for deciduous or infant teeth and 'DMFT' for permanent teeth) and edentulism (the loss of all natural teeth). There is little information about the dental health of Indigenous people. Some information about children's dental health is available from the Child Dental Health Survey, in which children using the School Dental Service throughout Australia are examined. However, the information for Indigenous children is limited by the small sample sizes available for most jurisdictions. Data from the 1998 survey for the Northern Territory are presented below (see Child Dental Health section).

Information on the dental health of Indigenous adults has been limited to data from the Commonwealth Dental Health Program which ceased in 1996, and data from a small sample of Indigenous people in the 1994–96 National Dental Telephone Interview Surveys (AIHW Dental Statistics & Research Unit 1995, Brennan & Carter 1998). While indicative only, these data suggested that dental problems, tooth extraction and edentulism are more common among Indigenous people than non-Indigenous people.

The 1995 National Health Survey provided information about dental visits, and estimated that Indigenous people in every age group were less likely than non-Indigenous people to report a recent dental consultation (ABS 1999c). The 1999 CHINS provided information about the availability of dentists in discrete Indigenous communities, and showed that 105 of the 254 communities surveyed (with populations of 50 or more located 10 km or more from the nearest hospital), affecting about 13,600 people, did not have a dentist in the community nor did the community receive the service of a visiting dentist (see Chapter 4 for more details).

A study of oral health in the Anangu Pitjantjatjara (AP) lands of South Australia found that the children had a high and increasing prevalence of dental caries in their deciduous teeth, and that edentulism among adults had increased rapidly over the last decade, from no recorded cases in 1987, to ten cases in 2000 (2.9% of all adults attending for dental care) (Endean et al., forthcoming). All edentulous adults on the AP lands also had a diagnosis of diabetes. An association between periodontal disease and diabetes was identified in an earlier study (Taylor et al. 1996).

Child dental health

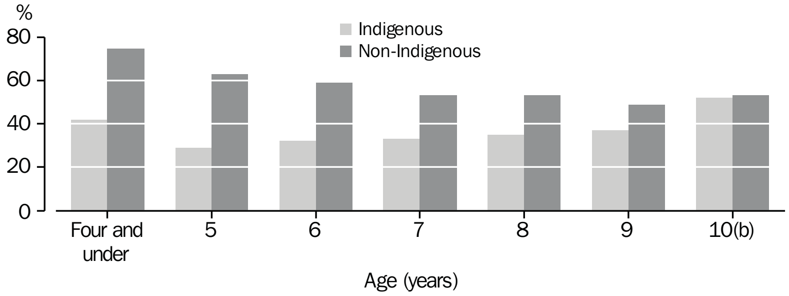
Good oral health throughout infancy and childhood contributes to better dental health in adults, as indicated by a reduced loss of natural teeth and less decay. Effective preventive strategies, including water fluoridation, improved oral hygiene practices, better diet and improved disease management, all help maintain the health of teeth and gums.

Since the introduction of the School Dental Scheme in 1977, the dental health of Australian school children has improved markedly. The average number of decayed, missing or filled teeth, for both infant and permanent teeth, decreased over the period 1989–1996 and was accompanied by a marked increase in the proportion of children with no dental decay (AIHW 2000b).

Child dental health
continued

However, comparative data from the 1998 Child Dental Health Survey for children in the Northern Territory show that Indigenous children are more likely than non-Indigenous children to have decayed, missing or filled deciduous teeth (graph 6.25). Data for New South Wales, which are not presented here and can be considered indicative only, because of the small numbers of Indigenous children in the sample, show a similar pattern, although the differences are less marked (AIHW Dental Statistics Research Unit).

6.25 HEALTH OF DECIDUOUS TEETH(a), Northern Territory—1998

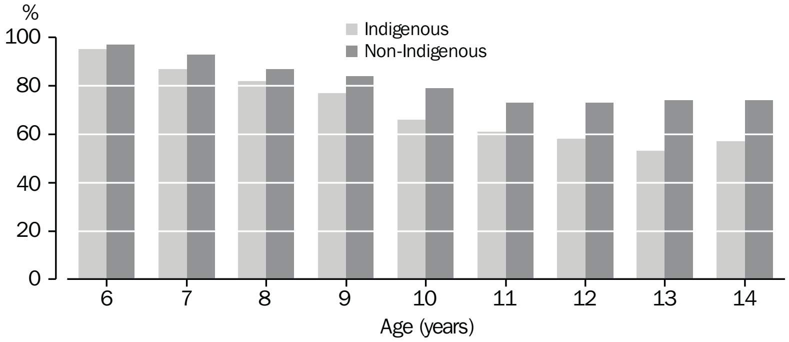


(a) Percentage of children with no decayed, missing or filled deciduous (infant) teeth (dmft=0)
(b) From age ten onwards, there are few remaining deciduous teeth which means that the likelihood of having dmft=0 increases.

Source: AIHW Dental Statistics Research Unit.

Graph 6.26, which illustrates the dental experience for permanent teeth, shows that the proportion of children with healthy permanent teeth declines steadily from age 6 to 13, and the decline is more pronounced among Indigenous children than non-Indigenous children. Data for New South Wales showed a similar pattern (not graphed).

6.26 HEALTH OF PERMANENT TEETH(a), Northern Territory—1998



(a) Percentage of children with no decayed, missing or filled permanent teeth (DMFT=0).

Source: AIHW Dental Statistics Research Unit.

SUMMARY

Although the data presented in this chapter are limited in their availability and are often of uncertain quality, it is clear that Indigenous people suffer from a greater burden of ill health than other Australians. Health risk factors, high rates of hospitalisation and illnesses, such as cancer, renal disease and some communicable diseases, all impact on the quality of life of Indigenous people. The absence of discussion of certain health conditions should not be understood to imply that Indigenous people experience only those described in this chapter. There is very little information about the health of people who are not hospitalised, or who are not recorded in the various registries (e.g. cancer, communicable diseases, ANZDATA), although surveys will provide new information in the near future.

The high rates of illness experienced by Indigenous people are reflected in higher death rates, as can be seen in Chapter 8. Indigenous people are also likely to suffer multiple illnesses, an issue which is raised in the following chapter on diabetes.

CHAPTER 7 DIABETES

INTRODUCTION

In previous editions of this publication a 'feature chapter' has been dedicated to a detailed review of an issue of particular importance in Indigenous health or welfare. In this edition, the feature chapter examines diabetes and its effects on Australia's Aboriginal and Torres Strait Islander people. Diabetes was chosen because of its significance as a health issue among the Indigenous population.

The disease exists in two primary forms, known as Type 1 and Type 2 diabetes (see inset 7.1). While Type 1 diabetes is relatively rare among Indigenous people, available data suggest that the Indigenous population has very high prevalence rates of Type 2 diabetes (McCarty et al. 1996). Type 2 diabetes in the Indigenous population is characterised by its early onset, which has serious implications for diabetic complications (O'Dea 1992a).

Diabetes is associated with a number of other major health conditions. It has been associated with cardiovascular disease (Eastman & Keen 1997), and is a major cause of nephropathy (kidney disease) (Disney 2001), neuropathy (nerve damage) (Eastman in eds. Harris et al. 1995), retinopathy resulting in blindness (Klein & Klein in eds. Harris et al. 1995), and is associated with peripheral vascular disease, causing ulceration, gangrene and, ultimately, amputation (Palumbo & Melton in eds. Harris et al. 1995). In addition, diabetes in pregnant women is associated with fetal abnormalities (Martinez-Frias et al. 1998, Kamath et al. 1998), and may also increase the risk of infants developing insulin resistance and other diabetes-related conditions later in life (Plagemann et al. 1997).

Data in this chapter are presented from hospital separations data, death registrations, surveys and from a number of small area studies.

7.1 DIABETES: TERMS AND DEFINITIONS

Diabetes is a chronic disease caused by 'deficient insulin production and/or resistance to its action' (NHMRC 2000, p. 153). Two primary forms of diabetes have been distinguished: Type 1 diabetes, or Insulin-Dependent Diabetes Mellitus (IDDM) and Type 2 diabetes, or Non-Insulin-Dependent Diabetes Mellitus (NIDDM).

Type 1 diabetes is currently understood to be caused by the destruction of beta-cells in the pancreas leading to an inability to produce insulin, and is characterised by a sudden onset of symptoms. To control the disease, people with Type 1 diabetes must inject insulin to maintain their blood sugar levels at non life-threatening levels (Harris & Zimmet in Alberti et al. (eds),1992).

Type 2 diabetes is caused by 'a combination of abnormalities of insulin action and insulin secretion' (NHMRC 2000, p. 153). Type 2 diabetes is thought to be an hereditary disease, with environmental and behavioural risk factors, such as low physical activity levels and rapid lifestyle change also being contributing factors. There is also a strong association between Type 2 diabetes and obesity, and a person's diabetic condition often improves in response to weight reduction, increased physical activity and dietary changes. In severe cases, insulin may be required to control hyperglycaemia (high blood glucose levels) during later stages of the disease (Harris & Zimmet in Alberti et al. (eds), 1992).

7.1 DIABETES: TERMS AND DEFINITIONS *continued*

Another form of the disease, gestational diabetes, is very similar to Type 2 diabetes, although it is usually only present for the duration of pregnancy. A number of obstetric complications for mother and baby may arise as a result of diabetes during pregnancy, including an increased risk of difficulties associated with labour and delivery. Other obstetric complications may include hypertension (high blood pressure), urinary tract infections, uterine bleeding, and premature birth (McMahon et al. 1998). Children born to women with diabetes are at increased risk of fetal malformations, fetal distress, and neonatal complications (Martinez-Frias et al. 1998, Kamath et al. 1998). They also appear to be at greater risk of developing susceptibility to IGT (Impaired Glucose Tolerance) and insulin resistance later in life (Plagemann et al. 1997).

In January 1999 the International Classification of Diseases 9th Revision (ICD-9) was replaced by ICD-10 for cause-of-death coding. For reporting of hospital diagnoses, an Australian Modification of ICD-10 was introduced in NSW, Victoria, NT and ACT in July 1998, and in the remaining Australian States in July 1999. The changes included a move from the treatment-based classification of insulin-dependent diabetes and non-insulin-dependent diabetes to the cause-based classification of Type 1 and Type 2 diabetes. Hospitalisation and mortality data presented in this chapter have been mapped to correspond with the ICD-10 classification (see Explanatory Notes).

PREVALENCE OF DIABETES

Data about the prevalence of diabetes within the Australian community have recently been published in the Australian Diabetes, Obesity and Lifestyle (AusDiab) Report (International Diabetes Institute 2001). AusDiab is the first national study of the prevalence of diabetes in the Australian population. At this stage, reliable information about the prevalence of the disease in the Aboriginal and Torres Strait Islander population is not available at the national level because of data quality and availability problems (see below). The information presented in this section comes from a range of sources that, despite the data limitations, provide a substantial amount of evidence indicating the prevalence of diabetes is considerably higher among Aboriginal and Torres Strait Islander people than the whole of the Australian population.

Hospital visits for diabetes

Hospitalisation statistics provide insights into the level of diabetes in the community but are not a measure of prevalence, as not all people with diabetes are hospitalised. It should also be noted that hospitalisation statistics are affected by the fact that the number of Indigenous people who are correctly identified is lower than the true number of Indigenous patients (see Chapter 6).

Nationally, in 1998–99, there were more than 1,600 separations from hospital (see Glossary for definitions) for Type 1 and Type 2 diabetes for people who were identified as Indigenous. Nearly 75% of these were for Type 2 diabetes. Based on rates for the total Australian population, there were 10 times as many hospital separations as expected for Type 2 diabetes for Indigenous males, and nearly 15 times as many for Indigenous females (see inset 8.1 for an explanation of ‘expected’).

7.2 HOSPITAL SEPARATIONS FOR DIABETES — 1998–99(a)

	Indigenous males			*Indigenous females*		
	Observed separations			*Observed separations*		
	no.	%	Age-standardised hospital separation ratio(b)	no.	%	Age-standardised hospital separation ratio(b)
Type 1 diabetes	194	27	1.8	222	24	2.0
Type 2 diabetes	523	72	10.3	693	75	14.5
Diabetes mellitus(c)	**722**	**100**	**4.6**	**928**	**100**	**5.9**

(a) Based on principal diagnosis. Data are from public and most private hospitals.

(b) Age-standardised hospital separation ratio is calculated as observed hospital separations divided by expected hospital separations, based on all Australian age-, sex-, and cause-specific rates.

(c) Includes other types of diabetes mellitus and unspecified types of diabetes mellitus. Excludes hospitalisation for gestational diabetes.

Source: AIHW National Hospital Morbidity Database.

Deaths from diabetes

The number of deaths due to diabetes provides an indication of the burden of the disease in the population. There are, however, data quality issues in relation to the way diabetes is recorded on cause-of-death forms (see below 'Data quality and availability') as well as underestimation of the numbers of Indigenous people recorded in overall death registration data (see Chapter 8).

In 1997–99, in Queensland, South Australia, Western Australia and Northern Territory, diabetes was recorded as the underlying cause of death for 328 people identified as Indigenous. These deaths represented 6% of all male deaths and 10% of all female deaths recorded as Indigenous, in these jurisdictions. A further 423 deaths of Indigenous people were reported with diabetes as an associated cause (see Chapter 8 for an explanation of 'underlying' and 'associated' cause). For the period 1997–99, the identification of Indigenous people in the death registrations data of other States and Territories was of insufficient quality to be included (see Chapter 8).

Table 7.3 shows that the standardised mortality ratio (SMR) for diabetes was 10 for Indigenous males and 13.5 for Indigenous females. The SMR for Type 2 diabetes was much higher than for Type 1 diabetes (see inset 8.1 for an explanation of SMR).

7.3 DEATHS FROM DIABETES(a)—1997–99

	Indigenous males			Indigenous females		
	Observed deaths			Observed deaths		
	no.	%	SMR(b)	no.	%	SMR(b)
Type 1 diabetes	10	7	4.4	11	6	5.9
Type 2 diabetes	66	44	16.5	71	40	19.7
Other diabetes(c)	74	49	8.4	96	54	12.5
Diabetes mellitus(d)	**150**	**100**	**10.0**	**178**	**100**	**13.5**

(a) Based on underlying cause of death. Data from Queensland, South Australia, Western Australia and the Northern Territory combined. Based on year of registration.

(b) Standardised mortality ratio is calculated as observed deaths divided by expected deaths, based on all Australian age, sex, and cause-specific rates.

(c) Includes deaths due to other types of diabetes mellitus and unspecified types of diabetes mellitus.

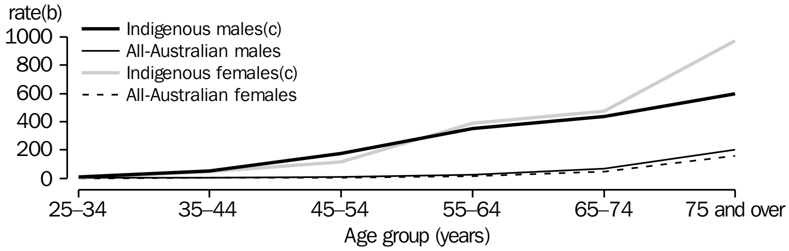
(d) Excludes deaths due to gestational diabetes.

Source: ABS data available on request, Deaths Registration Database.

Deaths from diabetes *continued*

Graph 7.4 shows that from age 25 onwards, the death rate for Indigenous people is higher than the death rate for the total population. This reflects the earlier onset of diabetes for Indigenous people.

7.4 AGE SPECIFIC DEATH RATES—DIABETES MELLITUS(a)



(a) Based on underlying cause of death. Data are for the years 1997-99 combined, based on year of registration.
(b) Per 100,000 people.
(c) Indigenous data are for usual residents of Queensland, South Australia, Western Australia and the Northern Territory combined.

Source: Data available on request, ABS Deaths Registration Database.

Of 328 deaths recorded with diabetes as the underlying cause, 41% had ischaemic heart disease listed as an associated cause, 26% listed other forms of heart disease and renal disease was an associated cause in 38% of deaths (ABS data available on request, Deaths Registration Database).

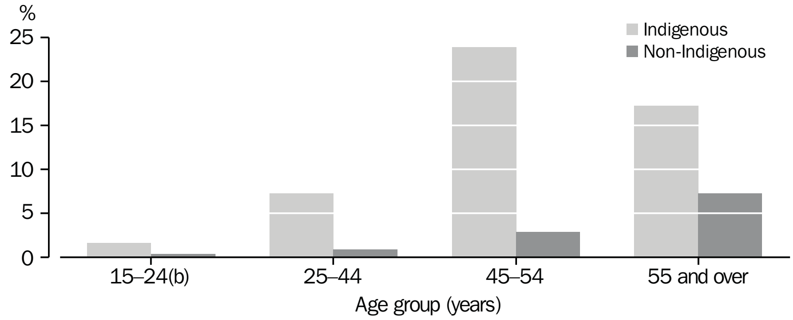
Surveys and other studies

Some 3.5% of males and 4.7% of females in the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) reported having diabetes as a long-term health condition. After age 45, however, this figure increased to 17% for Indigenous males and 23% for Indigenous females. Although results for non-Indigenous people are not available from the NATSIS, the 1995 National Health Survey (NHS) estimates the prevalence rate of diabetes (reported at any time during the respondent's life) to be 6.2% for all Australian males over 45 and 5.3% for all Australian females over 45 (ABS 1996, ABS 1997b).

Surveys and other studies *continued*

The age-standardised reported rate of diabetes among Indigenous people aged 15 years and over living in non-remote areas (11%), was four times higher than for the general population (2.7%)(ABS, data available on request, NHS 1995). For Indigenous people aged between 25 years and 55 years, diabetes was reported at rates 7–8 times higher than those for non-Indigenous people (graph 7.5) (ABS 1999c—refer to Explanatory Notes for NHS definition of 'non-remote').

7.5 REPORTED DIABETES(a)—1995



(a) Excludes persons living in remote areas.
(b) Some data values too small to graph.
Source: ABS 1999c.

Both the NATSIS and NHS figures are likely to underestimate the true prevalence of diabetes because health conditions were self-reported in these surveys, and it is likely that many respondents who had the disease were unaware of their condition. The AusDiab Report estimates the prevalence of diabetes in the Australian population aged 25 years and over at 7.5%, rising to 24% in people aged 75 years and over (International Diabetes Institute 2001). The study found that there was one undiagnosed case of diabetes for every diagnosed case. Plans to conduct a similar study, to estimate the prevalence of diabetes in an urban Aboriginal and Torres Strait Islander population are currently being developed.

In 1998, a systematic review of the published evidence concerning diabetes in Aboriginal and Torres Strait Islander populations was undertaken for the Department of Health and Family Services (de Courten et al. 1998). The review examined a large number of small area studies and, despite difficulties in comparability due to different methodologies and diagnostic criteria, found evidence suggesting the overall prevalence rate of diabetes for Indigenous people of all ages lies between 10% and 30%. Another study found the prevalence of diabetes among the 20–50 year age group in six Indigenous communities in northern and central Australia to be 10 times higher than among the Australian non-Indigenous population (O'Dea 1996).

Surveys and other studies *continued*

From 1 January 1999, the National Diabetes Register was established. It records new cases of insulin-treated diabetes. In 1999 and 2000, there were 51 Indigenous people per 100,000 registered, compared with 34 non-Indigenous people per 100,000 (age standardised, National Diabetes Register, AIHW). Aboriginal and Torres Strait Islander people are considered to be under-represented on the Register.

Diabetes has also been found to be prevalent at rates which exceed the general population in indigenous communities in other industrialised nations (inset 7.6).

7.6 DIABETES AND OTHER INDIGENOUS PEOPLES

In the USA, approximately 9% of American Indians and Alaskan Natives have been diagnosed with Type 2 diabetes. On average, they are approximately three times more likely to be diagnosed with the disease than other Americans of a similar age (excluding Hispanic people). It has been suggested, however, that the data available underestimate the true extent of diabetes in this population. For example, a study across three geographic areas found that 40–70% of American Indians aged 45–74 had Type 2 diabetes (National Diabetes Information Clearinghouse 2000).

In Canada, diabetes has been estimated to be three times more prevalent in Aboriginal peoples than in the rest of the population, with women accounting for two-thirds of those people diagnosed with the disease (Diabetes in Canada 2000).

According to the 1996–97 New Zealand Health Survey, Maori and Pacific Islander people were more than twice as likely to report having been diagnosed with diabetes than other New Zealanders. A review of studies in New Zealand suggests that the prevalence of diabetes in the Maori population is 5–10%, with Maori people more likely to be diagnosed with diabetes at an earlier age than non-Maori people. Mortality and hospitalisation data suggest that deaths from diabetes among Maori people are 4.5 times higher than for non-Maori people, and that the rate of hospitalisation for diabetes is 3.3 times higher. The higher prevalence of diabetes among Maori may be partially explained by the fact that they are more likely to be overweight than non-Maori people. A survey in 1989–90 revealed that 29% of Maori men were obese, compared with 9% of non-Maori men. Similarly, 27% of Maori women were obese compared with 12% of non-Maori women (Ministry of Health 2000).

RISK FACTORS FOR DIABETES

A number of factors have been suggested as influencing the development of diabetes. The following section examines these factors and the roles they play in the prevalence of diabetes in the population.

Genetic risk factors

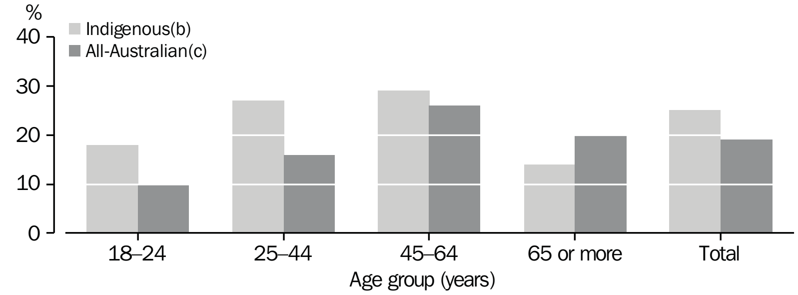
A family history of diabetes is a risk factor for both Type 1 and Type 2 diabetes, suggesting that genetic factors may play a role in the development of the disease. The appearance of Type 1 diabetes is thought to occur after an auto-immune attack against the insulin-producing beta-cells in the pancreas, which may be caused by a genetic predisposition to the disease and exposure to environmental triggers (de Courten et al. 1998). Similarly, genetic factors play a role in the development of Type 2 diabetes, but their interaction with lifestyle and environmental factors is complex and not yet well understood (O'Dea 1992b). High rates of Type 2 diabetes are often found in populations undergoing rapid changes to their lifestyle. A complex array of environmental and lifestyle factors may 'unmask' a possible genetic susceptibility to the disease in these circumstances (O'Dea 1992b).

Obesity

Type 2 diabetes is more common in people who are obese than in those who are not (Perry et al. 1995, Shaten et al. 1993). Aspects of obesity that may be important in the development of Type 2 diabetes include the distribution of fat on the body, the timing of onset and the duration of obesity, and gender differences (de Courten et al. 1998).

Results from the 1994 NATSIS show that approximately 25% of Indigenous males (aged 18 years and over) and 29% of Indigenous females (aged 18 years and over) were obese. This compares with about 19% of all Australian males and females aged 19 years and over, as reported in the 1995 National Nutrition Survey (NNS) (ABS 1997c). Graphs 7.7 and 7.8 show the proportion of males and females in different age groups who were classified as obese.

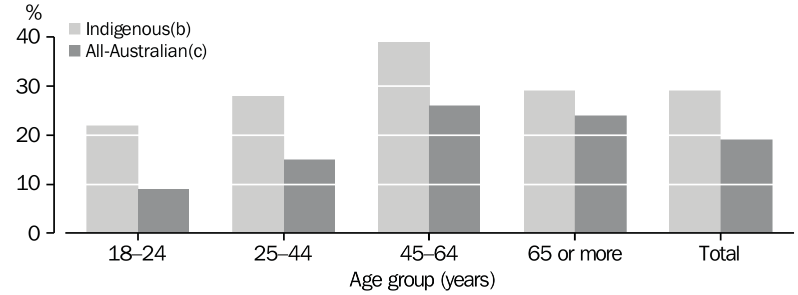
7.7 OBESITY(a) IN ADULT MALES



(a) Based on body mass index (BMI) (see Glossary).
(b) 1994 NATSIS.
(c) 1995 NNS. Data from the NNS are for adults aged 19 years or more.

Source: Cunningham and Mackerras 1998.

7.8 OBESITY(a) IN ADULT FEMALES



(a) Based on body mass index (BMI) (see Glossary).
(b) 1994 NATSIS.
(c) 1995 NNS. Data from the NNS are for adults aged 19 years or more.

Source: Cunningham and Mackerras 1998.

Obesity *continued*

Results from the 1994 NATSIS show that Indigenous people who were obese were more likely to report diabetes as a long term health condition (11%) than those who were overweight (7%), or of 'acceptable' weight (3%) (ABS 1996). A longitudinal study of Aboriginal people in Central Australia examining the association between body mass index (BMI—see Glossary) and the incidence of diabetes, found that the diabetes incidence rates for each category of BMI were among the highest in the world. Even in the lowest BMI category, the rate of diabetes was two to five times higher than the rate for the non-Aboriginal population (Daniel et al. 1999). O'Dea (1996) and Daniel et al. (1999) have suggested that Aboriginal people may need to achieve a lower BMI than non-Aboriginal people, in order to reduce the risk of diabetes.

While poor diet and low levels of physical activity are risk factors for Type 2 diabetes, through their contribution to obesity, they are also considered to be independently associated with the disease. Increased levels of physical activity are thought to contribute to improvements in the effectiveness of insulin, even where obesity is present (Kriska et al. 1993).

Physical activity

Physical activity has been shown to lessen the risk of developing diabetes (Perry et al. 1995). From the few data available about the physical activity levels of Aboriginal and Torres Strait Islander people, it appears that Indigenous adults are less likely to exercise than the rest of the adult population. Results from the 1995 NHS show that Indigenous people aged 18 years or more, living in non-remote areas, were less likely than their non-Indigenous counterparts to report having taken exercise for sport, fitness or recreation in the two weeks prior to the survey (59% compared with 66%) (ABS data available on request, 1995 NHS). Indigenous females were more likely (42%) than Indigenous males (38%) to report undertaking no exercise (ABS 1999c). It should be noted that the question about physical activity used in the NHS asked only about exercise undertaken for sport, recreation or fitness and did not reflect total physical activity. NHS data should therefore be treated with caution when taken as an indicator of the level of physical activity among Indigenous people.

Nutrition

Diet plays a crucial role in the development of Type 2 diabetes. In general, the diet of Aboriginal and Torres Strait Islander people has undergone rapid change, from a low energy, low density diet to a diet high in energy derived from refined carbohydrates and saturated fats (O'Dea 1992b). Evidence suggests that a diet of this kind leads to weight gain and increased insulin resistance, particularly in populations which have undergone rapid lifestyle transition (NHMRC 2000; see also Chapter 6 for a discussion of 'Syndrome X'). The association between diet and diabetes-related conditions was examined in a study involving a group of urban-dwelling Aborigines who spent seven weeks as 'hunter-gatherers' in their homelands in the Kimberley region of northern Western Australia (O'Dea 1984). Dietary changes, including the consumption of food low in saturated fat and high in complex carbohydrates, were accompanied by increased levels of physical activity. Metabolic abnormalities associated with Type 2 diabetes that were observed in the group were reported to be 'greatly improved or completely normalised' (O'Dea 1984).

Inset 7.9 describes two programs aimed at reducing the onset and impact of diabetes in Indigenous communities.

7.9 MANAGING DIABETES

Kimberley

Looma Healthy Lifestyle, initiated in 1993, is an example of an Aboriginal community-directed diabetes prevention program. Looma is a community of 500 people in the Kimberley region of northern Western Australia. Community concern about high rates of illness and mortality from diabetes, and the prevalence of diabetes-related complications, resulted in the establishment of the program. Initially a diabetes nurse-educator was employed, followed later by several Aboriginal health workers who assisted Looma community members with the design and implementation of the program.

The first stage of the program involved voluntary screening of adults in the community to identify those with diabetes and those at risk of developing diabetes. The results were discussed with the participants and they were given information on how to manage, or reduce the risk of developing, the disease. The next stage involved taking action within the community to encourage weight reduction and increased physical activity. Local bush tucker and traditional open fire cooking methods were promoted as healthy, low-fat dietary options. Cooking classes and store tours were held to inform people about choosing, preparing and cooking low-fat foods. Physical activity was encouraged through organised hunting trips, participation in sport and regular walking groups. Informal education sessions were held each week to increase people's awareness and understanding of diabetes in the community.

After the program had been in place for four years, improvements were noted in insulin levels although there was no change in the prevalence rates of obesity and diabetes. Reductions in cardiovascular risk factors were also reported. The proportion of older members in the community reporting that they were undertaking regular physical activity and attempting to reduce their intake of fats and sugars, increased markedly over the course of the study.

The keys to the successful long-term operation of the program are considered to be the community's widespread support and commitment, as well as its ownership of the program. Community-wide outcomes included the appointment of local diabetes workers, and the appointment of a community worker to manage the store, instituting a policy emphasising fresh, healthy foods and reducing sales of high-fat and high-sugar products. Health issues were also promoted through sporting and art competitions, and the appointment of a sport and recreation officer. (Rowley et al. 2000b, Spinks & White in Dignan & Sharp (eds) 1996).

Torres Strait

The Torres Strait has a very high prevalence of diabetes (24% of adults over the age of 15) and increasing rates of hospitalisation and death from diabetes complications (Queensland Health 1999). There is good evidence that improved care of people with diabetes, in a community setting, can reduce these complications. A study (McDermott et al. 2001) was undertaken to find the best way of translating this research evidence into practice in the remote clinics of the Torres Strait and Northern Peninsula Area Health Service District.

At the beginning of the study patients receiving diabetes care in 21 clinics were reviewed to determine how good their care was from the point of view of routine checkups, and how often they had been hospitalised in the previous year. A diabetes outreach service was then established to provide direct assistance to the communities involved. In addition, eight of the centres were randomly selected for the establishment of a paper-based recall and reminder system which was used for routine diabetes care and managed by local health workers. The health workers, who had been given basic training in diabetes care, were supported by visits from the project manager, and through weekly phone calls, a bi-monthly newsletter and a mid-project workshop.

After one year, a repeat audit of medical files showed that most measures of good diabetes care had improved in all centres, and that the clinics where the recall and reminder system was in place had performed 21% better than those that did not have the system in place. People with diabetes who were treated at clinics with the recall system in place were 40% less likely than those treated at other centres to have been hospitalised for a diabetes-related condition in the previous 12 months. There was a 32% reduction in hospital admissions for diabetes-related conditions from intervention sites, compared with a 2% reduction from other sites.

The dramatic improvement in diabetes care and outcomes in sites where recall systems were managed by local health workers, suggests that greater health gains can be made by supporting local Indigenous management of community-based chronic disease care systems. In 2001 these systems are being trialled in other North Queensland Indigenous communities, as part of the Chronic Disease Strategy of the Queensland Health Department (McDermott et al. 2001).

DATA AVAILABILITY AND DATA QUALITY

As noted, reliable national figures for the incidence and prevalence of diabetes in the Indigenous population are not currently available. Diabetes data for Indigenous people from national surveys such as the NATSIS and the NHS are limited because they are obtained through self-reporting, and are therefore likely to underestimate the number of people with the condition. AusDiab (International Diabetes Institute 2001) estimates there are as many people in the general population with 'undiagnosed diabetes' as those who have had the condition diagnosed. A further limitation of both the NATSIS and the NHS is that neither distinguishes between Type 1 and Type 2 diabetes. Data from the NHS, while allowing an Indigenous/non-Indigenous comparison, exclude responses from people living in remote (sparsely settled) areas because of data quality problems (see Explanatory Notes). The NHS also had only a small sample of Indigenous people, reducing the possibility of investigating the characteristics of people who reported diabetes. While the NATSIS had a larger sample size than the NHS, and covered all areas of Australia, it did not provide data that allowed comparisons between Indigenous and non-Indigenous people to be made. The NHS is being run again in 2001 and in 2004/5 (see Chapter 9 for further details). The 2004/5 survey will have a larger Indigenous sample size, which may permit more detailed analysis of self-reported diabetes.

In addition, diabetes may be under-reported in mortality data, as certifying doctors do not always record diabetes as an underlying cause on death certificates. For example, a study of 374 Central Australian Aboriginal adults previously diagnosed with diabetes found that 44% of the death certificates of those subjects who died during the follow-up period did not mention diabetes at all, and diabetes was only mentioned as the underlying cause of death in 50% of cases (Phillips et al. 1995). It is likely that the coding of other conditions associated with diabetes is affected by similar limitations.

In addition, the overall number of deaths registered as Indigenous is likely to be an underestimate because not all death registration records correctly identify Indigenous people. The number of Indigenous people receiving hospital treatment is similarly underestimated. See Chapters 6, 8 and 9 for further details concerning the under-estimation in both mortality and morbidity statistics.

SUMMARY

This chapter deals primarily with Type 2 diabetes, a disease generally confined to adult populations, and which poses serious health problems for many Indigenous Australians. Type 2 diabetes is characterised by early onset in the Indigenous population and is associated with cardiovascular disease, kidney disease, nerve damage, eye damage, ulceration and gangrene. There are more episodes of hospitalisation for and more deaths from diabetes than expected, for Indigenous people based on rates for the total population. Obesity, poor nutrition and lack of physical activity are all considered risk factors for the disease in a population and there are indications that Indigenous people are more likely to be exposed to these health risks.

Reliable data for deriving national prevalence rates of diabetes in the Aboriginal and Torres Strait Islander population are currently not available. Self-reported data underestimate the prevalence of the disease in both the Indigenous and the total population because many people (an estimated 50%, based on AusDiab estimates) who have diabetes are unaware of their condition. The quality and availability of data about the level of diabetes in the Aboriginal and Torres Strait Islander population are also limited because Indigenous people are often not accurately identified in administrative records, which results in an undercount of their numbers.

CHAPTER 8 MORTALITY

INTRODUCTION

Aboriginal and Torres Strait Islander people are more likely to experience disability and reduced quality of life due to ill health, and to die at younger ages, than other Australians. While the available evidence clearly supports these facts, the exact magnitude of the differences between the Indigenous and non-Indigenous populations is difficult to establish conclusively. Incomplete recording of Aboriginal and Torres Strait Islander status in death records, and the experimental nature of population estimates, remain the major obstacles to producing a complete picture of Indigenous mortality in Australia. While these limitations prevent precise analysis of the data and present difficulties in the monitoring of mortality trends over time, the available statistics provide useful measures of Aboriginal and Torres Strait Islander health, and comparisons with the health of the total Australian population.

This chapter examines the mortality of the Aboriginal and Torres Strait Islander population using death registrations for the period 1997–99. Mortality data for Queensland, South Australia, Western Australia and the Northern Territory have been combined to present a quasi-national picture of Indigenous mortality. These jurisdictions are considered to have the most complete coverage of Indigenous deaths for the given period. It should be noted that previous editions of this publication presented mortality statistics for South Australia, Western Australia and the Northern Territory only. Queensland data have been included here for the first time. The inclusion of Queensland data, and fluctuations in the levels of coverage of Indigenous deaths across all four jurisdictions over the 1995–1999 period, prevent comparisons being made between the results presented below and those published in previous editions of this publication. (These issues are discussed in the following section and in Chapter 9.)

Data quality and availability

While almost all deaths in Australia are registered, the Indigenous status of the deceased is not always recorded. The incompleteness of records means that the number of deaths registered as Indigenous is an underestimate of the actual number of deaths which occur in the Aboriginal and Torres Strait Islander population. The extent to which the identification of Indigenous people occurs in data collections is referred to as ‘coverage’ or ‘completeness of coverage’. While there is incomplete coverage of Indigenous deaths in all State and Territory collections, some jurisdictions have been assessed by the ABS as having a sufficient level of coverage to enable statistics on Aboriginal and Torres Strait Islander mortality to be produced. For the three year period 1997–99, Queensland’s coverage of Indigenous deaths approached the levels of completeness found in South Australia, Western Australia and the Northern Territory and has been included in the combined analysis of Indigenous mortality (see table 9.10). As a result of the national project to improve Indigenous identification in administrative data collections, the estimated coverage of death registrations in other jurisdictions, notably Victoria and New South Wales, has also increased over this period. While the coverage in these States has not yet reached a level

Data quality and availability *continued*

which would allow its inclusion in the following analysis, current trends of improvement suggest that it may be considered for inclusion in the next edition of this publication (see Chapter 9).

Deaths by year of registration, rather than year of occurrence, for 1997–99 have been used in this publication to provide up to date information. While the majority of deaths are registered in the year they occur, some of those registered in a given period have occurred in previous years, and some which have occurred in that period are not registered until subsequent years. The likelihood of a death being registered in a year following its occurrence increases markedly for those deaths which occur close to the end of the year. Delays in registration also occur when deaths are subject to the findings of a coroner. Late registrations are more common in relation to Indigenous deaths, and therefore have a greater impact on mortality statistics. In 1999, 1.3% of all deaths in the Australian population were registered more than two months after they occurred, and less than 0.1% more than 12 months after death. However, for the same period, 16.3% of Indigenous deaths were registered more than two months after death, and 2.6% more than 12 months after death (ABS 2000d). In this publication, year of registration data for three years have been combined to smooth out any such artificial variations.

It should also be noted that, over the period 1997–99, there have been some fluctuations in the estimated coverage of Indigenous deaths recorded in most jurisdictions (see table 9.11). Such variations could be the result of late registrations, or of fewer deaths being identified as Indigenous in death collections, and can affect Indigenous mortality rates, within a given period of time. There is also uncertainty about the accuracy of the method used to determine estimates of coverage of Indigenous deaths (see Chapter 9). A more detailed analysis of the factors which influence fluctuations in the numbers of Indigenous death registrations is required before any conclusions can be drawn about how actual Indigenous mortality has altered over time. Information on trends in mortality have, therefore, not been reported in this publication.

Cause of death statistics provided in this chapter are based on the tenth revision of the International Classification of Diseases (ICD-10). Previous editions have used data based on ICD-9 codes. This change in classification represents a series break in the reporting of detailed mortality (and morbidity) statistics in Australia generally, and affects the comparability of mortality trends, by cause of death, over time (see Explanatory Notes).

Data quality and availability *continued*

Experimental projections (low series) have been used to calculate rates and ratios presented in this chapter (see Chapter 9 for details on 'experimental' data derived from population estimates).

8.1 AGE STANDARDISATION

There are a number of ways to quantify the mortality experience of a population. For example, dividing the number of deaths by the population gives us a 'crude death rate', which is often expressed as deaths per 1,000 or per 100,000 population. However, because death is closely related to age and, as discussed in Chapter 1, the age structure of the Indigenous population is very different to that of the total population, it is important to adjust for the effect of age before meaningful comparisons can be made.

One way of adjusting for differences in age is to calculate the number of deaths 'expected' in a population, based on its age structure, if it had the same mortality experience as a reference population. In this publication, the *expected number of deaths* are calculated by applying the age-specific death rates of the total Australian population to the Indigenous population. For example, if Indigenous females had experienced the same age-specific death rates as all-Australian females in 1997–99, the number of expected deaths would have been 646. The actual number of deaths recorded, however, was 1,863. Dividing the actual number of deaths by the expected number gives a ratio of 2.9. This ratio is known as the *standardised mortality* ratio (SMR).

If the SMR is greater than 1.0, there were more deaths than expected; if the ratio is less than 1.0, there were fewer than the expected number of deaths. In the above example, the SMR of 2.9 means that the number of deaths recorded was 2.9 times higher than expected, based on the death rates observed in the reference population, and the age and sex structure of the population in question (i.e. Aboriginal and Torres Strait Islander people). In the following pages, the age- and sex-specific death rates for the 1997–99 all-Australian population estimates and the 1997–99 experimental projections (low series) of the Indigenous population have been used as the reference.

In the same way, an age-standardised *hospital separation ratio* can be calculated for hospitalisation, using figures for national and Indigenous hospital separations, rather than mortality data (see Chapter 6).

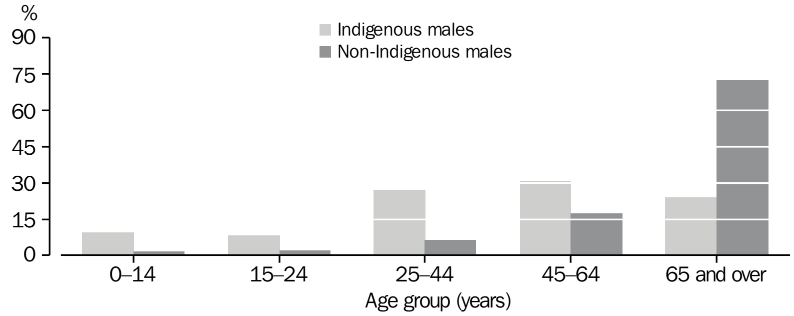
DEATHS 1997–99

In 1997–99, there were 4,379 registered deaths identified as Indigenous for usual residents of Queensland, South Australia, Western Australia and the Northern Territory. These deaths accounted for 3.2% of all deaths in these four jurisdictions, and 76% of all identified Aboriginal and Torres Strait Islander deaths in Australia. Over the same period, the total number of deaths registered to all usual residents of Queensland, South Australia, Western Australia and the Northern Territory, was 136,720, or just over one-third (36%) of all Australian deaths (384,624). In 1998, Indigenous people living in these four jurisdictions represented 61% of the total Australian Indigenous population, and the total number of usual residents of these four jurisdictions represented 37% of the total Australian population.

Age at death

A higher proportion of Indigenous deaths than non-Indigenous deaths occur in age groups under 65 years. Over the period 1997–99, the majority of identified Indigenous deaths registered in Queensland, South Australia, Western Australia and the Northern Territory were of persons aged less than 65 years. As can be seen in graphs 8.2 and 8.3, the majority of deaths among Indigenous males (76%) and Indigenous females (65%) occurred before the age of 65 years. The reverse was true for non-Indigenous deaths, with the majority of male and female deaths (73% and 84%, respectively) occurring after the age of 65 years. About 45% of deaths among Indigenous males, and 34% of deaths among Indigenous females, occurred before age 45 years. The corresponding proportions for non-Indigenous males and females were 10% and 6%, respectively.

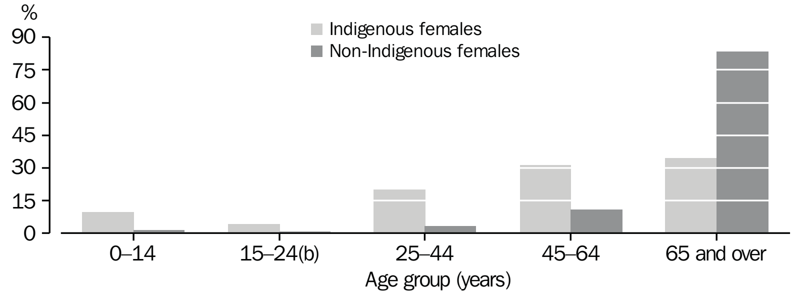
8.2 AGE DISTRIBUTION OF DEATHS(a), Males—1997–99



(a) Data for Queensland, South Australia, Western Australia and Northern Territory combined. Based on year of registration.

Source: ABS data available on request, Deaths Registration Database.

8.3 AGE DISTRIBUTION OF DEATHS(a), Females—1997–99



(a) Data for Queensland, South Australia, Western Australia and Northern Territory combined. Based on year of registration.
(b) Data values for non-Indigenous females are too small to be visible on the graph.

Source: Data available on request, ABS Deaths Registration Database.

Approximately 7% of identified Indigenous deaths in Queensland, South Australia, Western Australia and the Northern Territory were of infants aged less than one year. Almost one in five infant deaths in these jurisdictions were recorded as Indigenous, including 28% of all deaths from Sudden Infant Death Syndrome.

Age at death *continued*

Table 8.4 shows identified Indigenous deaths as a proportion of all deaths for different age groups in 1997–99. It also shows that Indigenous people were over-represented in mortality statistics, relative to their proportion of the total population, in every age group.

8.4 DEATHS IDENTIFIED AS INDIGENOUS(a)—1997–99

Age group (years)	*Indigenous deaths as a proportion of all deaths* %	*Indigenous population as a proportion of total population* %
<1	18.5	6.3
1–4	14.0	5.9
5–14	16.5	6.2
15–24	12.4	4.7
25–34	13.7	3.8
35–44	13.9	2.6
45–54	9.0	1.8
55–64	5.3	1.5
65–74	2.3	1.0
75 and over	0.8	0.3

(a) Data are for Queensland, South Australia, Western Australia and Northern Territory combined. Based on year of registration.

Source: ABS data available on request, Deaths Registration Database.

Age-specific death rates

Age-specific death rates for Indigenous males and females in Queensland, South Australia, Western Australia and the Northern Territory were higher than all-Australian rates across all age groups. The greatest relative differences (reflected in the rate ratios shown in table 8.5) occurred among those aged 35–54 years, where the rates for Indigenous males and females were 5–6 times higher than the all-Australian rates (table 8.5). There were also substantial differences between the 25–34 and 55–64 year age groups, where the Indigenous age-specific death rates were 3–5 times higher, than the all-Austalian rates.

8.5 AGE-SPECIFIC DEATH RATES(a)—1997–99

	Males			*Females*		
Age group (years)	*Indigenous rate(b)*	*All-Australian rate(c)*	*Rate ratio(d)*	*Indigenous rate(b)*	*All-Australian rate(c)*	*Rate ratio(d)*
<1	1 607	588	2.7	1 230	476	2.6
1–4	77	36	2.1	60	26	2.3
5–14	42	16	2.6	38	12	3.2
15–24	291	102	2.9	110	38	2.9
25–34	494	138	3.6	225	50	4.5
35–44	962	167	5.8	504	91	5.5
45–54	1 735	326	5.3	1 039	207	5.0
55–64	3 039	909	3.3	2 260	519	4.4
65–74	5 686	2 636	2.2	4 242	1 436	3.0
75 and over	10 522	8 585	1.2	9 260	6 787	1.4

(a) Per 100,000 population.

(b) Data are for deaths identified as Indigenous for usual residents of Queensland, South Australia, Western Australia and Northern Territory combined. Based on year of registration.

(c) Data are for all deaths of usual residents of Australia, including deaths identified as Indigenous.

(d) Indigenous rate divided by all-Australian rate.

Source: ABS data available on request, Deaths Registration Database.

CAUSES OF DEATH

Based on 1997–99 death registrations, the three leading causes of death for Indigenous people living in Queensland, South Australia, Western Australia and the Northern Territory were diseases of the circulatory system, deaths due to external causes (predominantly accidents, self harm and assault) and neoplasms (cancer) (table 8.6). Deaths due to these causes accounted for 60% of all identified Indigenous deaths in these jurisdictions. These were also the leading causes of death among the Australian population as a whole, accounting for about 75% of all deaths. However, as shown in graphs 8.8, 8.9 and 8.10, Indigenous males and females had higher death rates, and were more likely to die at much younger ages from these causes, than the general population.

In 1997–99, there were approximately three times as many deaths as expected for all causes of death, based on all-Australian rates, for both Indigenous males and females. The highest standardised mortality ratios (SMRs) for Indigenous males and females were for endocrine and metabolic diseases, where there were 7 and 9 times more deaths, respectively, than expected. Most of these deaths (88%) were due to diabetes mellitus (see Chapter 7).

8.6 DEATHS FROM SELECTED CAUSES—1997–1999(a)

	Indigenous Males		Indigenous Females	
	no.	*SMR(b)*	*no.*	*SMR(b)*
Circulatory	750	3.1	568	2.8
External causes	496	2.8	205	3.3
Neoplasms	320	1.4	267	1.4
Respiratory	206	4.1	159	4.0
Endocrine/metabolic	169	7.2	202	9.4
Digestive	119	4.7	96	4.9
Mental disorders	62	2.4	34	2.3
Genitourinary	58	5.8	85	7.6
Infectious/parasitic	58	4.2	45	5.4
Nervous system	55	2.3	39	1.8
Ill-defined	76	6.0	43	5.3
All causes	**2 515**	**2.9**	**1 864**	**2.9**

(a) Data from Queensland, South Australia, Western Australia and the Northern Territory combined. Based on year of registration.

(b) Standardised mortality ratio = observed deaths divided by expected deaths, based on all-Australian age, sex, and cause-specific rates.

Source: ABS data available on request, Deaths Registration Database.

CAUSES OF DEATH *continued*

SMRs like those presented in table 8.6 are used to enable meaningful comparisons of death rates between two populations with different age structures, such as the Indigenous and total Australian populations. The SMRs express the actual number of deaths in the Indigenous population as a ratio of the expected number of deaths (see inset 8.1). Deaths over and above the number expected are referred to as 'excess' deaths.

Diseases of the circulatory system accounted for the highest proportion of excess deaths (table 8.7). Other major causes of excess deaths were external causes, endocrine and metabolic diseases, and respiratory diseases. Deaths due to these causes were responsible for over two-thirds of excess deaths among Indigenous males and females.

8.7 MAIN CAUSES OF EXCESS DEATHS—1997–99(a)(b)

	Indigenous males	Indigenous females
	Proportion of excess	*Proportion of excess*
Disease category	%	%
Circulatory	31.2	30.1
External causes	19.6	11.7
Respiratory	9.5	9.8
Endocrine/metabolic	8.9	14.8
Neoplasms	6.1	6.6
Digestive	5.7	6.2
All other causes	19.0	20.8

(a) Excess deaths are equal to observed deaths minus expected deaths (based on 1997–99 all-Australian age, sex and cause-specific rates).

(b) Data are for Queensland, Western Australia, South Australia, and the Northern Territory combined. Based on year of registration.

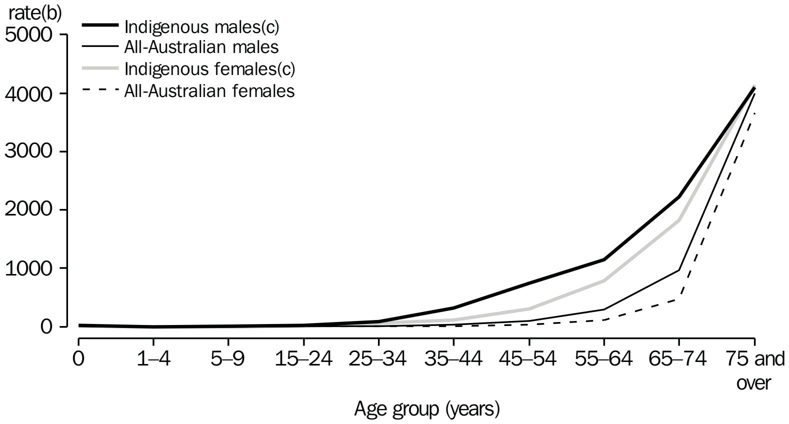
Source: ABS data available on request, Deaths Registration Database.

Circulatory diseases

Diseases of the circulatory system accounted for 30% of both Indigenous male and Indigenous female deaths. Over half (57%) of these deaths were attributable to ischaemic heart disease (heart attack, angina), and a further 18% were due to cerebrovascular disease (stroke).

As illustrated in graph 8.8, Aboriginal and Torres Strait Islander people experienced higher rates of mortality from circulatory diseases, and were more likely to die from these diseases at younger ages, than the Australian population as a whole. Age-specific death rates were higher for Indigenous males and females than all-Australian males and females in every age group except the 1–4 year olds. The greatest relative differences occurred in the 25–54 age group, where Indigenous age-specific death rates were 7–12 times higher than the all-Australian rates.

8.8 AGE SPECIFIC DEATH RATES—DISEASES OF THE CIRCULATORY SYSTEM(a)



(a) Data are for the year 1997-99 combined, based on year of registration.
(b) Per 100,000.
(c) Indigenous data are for usual residents of Queensland, South Australia, Western Australia and Northern Territory combined.

Source: Data available on request, ABS Deaths Registration Database.

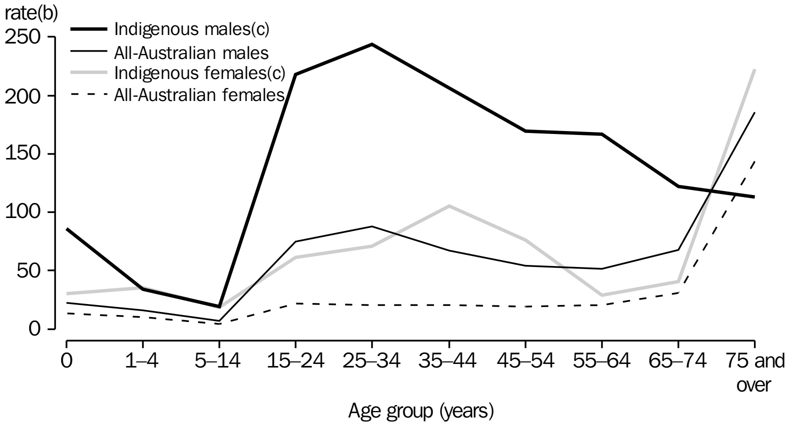
External causes

Deaths due to external causes, such as accidents, intentional self harm (suicide) and assault, accounted for 16% of all Indigenous deaths. There were three times more deaths from external causes than expected, based on all-Australian rates. The majority (71%) of these deaths were for males, with the main causes being intentional self-harm and transport accidents, which accounted for 34% and 27%, respectively, of all Indigenous male deaths in this category. The major causes of death due to external causes among Indigenous females were transport accidents (31%), assault (19%) and intentional self-harm (17%). (SMRs for intentional self harm and assault are included in Chapter 6.)

External causes *continued*

The 1997–99 age-specific death rates due to external causes were substantially higher among Indigenous males than among all-Australian males in all age groups between 15–64 years (graph 8.9). Indigenous men aged 25–34 years experienced 244 deaths per 100,000, a rate three times higher than the all-Australian rate of 88 deaths per 100,000. Death rates due to external causes for Indigenous females exceeded those for all-Australian females in every age group. The greatest relative difference occurred in the 35–44 age group, where the rate was more than five times higher than the all-Australian female rate.

8.9 AGE SPECIFIC DEATH RATES—EXTERNAL CAUSES(a)



(a) Data are for the year 1997-99 combined, based on year of registration.
(b) Per 100,000.
(c) Indigenous data are for usual residents of Queensland, South Australia, Western Australia and Northern Territory combined.

Source: Data available on request, ABS Deaths Registration Database.

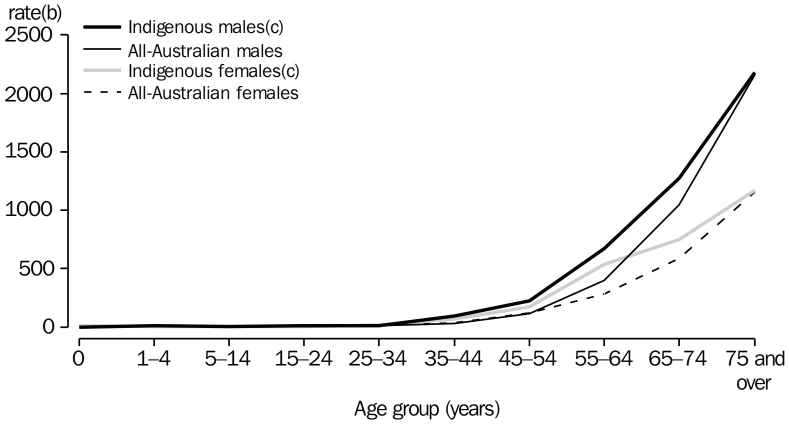
Neoplasms (Cancer)

Neoplasms were responsible for 13% of all deaths identified as Indigenous. There were 40% more deaths than expected among Indigenous people, based on all-Australian rates. Death rates from neoplasms were higher for both Indigenous males and females than their all-Australian counterparts, in all age groups above 35–44 years (graph 8.10).

The majority of deaths in this category among Indigenous people (97%) were due to malignant neoplasms (cancer). The main causes were malignant cancers of the digestive organs, which include cancers of the liver, stomach, intestine, gall bladder and pancreas, and respiratory and intrathoracic cancers, such as cancers of the bronchus and lung, and larynx and trachea.

There were fewer than the expected number of deaths among Indigenous people for some types of cancer, including melanoma and other skin cancers, prostate cancer, cancers of the urinary tract and lymphatic/haematopoietic cancers. There were no identified Indigenous deaths attributable to breast cancer over the period 1997–99 in Queensland, South Australia, Western Australia and the Northern Territory.

8.10 AGE SPECIFIC DEATH RATES—NEOPLASMS(a)



(a) Data are for the year 1997-99 combined, based on year of registration.
(b) Per 100,000.
(c) Indigenous data are for usual residents of Queensland, South Australia, Western Australia and Northern Territory combined.

Source: Data available on request, ABS Deaths Registrations Database.

Multiple causes of death

Multiple causes of death include all causes and conditions reported on the medical cause of death certificate. Since 1997, the ABS has coded all causes of death reported on each death certificate, including the underlying, immediate and other associated causes of death. While it is often the case that more than one cause of death is reported on a death certificate, until recently, only the single underlying cause of death was used to produce statistics on mortality for the Australian population. However, it has been argued that some deaths would not occur without the influence of more than one cause, and that to understand mortality patterns of a population it is important to examine, where possible, all the causes which contribute to death. In particular, deaths due to chronic diseases, such as heart disease, kidney disease and diabetes, often occur with a number of concurrent, or coexisting, conditions present, and a single initiating condition is often difficult to isolate (ABS 1997a).

For example, in 1997–99 there were 751 deaths of Indigenous persons where the underlying cause of death was ischaemic heart disease (table 8.11). For 17% of these deaths, ischaemic heart disease alone was reported on the death certificate as the cause of death. One or more associated causes were reported for the remainder (83%). The most commonly associated cause of death reported with ischaemic heart disease was 'other forms of heart disease'. Diabetes mellitus, which has been identified as a risk factor for cardiovascular disease (Eastman & Keen 1997), was recorded as an associated cause in one in five Indigenous deaths (22%) resulting from ischaemic heart disease. (Multiple causes of death in relation to renal failure and diabetes have also been reported in Chapters 6 and 7, respectively.)

8.11 ASSOCIATED CAUSES OF DEATH REPORTED WITH ISCHAEMIC HEART DISEASE—1997–99(a)(b)

	Indigenous Males		*Indigenous Females*		*Indigenous Persons*	
	no.	*%*	*no.*	*%*	*no.*	*%*
Reported alone	95	20.3	33	11.6	128	17.0
Reported with						
Malignant neoplasms	10	2.1	6	2.1	16	2.1
Diabetes mellitus	72	15.4	91	32.0	163	21.7
Mental and behavioural disorders	54	11.6	20	7.0	74	9.9
Other forms of heart disease	146	31.3	128	45.1	274	36.5
Cerebrovascular diseases	16	3.4	19	6.7	35	4.7
Influenza and pneumonia	26	5.6	17	6.0	43	5.7
Chronic lower respiratory diseases	59	12.6	30	10.6	89	11.9
Renal failure	34	7.3	41	14.4	75	10.0
Total deaths(c)	**467**	**100.0**	**284**	**100.0**	**751**	**100.0**

(a) Data from Queensland, South Australia, Western Australia and the Northern Territory combined. Based on year of registration.

(b) Where ischaemic heart disease was recorded on the death notification form as the underlying cause of death.

(c) Components do not add to total because more than one associated cause can be recorded on death notification forms

Source: ABS data available on request, Deaths Registration Database.

LIFE EXPECTANCY

The estimates of life expectancy presented here are drawn from the Australian life tables, 1997–99, and the Experimental Indigenous Abridged life tables, 1997–99 (ABS 1999b) (see Glossary). The life expectancies for Indigenous males and females have been calculated based on data for all jurisdictions in Australia, except Tasmania and the Australian Capital Territory.

Life expectancy refers to the average number of years a person of a given age and sex can expect to live, if current age-specific mortality rates continue to apply throughout his or her lifetime. A life table uses age-specific mortality rates to calculate values which measure mortality, survivorship and life expectancy. To construct a life table, data on population, births and deaths are needed, and the accuracy of the life table depends upon the completeness of these data. Because of uncertainty about the estimates of these components for the Aboriginal and Torres Strait Islander population, experimental methods are used to calculate life expectancies for the Indigenous population (see Chapter 9). Furthermore, the Indigenous male and female life expectancies given below are based on a different methodology to those presented in previous editions of this publication. Therefore, precise analysis is discouraged, and these life expectancies should only be used as indicative summary measures.

LIFE EXPECTANCY *continued*

In the period 1997–99, the life expectancy at birth for the Indigenous population was estimated to be 56 years for males and 63 years for females. In contrast, the life expectancy at birth for all Australians was 76 years for males and 82 years for females. The 1997–99 Indigenous life expectancies are similar to life expectancy for the total male population in 1901–1910, and for the total female population in 1920–22 (ABS 1999b).

SUMMARY

While the coverage of Indigenous deaths in registration collections is improving in Australia, it is still not sufficient in all jurisdictions to allow for national reporting. Indicative information is available from the 1997–99 age-specific death rates for Indigenous people in Queensland, South Australia, Western Australia and the Northern Territory, which were higher than the all-Australian rates in every age group. The largest relative differences occurred at ages 35–54 years, where Indigenous rates were 5–6 times higher than all-Australian rates. After adjusting for age, death rates were higher for Indigenous people than for Australians as a whole, for almost all causes of death. Diseases of the circulatory system, neoplasms, deaths resulting from external causes (suicide, assault, accidents, etc.) and endocrine/metabolic diseases accounted for the greatest numbers of deaths among Indigenous people. The estimated life expectancy at birth for Aboriginal and Torres Strait Islander males and females is 19–20 years lower than for other Australians.

CHAPTER 9

QUALITY AND AVAILABILITY OF INDIGENOUS STATISTICS

INTRODUCTION

This chapter provides an outline of the quality and availability of data in relation to Aboriginal and Torres Strait Islander people. There is increasing demand for good quality information concerning Australia's Aboriginal and Torres Strait Islander peoples and, as has been noted throughout this publication, generally the Indigenous population data that are available are of lower quality than statistics for the Australian population as a whole. Several types of collections are used to provide information on the Indigenous population. These include the five-yearly Census of Population and Housing, other major surveys conducted by the ABS and other agencies (e.g. AIHW), and 'by-product' datasets obtained from the administrative procedures of service delivery agencies.

The quality of Indigenous health and welfare statistics depends upon the accuracy of Indigenous population estimates, the level of completeness achieved in the collection of Indigenous status by surveys and administrative records, and the accuracy of reporting for data items. This chapter begins with a discussion of the identification of Aboriginal and Torres Strait Islander peoples in official statistics, followed by a section on estimating the size and composition of the Indigenous population. (As indicated in earlier chapters, a substantial amount of new information will become available from the 2001 Census.) A discussion of the quality and availability of data obtained from surveys and administrative sources is then presented, including recent initiatives in relation to administrative data and the ABS's new survey program. The chapter concludes with an overview of the developments in strategic initiatives to improve data quality in Indigenous health, community services and housing.

IDENTIFYING ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

Complete and consistent Indigenous identification in censuses, surveys and administrative data collections is fundamental to developing high quality information about Aboriginal and Torres Strait Islander peoples. This requires substantial effort on the part of government and non-government organisations to establish the broad acceptance of a standard question on Indigenous origin in all key data collections. The ABS standard question is used in the five-yearly census, ABS surveys and many national administrative datasets. This standard is discussed below and inset 9.1 provides the current wording and an explanation of the way it is recorded and reported.

The 'Commonwealth working definition' states that "an Aboriginal or Torres Strait Islander person is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he lives" (Department of Aboriginal Affairs 1981). Although this definition is commonly cited, it is not always practical to collect information on all three aspects (i.e. descent, self-identification and community acceptance) in statistical collections. The definitions used in statistical collections generally focus on descent and/or self-identification, rather than community acceptance.

IDENTIFYING ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE *continued*

In Australian Censuses of Population and Housing, the question currently used to identify Indigenous people asks about origin (or descent) only, although it is assumed that there is an element of self-identification inherent in the way a person responds to the question. That is, people of Aboriginal or Torres Strait Islander origin may choose to answer the question in the negative because they do not identify as such, while those who respond positively are, in effect, self-identifying as Indigenous. The approach used by the ABS in censuses has been broadly the same since 1981, although there have been some changes to the wording. For example, in 1996, it became possible for people of both Aboriginal and Torres Strait Islander origin to make two responses, that is 'yes' to both 'Aboriginal' and 'Torres Strait Islander' (see inset 9.1).

Prior to 1967, 'Aboriginal' people were identified in the census in order to exclude them from official population figures, as required by the Constitution, and identification of a person as 'Aboriginal' was restricted to people of more than 50% Aboriginal descent. Following the results of the 1967 Referendum, in which Australians voted to grant full citizenship to Aboriginal people, the Constitutional requirement that Aboriginal people be excluded from the official population figures was revoked, resulting in the need for a new, broader definition of an Aboriginal person. Numerous changes over the past three decades have led to the development of the 'Commonwealth working definition' discussed above (Ross 1999).

Since 1971, Torres Strait Islanders have been counted in the census as a separate group. Prior to this, they were either regarded as Aboriginal, and thus excluded from official population counts until 1967, or classified as Polynesian or Pacific Islanders and counted as such in official counts. The Commonwealth working definition was extended to include Torres Strait Islanders in 1972 (DAA 1981), but, as discussed above, it was not until the 1996 Census that individuals could identify as both Aboriginal and Torres Strait Islander.

The status of South Sea Islanders has been the subject of some concern (HREOC 1992, ABS 1998e). This population group is recognised as experiencing social and economic disadvantage, but is not regarded as Indigenous. The extension of the definition of Indigenous origin to South Sea Islanders has previously been the subject of consideration by the Commonwealth, although it has been concluded that this population remains outside the definition of peoples who are indigenous to Australia (Department of Aboriginal Affairs 1975, Aboriginal Law Reform Commission 1986). However, the exclusion of this population group from analyses of Indigenous data continues to raise some data quality concerns. Anecdotal evidence and analyses of census data on language spoken by people identifying as Indigenous suggest that some South Sea Islanders do identify as Indigenous in censuses (Ross 1999).

9.1 ABS STANDARD QUESTION ON INDIGENOUS STATUS

In 1995, the ABS formally adopted the following question as the standard for identifying persons as members of the Indigenous population:

Are you of Aboriginal or Torres Strait Islander origin?
For persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes.

☐ No

☐ Yes, Aboriginal

☐ Yes, Torres Strait Islander

The categories expected to be used in collecting Indigenous status data are derived from the answers to the relevant question in the question module, but include the supplementary category 'Not Stated/Inadequately described', where applicable:

1. No
2. Yes, Aboriginal
3. Yes, Torres Strait Islander
4. Not Stated/Inadequately described

However, these 'input' categories do not include the category 'Both Aboriginal and Torres Strait Islander Origin' because that category is defined when both the 'Yes' boxes are ticked. When this occurs the results are amalgamated and appear in the standard output (see below).

It can be seen that the 'output' categories are the same as the categories agreed for use in the collection protocol for Indigenous status in the National Health Data Dictionary and the National Community Services Data Dictionary, and create the following output data:

1. Aboriginal but not Torres Strait Islander origin
2. Torres Strait Islander but not Aboriginal origin
3. Both Aboriginal and Torres Strait Islander origin
4. Neither Aboriginal nor Torres Strait Islander origin
5. Not stated/Inadequately described

The ABS standard question is based upon the 'Commonwealth working definition' but does not include the third element of the Commonwealth definition, namely; that 'an Aboriginal or Torres Strait Islander is a person who is accepted as such by the community in which he or she lives'. Collecting information on the basis of community acceptance is often impractical and can lead to serious inaccuracies, and for these reasons it is not included in the ABS standard.

IDENTIFYING ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE *continued*

The standard question is used in the census and in other surveys conducted by the ABS, and has also been adopted by Registrars-General throughout Australia. The National Health Data Dictionary and the National Community Services Data Dictionary recognise the ABS standard, although the categories required for collection refer to the ABS output standard and the definition refers to community acceptance as a criterion for Indigenous status. Later sections of this chapter discuss some of the differences that remain from collection to collection with respect to the actual question used and, for data reported by service delivery agencies, whether the question is actually asked of clients. These issues have a potentially substantial impact on the completeness and consistency of reported data.

Despite using largely the same question in the census since 1981, there have often been substantial intercensal changes in the counts of Indigenous people which cannot be fully explained by natural increase (Ross 1999). Between 1991 and 1996, for example, the number of people counted as Indigenous in the census increased by 33%, while the corresponding increase for the total population was 5% (ABS 1997d, ABS 1998b, Ross 1999). Just over half of this increase (53%) was attributable to a combination of natural increase (i.e. births and deaths), changes in census editing procedures, and changes in the transmission rate (i.e. the rate at which couples in which one partner is Indigenous identify their children as Indigenous on the census form) (Ross 1999). The proportion of couples where one parent is Indigenous has increased steadily over the period 1986–96. The transmission rate of Indigenous identification from parents to child in such families is high, rising from 80% to 88% for Australia as a whole, between 1991 and 1996 (Ross 1999).

Other possible explanations for the increase, all of which are unquantifiable, include the census undercount, and previous non-response to the question on Indigenous status on the census form. In addition, improvements to the ABS' Indigenous Enumeration Strategy (see below) may have had an impact on the census count in some areas, although the effectiveness of the strategy is very difficult to measure (Ross 1999). While these factors are likely to have affected the extraordinary increase in the number of Indigenous people over the last two censuses to some extent, the main effect seems to stem from changes in personal attitudes to Indigenous self-identification in some people of Aboriginal and/or Torres Strait Islander descent, and increased willingness to indicate Indigenous status on the census form among people who already personally identify as Indigenous, or a combination of the two (see Ross 1999 for a full discussion of these issues).

In response to the large increase in people identifying as Indigenous, and the uncertainty about peoples' interpretation of the standard question, in 1999 the ABS conducted a consultation exercise to investigate responses to the ABS standard question on Indigenous origin. Open ended discussions were held with 13 groups of Aboriginal and Torres Strait Islander people living in five cities, and one group of non-Indigenous people living in Indigenous households. The study found no evidence of an urgent need to change the ABS standard question, and the participants provided a strong view that definitions or questions based on "community recognition" would not be acceptable.

Uncertainty about interpretation of the standard question and how responses may change over time leads to difficulty in estimating and projecting the Indigenous population. This in turn results in uncertainty about the accuracy of rate and ratio statistics which use census-based population estimates as their denominators. The way in which people interpret and respond to the Indigenous status question in other collections, such as births, deaths and hospital statistics, means that the numerator in rate and ratio statistics is also affected. This makes the assessment of trends difficult.

ESTIMATING THE ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION

Population estimates and projections for the total Australian population are derived from the most recently available census counts, using well-established methods. The counts (by sex and single year of age) are first adjusted for the estimated amount of under-enumeration at the time of the census, and then 'grown' backward or forward to the date for which the estimate or projection is required. For the total Australian population, this involves adjustments for the numbers of births, deaths and estimated migration into and out of Australia (or a State or Territory, for jurisdictional population estimates). Assumptions about future rates of fertility, mortality and migration are used to derive population projections.

Estimating the size and demographic structure of the Indigenous population is problematic and prone to uncertainty (ABS 1998c, ABS 1998d). Because satisfactory data about Indigenous births, deaths and migration are often not available, the usual methods cannot be applied. For this reason, the ABS estimates and projections of the Indigenous population are referred to as 'experimental'.

An additional source of uncertainty, with respect to the estimation of the Indigenous population, is that many people do not provide information about their Indigenous status in the census. This can occur when a person does not fill out a census form at all, or when a census form is completed without a response to the Indigenous identification question. In 1996, for example, over 525,000 people did not respond to the question on Indigenous status, which is considerably more than the almost 353,000 people who indicated they were of Aboriginal and/or Torres Strait Islander origin (ABS 1998b). It is assumed that some of these non-respondents were Indigenous, but the proportion is not known (ABS 1998e, Ross 1999). In order to calculate population estimates, it is necessary to assign these people to either the Indigenous or non-Indigenous population using probabilities based on their sex and place of residence.

Despite the difficulties described above, the best currently available estimates and projections of the Indigenous population by age and sex for each State and Territory, and for Australia as a whole, are the experimental estimates for 1991–96 and the experimental projections for 1996–2006 produced by the ABS after the 1996 Census (see Appendix tables A19 and A20). A new set of estimates and projections will be derived from the 2001 Census.

Two series of experimental projections based on the 1996 Census have been produced and published for the years 1996–2006 (ABS 1998d) (see Appendix table A19). These two series use different assumptions about future changes in the propensity of people to identify as Indigenous. In both series, it is assumed that the fertility rates of Indigenous females will decline by 1% per year, that Indigenous paternity rates (i.e. birth rates where the mother is non-Indigenous and the father is Indigenous), mortality and net interstate movements will remain constant, and that there will be zero net overseas migration over the period of the

ESTIMATING THE ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION *continued*

projections. The low series projections assume there will be no change over time in people's propensity to identify as Indigenous, and that the Indigenous population will only change as a result of natural increase. This series is an extension of the previously published 1991–96 estimates (ABS 1998c), (see Appendix table A20). The high series projections assume that there will be an increase over time in people's propensity to identify, with the rate of change estimated to be the same as that which occurred between the 1991 and 1996 Censuses. The other assumptions are the same as those for the low series projections. The 2001 low series population projections by State and Territory, sex and five-year age group are shown in table 9.2.

The impact of the assumption about changes in the propensity of people to identify as Indigenous can be seen in the projections. For 2006, the low series projection of the Indigenous population is 469,000, representing an annual increase of 2.0% over the period. The high series projection for the same year is 649,000, with an annual average rate of increase of 5.3% (ABS 1998d). The projected distribution of the Indigenous population by State and Territory also varies between the low and high series. For example, New South Wales' share of the Indigenous population would go from 28.5%, in 1996, to 28.3% (low series) or 33.3% (high series), in 2006. The Northern Territory's share would decline from 13.4%, in 1996, to 12.9% (low series) or 9.9% (high series), in 2006.

The projections are not intended as predictions or forecasts, but are illustrations of the changes which would occur in the population, if the assumptions about future demographic trends and changes in the propensity of people to identify as Indigenous were to prevail over the projection period. There is no certainty that these assumptions will be realised, and no assessment of their accuracy can be made until the results of the 2001 Census are available. Care must be taken when comparing the experimental population estimates and projections presented here with those produced at other times, because estimation procedures and assumptions will continue to be refined and modified as new information becomes available.

9.2 PROJECTIONS OF THE INDIGENOUS POPULATION BY AGE AND SEX—30 JUNE 2001(a)

Age group (years)	*New South Wales*	*Victoria*	*Queensland*	*South Australia*	*Western Australia*	*Tasmania*	*Northern Territory*	*Australian Capital Territory*	***Australia(b)***
				MALES					
0–4	8 560	1 735	8 432	1 541	4 020	1 138	3 648	271	**29 348**
5–9	8 131	1 662	8 000	1 575	3 908	1 049	3 611	194	**28 138**
10–14	7 662	1 415	7 434	1 618	4 049	1 057	3 397	186	**26 827**
15–19	6 814	1 297	6 456	1 296	3 284	980	3 047	229	**23 416**
20–24	5 156	1 065	5 242	960	2 750	753	2 664	177	**18 785**
25–29	4 655	1 027	4 804	967	2 581	560	2 743	190	**17 537**
30–34	4 013	972	4 250	874	2 310	521	2 440	130	**15 519**
35–39	3 563	791	3 599	747	1 990	524	1 776	112	**13 110**
40–44	3 038	676	2 995	624	1 672	481	1 447	125	**11 065**
45–49	2 538	502	2 284	531	1 221	412	1 102	50	**8 646**
50–54	1 994	415	1 740	348	933	320	791	42	**6 590**
55–59	1 372	291	1 120	274	619	190	617	14	**4 501**
60–64	950	193	722	175	401	111	402	6	**2 966**
65–69	629	109	591	106	268	92	271	7	**2 076**
70–74	361	82	311	75	213	40	176	7	**1 265**
75+	313	93	360	80	214	38	189	—	**1 287**
Total	*59 749*	*12 325*	*58 340*	*11 791*	*30 433*	*8 266*	*28 321*	*1 740*	***211 166***
				FEMALES					
0–4	8 181	1 622	8 086	1 557	3 773	1 094	3 384	225	**27 926**
5–9	8 067	1 537	7 940	1 578	3 698	996	3 190	212	**27 226**
10–14	7 247	1 427	7 158	1 426	3 945	925	3 089	202	**25 430**
15–19	6 357	1 200	6 298	1 383	3 365	968	2 989	200	**22 765**
20–24	5 030	967	5 210	1 101	2 666	839	2 648	176	**18 644**
25–29	4 994	955	5 101	1 072	2 601	666	2 670	183	**18 251**
30–34	4 678	1 026	4 774	1 072	2 569	603	2 314	174	**17 219**
35–39	4 126	940	3 996	905	2 197	536	1 876	160	**14 740**
40–44	3 551	764	3 266	668	1 845	554	1 562	123	**12 340**
45–49	2 785	545	2 667	516	1 366	382	1 263	88	**9 618**
50–54	2 113	403	1 996	409	978	306	993	46	**7 253**
55–59	1 472	247	1 287	274	671	164	674	26	**4 819**
60–64	1 042	201	948	196	447	136	496	11	**3 478**
65–69	723	160	663	144	373	76	407	8	**2 556**
70–74	501	126	469	109	271	56	220	5	**1 759**
75+	526	141	550	112	307	77	268	10	**1 994**
Total	*61 393*	*12 261*	*60 409*	*12 522*	*31 072*	*8 378*	*28 043*	*1 849*	***216 018***

(a) Low series projections.

(b) Includes Jervis Bay Territory.

Source: ABS data available on request, Experimental Estimates and Experimental Projections of the Aboriginal and Torres Strait Islander Population.

Torres Strait Islander estimates

Separate estimated resident population figures for the Torres Strait Islander population have not been available until recently. In the 1996 Census, people were able to identify themselves as of 'Aboriginal origin', 'Torres Strait Islander origin' or 'both Aboriginal and Torres Strait Islander origin'. Prior censuses asked respondents to choose either Aboriginal or Torres Strait Islander origin, but not both. Following consultations with key stakeholders, estimates for 1996 were produced for the Torres Strait Islander population, comprising those who indicated either 'Torres Strait Islander origin' alone or 'both Aboriginal and Torres Strait Islander origin', in the 1996 Census.

In 1996, more than half (54%) of the Torres Strait Islander population lived in Queensland, while the remaining 46% were distributed across the remaining jurisdictions (table 9.3).

9.3 EXPERIMENTAL ESTIMATED RESIDENT POPULATION—30 JUNE 1996

	Torres Strait Area	*Rest of Queensland*	*Rest of Australia*	*Total Australia*
Torres Strait Islander(a)	6 335	16 705	19 363	42 403
Aboriginal(a)	709	86 300	267 689	354 698
Total Indigenous(b)	6 654	98 163	281 232	386 049

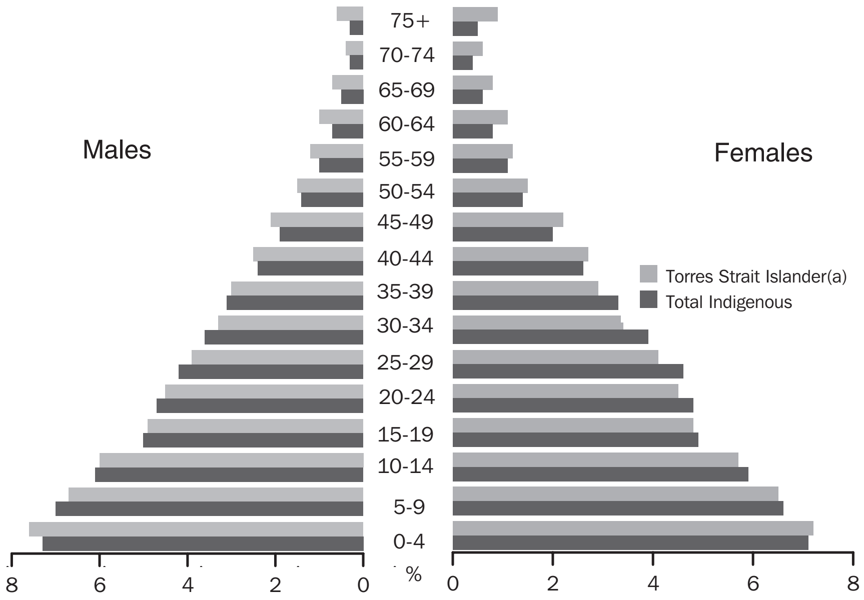
(a) Includes those people who identified themselves as being of both Aboriginal and Torres Strait Islander origin.

(b) The Indigenous categories do not add to the total Indigenous population because people who identified themselves as being of both Aboriginal and Torres Strait Islander origin are included in both the Torres Strait Islander and Aboriginal categories.

Source: ABS 2000a.

The age structure of the estimated Torres Strait Islander population was similar to that of the total Indigenous population, with higher proportions in the younger age groups and lower proportions in the higher age groups than the total Australian population (graph 9.4).

9.4 EXPERIMENTAL ESTIMATED RESIDENT POPULATION — 30 June 1996



(a) The Torres Strait Islander population includes those people who identified themselves as being of both Aboriginal and Torres Strait Islander origin.
Source: ABS 2000a.

QUALITY AND AVAILABILITY OF DATA FROM CENSUSES AND SURVEYS

Table 9.5 lists previous national censuses and surveys that have produced information relevant to the health and welfare of Aboriginal and Torres Strait Islander peoples and table 9.6 lists those either currently under way or planned.

9.5 NATIONAL CENSUS AND SURVEY COLLECTIONS RELEVANT TO INDIGENOUS HEALTH AND WELFARE—1994–1999

Collection (sponsoring agency), year	*Status*	*Approximate sampling fraction(a)*	*Comment*	*Coverage*
Census of Population and Housing (ABS), 1996	Results reported	100%	Conducted every 5 years. Content includes population, housing, income, education, employment. Complete coverage of the population is an advantage.	All people; Indigenous data reportable down to Indigenous location (ILOC) level, and CDs except where confidentiality is an issue.
National Aboriginal and Torres Strait Islander Survey (ABS), 1994	Results reported	5%	Wide range of topics in the areas of: family and culture; health; housing; education and training; employment and income; and law and justice.	All Indigenous people; data reportable down to ATSIC regional level.
Housing and Community Infrastructure Needs Survey (ATSIC), 1992	Results reported	100% of selected communities	Housing, environmental and health service infrastructure.	All remote and rural Indigenous communities. Some communities in major urban centres; data reportable down to community level.
Community Housing and Infrastructure Needs Survey (ATSIC and ABS), 1999	Results reported	100% of selected communities	As above	Discrete Indigenous communities and Indigenous housing organisations; data reportable down to community level.
National Drug Strategy Household Survey(b) (DHSH), 1994	Results reported	6%	Drug use and exposure, knowledge, attitudes and policy preferences, law enforcement indicators, campaign awareness and impact.	Indigenous people 14 years or more in selected urban areas; Indigenous data reportable at national level.
National Drug Strategy Household Survey (CDHAC), 1998	Some Indigenous results reported but numbers indicative only	0.08%	Drug use and exposure, attitudes, awareness, knowledge and behaviours.	All persons 14 years or more; Indigenous data reported at national level.
Labour Force Survey (ABS), 1994 and on	Results reported	0.5%	Labour force status. A question on Indigenous status was included in the survey in February 1994 and in the March surveys for 1995–99. Since May 2001, the Indigenous status question has been included monthly.	All people 15 years and over. Data for Indigenous people reportable at the national level.
National Health Survey (ABS), 1995	Results reported for non-remote areas	0.7%	Wide range of information about health conditions, actions, behaviours etc. Included an enhanced sample of Indigenous people.	All people; Indigenous data reportable at national level in non-sparsely settled areas.

9.5 NATIONAL CENSUS AND SURVEY COLLECTIONS RELEVANT TO INDIGENOUS HEALTH AND WELFARE—1994–1999—*continued*

Collection (sponsoring agency), year	*Status*	*Approximate sampling fraction(a)*	*Comment*	*Coverage*
Australian Housing Survey, 1999	Results reported	0.8%	As above. Included an enhanced sample of Indigenous dwellings.	All dwellings except in sparsely-settled areas; Indigenous data reportable at national level.
BEACH (General Practice Statistics and Classification Unit, Sydney Uni. and AIHW), 1998 and on	Indigenous results reported for 1998–99	1,000 randomly selected active GP's annually, 100 consecutive encounters each	A survey of General Practice activity. GP consultations including characteristics of GP, patient, reason, treatment, risk factors.	General Practitioners in private practice on a fee for service basis; some state-level Indigenous data available.

(a) The sampling fraction refers to the survey's coverage of Indigenous people (or dwellings/communities) and is calculated as the number of Indigenous people (or dwellings/communities) in the sample divided by the number of Indigenous people (or dwellings/communities) in the population of interest at the time of the survey.

(b) Urban Aboriginal and Torres Strait Islander Peoples' Supplement.

9.6 NATIONAL CENSUS AND SURVEY COLLECTIONS RELEVANT TO INDIGENOUS HEALTH AND WELFARE—2000–2005

Collection (sponsoring agency), year	*Status*	*Approximate intended sampling fraction(a)*	*Comment*	*Coverage*
Census of Population and Housing (ABS), 2001	Fieldwork completed	100%	Conducted every 5 years. Content includes population, housing, income, education, employment. Complete coverage of the population is an advantage.	All people; Indigenous data reportable down to Indigenous location (ILOC) level, and CDs except where confidentiality is an issue.
Community Housing and Infrastructure Needs Survey (ATSIC & ABS), 2001	Fieldwork completed	100% of selected communities	Housing, environmental and health service infrastructure survey, following initial survey in 1999.	Discrete Indigenous communities and Indigenous housing organisations; data reportable down to community level.
Labour Force Survey (ABS), 2000 and on	Ongoing reporting	0.5%	Labour force status. Since May 2001, the Indigenous status question has been included monthly.	All people 15 years and over. Data for Indigenous people reportable at the national level.
National Health Survey (Indigenous) (ABS), 2001	Fieldwork in progress	0.8%	Wide range of information about health conditions, actions, behaviours, etc. Subset of questions to be used in remote areas. To be conducted in conjunction with the National Health Survey.	All Indigenous persons; data reportable at national level.
Beach (General Practice Statistics and Classification Unit, Sydney Uni. and AIHW), 2000 and on	Ongoing reporting	1,000 randomly selected active GPs annually, 100 consecutive encounters each	A survey of General Practice activity. GP consultations including characteristics of GP, patient, reason, treatment, risk factors.	General Practitioners in private practice on a fee for service basis; some state-level Indigenous data available.

9.6 NATIONAL CENSUS AND SURVEY COLLECTIONS RELEVANT TO INDIGENOUS HEALTH AND WELFARE—2000–2006 —*continued*

Collection (sponsoring agency), year	*Status*	*Approximate intended sampling fraction(a)*	*Comment*	*Coverage*
Indigenous Health Survey (ABS)2004/5 (b)	Proposed	2.4%	Wide range of information about health conditions, actions, behaviours. To be conducted in conjunction with the National Health Survey.	All Indigenous persons; proposed that some data will be reportable down to State/Northern Territory level.
Indigenous Social Survey (ABS), 2002	Survey to be conducted	4.0%	General social survey reporting on areas of social concern including health, housing, education & income. To be conducted in conjunction with the General Social Survey. To be conducted at 6-yearly intervals thereafter.	Indigenous persons aged 15 and over; data reportable down to State/Northern Territory level.

(a) The sampling fraction refers to the survey's coverage of Indigenous people (or dwellings/communities) and is calculated as the number of Indigenous people (or dwellings/communities) in the sample divided by the number of Indigenous people (or dwellings/communities) in the population of interest at the time of the survey.

(b) From 2004/5, the National Health Survey (Indigenous) will be referred to as the Indigenous Health Survey.

The Census of Population and Housing

The Census of Population and Housing is perhaps the most useful statistical collection in Australia, with respect to providing data about Aboriginal and Torres Strait Islander people. It provides the basis for the estimation of the size of the Indigenous population, as well as information on a range of topics, such as housing, employment, education, income and language.

The 2001 Census was held on the 7th August and processing of data is now under way. Results will be released progressively from July 2002, starting with the Basic Community Profile, in which Indigenous status will be a variable. As with previous censuses, an Indigenous Enumeration Strategy (IES) was used to improve the coverage and accuracy of the count of the Indigenous population. The IES consists of special collection procedures and census awareness activities. Special collection procedures include the use of specially designed forms for use by interviewers in some Indigenous communities, and the employment of Indigenous people to assist with census enumeration. A variety of awareness activities are used as and where appropriate. These include newspaper articles, posters, presentations in Indigenous languages, radio and television interviews and information brochures. These are designed to address cultural barriers that may discourage Indigenous people from participating in the Census, and raise understanding of the purpose of the Census and its potential benefits. Extensive and ongoing consultation and liaison with Indigenous organisations and communities are seen as essential elements of the strategy. Census staff are also trained in Indigenous enumeration procedures, and a special recruitment effort ensures that, wherever possible, Aboriginal and Torres Strait Islander peoples are employed to assist with the census collection. Coordination

The Census of Population and Housing *continued*

of census activities with preparations for the 2001 CHINS were an added element to the IES this year. An evaluation of the 2001 IES will be conducted after the census.

In addition to the IES the ABS has a 2001 Census evaluation plan for discrete Indigenous communities which includes: capturing field information about collection activities, community response, difficulties and barriers experienced in the field; an assessment of the success of the collection; identification of unoccupied dwellings; comparisons of the Census counts of people and dwellings with the counts obtained in the 2001 CHINS; observational studies undertaken during Census 2001 collection; an analysis of a wide range of administrative data sources in order to compare the similarities and differences between these and Census data for particular communities; and a report, Population Issues, Indigenous Australians (Cat. 4708.0) which will provide special analyses of the 2001 Census data, including comparisons with 1991 and 1996 counts, and will be published in 2003. The results of the evaluation strategy will be published in both detailed papers and brought together in an overarching publication to guide users on Census Indigenous data quality.

ABS Indigenous survey program

In 1999, the ABS conducted a review of its household survey program. In parallel, a strategy for Aboriginal and Torres Strait Islander statistics was also developed. Both initiatives included wide consultation, involving all levels of government and the Aboriginal and Torres Strait Islander community. The survey program outcomes include:

- regular social surveys of Aboriginal and Torres Strait Islander people to be conducted;
- selected national surveys to have supplementary Aboriginal and Torres Strait Islander samples; and
- regular identification of Aboriginal and Torres Strait Islander people to occur in the Labour Force Survey so that broad employment data will be available in the intercensal period;

The results of these surveys will have the capacity to provide a broad information source to improve understanding about the social environment, and health and wellbeing of the Indigenous population. These surveys (discussed below) include the Community Housing and Infrastructure Needs Survey, an Indigenous sample supplement in the National Health Survey in 2001 and then the expanded Indigenous Health Survey from 2004/5 and six yearly thereafter, and the Indigenous Social Survey.

ABS Indigenous survey program *continued*

Survey strategies are designed to ensure that data are relevant, that collection methods are sensitive to Aboriginal and Torres Strait Islander peoples, and that broad consultation processes are in place. Achieving long-term credibility for survey results requires a substantial level of acceptance by the Aboriginal and Torres Strait Islander community, and the ABS is engaging a wide range of community stakeholders in consultative processes throughout the conduct of its Indigenous surveys. There is also an identified need for ongoing liaison with communities and respondents, as a routine function in the consultation process.

The first Community Housing and Infrastructure Needs Survey (CHINS) was conducted in 1999, after the Aboriginal and Torres Strait Islander Commission (ATSIC) engaged the ABS to conduct surveys of all Indigenous Housing Organisations (IHOs) and discrete Indigenous communities in Australia. CHINS collected housing and management information from Aboriginal and Torres Strait Islander housing organisations, and a range of community infrastructure information for those locations identified as discrete communities (see inset 2.1). The 2001 CHINS was conducted in conjunction with Census 2001, and will update the 1999 CHINS. CHINS data that are collected from IHOs include details of the current housing stock, and management practices and financial arrangements of Indigenous housing organisations providing housing to Aboriginal and Torres Strait Islander people. Details of housing and related infrastructure, such as water, power and sewerage systems, as well as other facilities, such as education and health services available in discrete Aboriginal and Torres Strait Islander communities, are also collected.

The Commonwealth Department of Health and Aged Care has entered into a partnership with the ABS to fund a program of triennial national health surveys, the first of which is currently being conducted. The program will allow for an enhanced Indigenous sample to be collected for the first two surveys and every six years thereafter. The 2001 National Health Survey (Indigenous) (see table 9.6), will provide national estimates on some indicators of health status, as well as opportunities for the ABS to increase its understanding of appropriate collection strategies, particularly in remote areas. It will also provide an opportunity to develop the survey so that the content can be reliably compared with results from ABS surveys of the general population. At this stage, detailed data on Indigenous health that can provide estimates for all States and the Northern Territory will not be available until the results of the larger 2004/05 Indigenous Health Survey are released. However, the 2002 Indigenous Social Survey to be released during 2003 (see below), will collect data of relevance to Indigenous health, and will deliver State/Northern Territory estimates. Considerable development will be undertaken before the content and methodology of the 2004/05 Indigenous Health Survey is finalised.

ABS Indigenous survey program *continued*

The Indigenous Social Survey (ISS) will be conducted for the first time in 2002, and at six-yearly intervals after that. It will provide broad information across all areas of social concern, including health, housing, work, education and income. The survey will allow for inter-relationships between different areas of social concern to be explored, and provide information on the extent to which some people face multiple social disadvantage. Another of the objectives of the ISS is to provide comparisons with non-Indigenous population data, such as that to become available from the General Social Survey (GSS).

Inset 9.7 describes a survey recently conducted in Western Australia. The survey seeks to examine health and its determinants among a large sample of Indigenous children, and represents a potentially valuable source of health data about young Indigenous people.

9.7 WESTERN AUSTRALIAN ABORIGINAL CHILD HEALTH SURVEY

An extensive State-wide survey of Western Australian Indigenous children aged 0–17 years was undertaken in 2000, by TVW Telethon Institute for Child Health Research, Perth, following extensive collaboration and consultation with Aboriginal communities and agencies throughout the State. By examining a range of possible factors in the development of ill health, behaviour problems and adverse health behaviours among Indigenous children, the study aims to provide an understanding of the determinants of educational performance, long-term health risk behaviours and psychosocial problems. The survey is also notable for attempting to determine some of the factors which promote resilience in Aboriginal children, exploring both individual and environmental aspects of childhood development. Information has been sought from caregivers and educators, in an endeavour to provide a comprehensive picture of the issues involved, with a sample of over 1,500 families and around 4,000 Aboriginal children.

The information collected is expected to provide comprehensive data which can be used to inform planning and monitoring of Aboriginal health strategies by a range of agencies, including ATSIC Regional Councils, Aboriginal Community Controlled Health Organisations and State and Commonwealth government departments. The social and demographic data will also be utilised to monitor sentinel health conditions as part of the National Child Health and Indigenous Child Health Information Framework.

Source: Dr Steven Zubrick, Institute for Child Health Research, personal communication.

QUALITY AND AVAILABILITY OF ADMINISTRATIVE DATA

Work coordinated by the ABS and the AIHW, in partnership with State and Territory authorities, has resulted in improvements in the completeness with which Aboriginal and Torres Strait Islander peoples are recorded in a range of administrative datasets. Priorities to date have been hospital records, and births and deaths registrations. Work on births and deaths registrations continues to be undertaken by ABS, in collaboration with State and Territory Registrars, and has uncovered a number of ways in which the quality of Indigenous vitals (i.e. births and deaths) data can be improved. These efforts are reflected in increases in the estimated coverage of Indigenous birth and death registrations.

Births

Information regarding Indigenous births is obtained by ABS from birth registration forms and by AIHW from the perinatal collections from each jurisdiction. Birth registrations provide information on the Indigenous status of both parents, whereas the perinatal collections include information only about the mother. Although the questions used in each jurisdiction to identify Indigenous status on birth registration forms are based on the ABS standard (see above), variations remain in the questions used on the perinatal collection forms. Most jurisdictions, however, have undertaken to update Indigenous identification questions to conform to the ABS standard. In Western Australia, for example, Birth Registration forms have recently been updated, while Tasmanian perinatal collections are expected to be brought into line with the ABS standard in the near future. At present, although the Tasmanian perinatal collections form does not feature the standard question, the perinatal collections officer has instructed all midwives to ask the question directly of the child's mother (see Appendix table A21).

In 1999, there were 10,580 births registered in Australia in which at least one of the parents was identified as of Indigenous origin (ABS 2000d). This is likely to be an under-estimate of the actual number of births to Indigenous parents because not all parents of Indigenous origin would have been identified as such.

One way of assessing the completeness of the data on Indigenous births is to compare the number registered (in which at least one parent was identified as Indigenous) with the number expected, which is derived using experimental Indigenous population estimates/projections and a constant set of age-specific fertility and paternity rates (see ABS 1998d). Table 9.8 shows the number of births registered in calendar years 1996–99 as a proportion of expected births.

9.8 RATIO OF REGISTERED TO EXPECTED BIRTHS—1996–99

	1996 based projections			
	1996	*1997*	*1998*	*1999*
New South Wales	0.72	0.82	0.87	0.88
Victoria	0.71	0.67	0.87	0.77
Queensland	0.79	0.93	0.93	0.89
South Australia	0.89	0.93	1.03	0.99
Western Australia	0.98	0.93	0.92	0.97
Tasmania	0.56	0.70	0.67	0.74
Northern Territory	0.95	0.88	0.89	0.98
Australian Capital Territory	0.73	0.57	0.44	0.77
Australia	**0.81**	**0.87**	**0.94**	**0.90**

Source: ABS 2000d.

Births *continued*

On the basis of the ratios in table 9.8, as well as other available information about collection processes, detailed data on births registered as Indigenous in 1999 were published for all States and Territories, except the Australian Capital Territory (ABS 1999a). The small total number of Indigenous births in the Australian Capital Territory precluded publication. Detailed Indigenous birth registration data for New South Wales and Victoria were published for the first time in 1998, followed by the addition of Tasmanian data in 1999. While apparent decreases in coverage were experienced in Victoria, Queensland and South Australia between 1998 and 1999, the coverage ratios indicate that, overall, progress has been made improving the coverage of Indigenous births, in recent years. It should be noted that there are some limitations in the methodology used to calculate the coverage ratios of Indigenous births and deaths (see below), and therefore these ratios should be considered indicative only.

Another way of assessing the completeness of birth registration data is to compare registrations with data collected by midwives, and others, for perinatal statistics collections. As indicated in table 9.9, the perinatal collections only include information about the Indigenous status of the mother, while birth registration forms ask about both the mother and the father. Table 9.9 presents data for 1998 for birth registrations, perinatal collections and 1996 Census-based low series projections of the Indigenous population for 1998. The table presents 1998 rather than 1999 data, as information from the perinatal collections is not yet available for 1999.

9.9 INDIGENOUS BIRTHS(a)

				1998 Birth Registrations(a)			
	1998 Projected Indigenous births(b)(c)	*1998 Projected births to Indigenous mothers(b)*	*1998 Perinatal collection(d)*	*Mother and father both Indigenous*	*Mother Indigenous(e)*	*Father Indigenous(f)*	*Total Indigenous*
New South Wales	3 448	2 338	2 043	664	1 368	979	3 011
Victoria	680	456	445	119	264	207	590
Queensland	3 312	2 497	2 731	1 076	1 189	820	3 085
South Australia	639	484	412	211	258	192	661
Western Australia	1 597	1 313	1 504	643	522	304	1 469
Tasmania	450	259	196	28	154	118	300
Northern Territory	1 436	1 351	1 248	600	581	103	1 284
Australian Capital Territory	96	58	73	7	18	17	42
Australia	**11 658**	**8 906**	**8 642**	**3 348**	**4 354**	**2 740**	**10 442**

(a) In 1998, data for New South Wales, Victoria, Queensland, South Australia, Western Australia and the Northern Territory were considered by the ABS to be of publishable quality. See text and ABS 1999a for more details.

(b) Based on 1996 census-based projected population for 1998, low series, and a constant set of age-specific fertility and paternity rates.

(c) Includes children of Indigenous mothers and/or Indigenous fathers.

(d) Refers to babies of Indigenous mothers.

(e) Father non-Indigenous or father's Indigenous status not stated or paternity not acknowledged.

(f) Mother non-Indigenous, or mother's Indigenous status not stated.

Source: AIHW National Perinatal Statistics Collection, 2001, ABS 1999a, ABS data available on request, births registrations database.

Births *continued*

The information in table 9.9 can be used to highlight discrepancies among the various data sources. For example, in Victoria there were 590 birth registrations in 1998, for which at least one parent was identified as Indigenous. This is lower than the 680 births projected for Victoria for that year. Similarly, the number of births to Indigenous mothers in Victoria, as identified through birth registrations (383, or 119+264) was lower than the number recorded in the perinatal collection (445) and projected births to Indigenous mothers (456).

Discrepancies between data sources vary between States and Territories. Some jurisdictions have established data linkage projects between the perinatal data collection and the relevant Registry of Births, Deaths and Marriages. For example, a study conducted in Victoria, linking the perinatal collection, births registrations and hospital admissions, showed that there were many mothers identified as Koori in one collection, but not in the others. It is estimated that in 1998, there were 1,095 births where either the mother and/or the father was Koori, considerably higher than the 680 Indigenous births projected for Victoria for that year (table 9.10) (Department of Human Services 2000).

Deaths

Most jurisdictions have adopted the ABS standard question on Indigenous status on death registration and medical cause of death forms (see Appendix A22). The ABS continues to work with State and Territory registrars to improve the recording of Indigenous status on registration forms.

In 1999, there were 1,976 deaths registered as being of an Aboriginal or Torres Strait Islander person (ABS 2000e). While most Indigenous deaths in Australia are registered, Indigenous status is not always recorded on death notification forms. The extent to which identification of Indigenous people occurs in data collections is referred to as ‘coverage’, or ‘completeness of coverage’. Coverage in death registrations can be estimated by comparing the number of deaths registered with an expected number of deaths, derived using a life table. A life table is a statistical model that can be used to show the levels of mortality of a population at different ages. Life tables produced for the Indigenous population are considered ‘experimental’ because of deficiencies in births, deaths and population data.

Table 9.10 shows the estimated coverage of Indigenous deaths for 1997–99, i.e. the actual number of deaths registered as Indigenous in 1997–99 as a proportion of the Indigenous deaths ‘expected’ to occur in those years.

Deaths *continued*

It should be noted that the calculation of 'expected' Indigenous deaths discussed in this section is different from the concept of 'expected' deaths in relation to indirect standardisation, as used in Chapter 8. The former is related to the assessment of the completeness of registration of Indigenous deaths, and 'expected' numbers are based on assumed underlying Indigenous mortality rates. The latter, on the other hand, is related to differences in age structures for two or more groups, with expected deaths based on a standard set of rates (such as those of the total Australian population) (Cunningham & Paradies, 2000) (see inset 8.1 for details of 'expected' deaths in this context).

9.10 RATIO OF REGISTERED TO EXPECTED DEATHS—1997–99

	Registered deaths			*Registered to expected deaths, 1996 Census based projections*		
	1997	*1998*	*1999*	*1997*	*1998*	*1999*
	no.	*no.*	*no.*	*ratio*	*ratio*	*ratio*
New South Wales	(b)88	462	435	(b)0.09	0.47	0.43
Victoria	93	123	130	0.43	0.56	0.59
Queensland(a)	531	593	529	0.58	0.63	0.55
South Australia	132	127	116	0.68	0.64	0.57
Western Australia	351	378	350	0.70	0.74	0.68
Tasmania	5	13	11	0.04	0.10	0.08
Northern Territory	458	415	399	1.00	0.88	0.83
Australian Capital Territory	4	3	6	0.20	0.14	0.27
Australia(c)	1 662	2 114	1 976	0.49	0.61	0.56

(a) Queensland introduced an improved Death Information Form in 1996 to capture Indigenous origin. Although the penetration of this new form increased from 1996 to 1997, it was only used for around 80% of deaths throughout the State in 1997.

(b) The small number of Indigenous deaths registered in New South Wales in 1997 is the result of a technical issue.

(c) Includes 'Other Territories'.

Source: ABS 2000e.

The coverage ratios are derived from the 1991–1996 experimental life tables (one for males and one for females), based on data from the 1991 and 1996 Censuses. A detailed explanation of how the ABS estimates coverage of Indigenous deaths in registration data, including a discussion of the limitations of the method and a discussion of the issues concerning the quality of mortality statistics about the Aboriginal and Torres Strait Islander population, has been published in an ABS occasional paper, *Mortality of Aboriginal and Torres Strait Islander Australians* (Cunningham & Paradies, 2000).

Because of difficulties with some aspects of the method used to calculate the 1991–96 life tables, the ABS constructed a new set of experimental life tables for 1997–99 (see ABS 2000e). However, on further analysis, it was found that the method used in the construction of these new life tables involved a methodological weakness. Consequently, the construction of Indigenous experimental life tables, along with estimates which use these as a basis, such as life expectancy, are currently under review (see Demography Working Paper 2001/2 for more information).

Deaths *continued*

Coverage ratios, and decisions based thereon, should be interpreted with caution. They are based on current knowledge, current demographic methods and the available data. Until adequate information on Indigenous births, deaths and migration becomes available, it will be necessary to continue to use experimental methods to construct life tables for the Indigenous population. As Cunningham and Paradies (2000) note, "it is important to understand—and accept—the limitations of the methods, including the sensitivity of the results to the assumptions used and the many uncertainties inherent in the process" (p. 23).

Hospital separations data

There remains variation on the form and method of Indigenous identification for public hospital admissions employed by each jurisdiction (see Appendix table A23). The health departments in New South Wales, Victoria, Queensland, Tasmania and the Australian Capital Territory consider their 1998–99 Indigenous hospital inpatient data to be in need of improvement (AIHW 2000c).

There are currently no national estimates of the level of completeness of coverage for the collection of Indigenous status data in hospital records. A jurisdiction-wide estimate is available for the Northern Territory which, in a 1997 data quality audit of all its public hospitals, showed a 94% agreement with respect to Indigenous status between hospital records and patient reports (Condon et al. 1998). The Health Department of Western Australia has recently undertaken an assessment of its hospital data in which face-to-face interviews were conducted with 10,000 patients, in 26 hospitals throughout Western Australia, with the information collected and compared to the patients' hospital records. Results from this project will be reported in the near future (Young, forthcoming).

The level of agreement in the Northern Territory was much higher than had been previously found in small studies conducted in a small number of hospitals in other jurisdictions (e.g. Lynch & Lewis 1997, Shannon, Brough & Haswell-Elkins 1997). In a 1998 pilot study, conducted by the Aboriginal and Torres Strait Islander Health and Welfare Information Unit in eleven hospitals, it was found that the accuracy with which a person's Indigenous status was recorded varied greatly from hospital to hospital, ranging from 55% to 100% of those interviewed (ATSIHWIU 1999).

As a result of this project, a set of procedures was developed, detailing the steps that a hospital, group of hospitals and State and Territory health departments can follow to enable them to implement a data quality assessment exercise within their collection(s). This included approaches to sample selection and a training package for interviewers who undertake the data collection (ATSIHWIU 1999). This methodology was also used in the Western Australian audit, referred to above (i.e. Young, forthcoming).

Hospital separations data *continued*

The Australian Health Ministers' Advisory Council (AHMAC) continues to allocate resources to promote improved Indigenous identification in hospitals in all States and Territories. As part of this process, all jurisdictions were asked to assess the completeness of recording of Indigenous status in their hospital data collections, by the end of 2001. Most states are now implementing or planning training programs for staff, and others are conducting data quality audits. Other activities include awareness-raising for the general public and data collectors, and documentation of best practice procedures, including 'less threatening strategies'. The project also involves joint partnership arrangements between hospitals and health authorities.

A process is also being developed that will provide ongoing monitoring of the quality of Indigenous identification in hospital records.

Primary health care data

There is a need to develop and collect information on the delivery and utilisation of primary health care services for Indigenous clients, although there is no agreed national dataset in this area. The most comprehensive source of data is collected by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) and the National Aboriginal Community Controlled Health Organisation (NACCHO), from Commonwealth-funded Aboriginal Medical Services. In addition, AHMAC has asked the Commonwealth and the Health Insurance Commission, subject to Aboriginal and Torres Strait Islander community agreement, to implement an Indigenous identifier in MBS and PBS systems for statistical purposes, by 1 January, 2002. Indigenous data available for statistical purposes from these administrative data bases would provide essential and timely information on some aspects of service utilisation and expenditure.

There is some information available on the Indigenous patients of general practitioners (GPs) from the Bettering the Evaluation and Care of Health (BEACH) survey, a collaborative work program between the Australian Institute of Health and Welfare (AIHW) and the University of Sydney. The survey questionnaire includes an Indigenous identifier, although it is unknown whether GPs filling out the survey forms are asking the question of their patients and recording the information consistently. As shown in Chapter 4, the representation of Aboriginal and Torres Strait Islander patients in the survey is below their representation in the population (see Chapter 4).

Mental health data

As discussed in Chapter 6, at present there is a scarcity of data regarding mental health among Aboriginal and Torres Strait Islander peoples. Inset 9.11 contains a discussion on some of the complex issues related to social and emotional wellbeing, the term preferred by Indigenous people to refer to mental health.

9.11 THE NEED FOR DATA DEVELOPMENT ON SOCIAL AND EMOTIONAL WELLBEING

Social and emotional wellbeing is a broader concept than that of mental health. The National Inquiry into the Human Rights of People with Mental Illness (HREOC 1993) recognised that definitions of mental health used by the general Australian community did not apply to the mental health of Aboriginal and Torres Strait Islander people. Predominantly, mental health professionals distinguish 'the mind and its illnesses' from 'the body and the spirit', whereas Aboriginal and Torres Strait Islander people see physical, mental and spiritual wellbeing as inextricably linked (HREOC 1993, p. 694). After listening to evidence from Aboriginal people, the Inquiry acknowledged that 'environmental and social factors have had a lasting and significant impact on their psychological wellbeing' (p. 695). Such factors caused mental distress, predisposed people to mental disorders, and were linked to anti-social and self-destructive behaviour which often went undiagnosed or brought people into contact with the criminal justice system (HREOC 1993). Swan and Raphael (1995), in developing the National Aboriginal Mental Health Policy and Plan, reiterated the need for Aboriginal mental health to be viewed holistically and stated that any discussion of the mental health of Indigenous people should be seen in the context of the impact of colonisation, loss of traditional lands, loss of culture, separation of children from their families, racism, social inequity, trauma, loss and grief.

The measurement of the social and emotional wellbeing of Aboriginal and Torres Strait Islander people continues to be limited by a number of constraints including the following:

- a lack of data definitions, standards, and data collection instruments that encapsulate the holistic nature of social and emotional wellbeing in a culturally appropriate way while allowing for statistical measurement needs to be met. At the National Indigenous Mental Health Data Workshop held in Brisbane in 1996, it was agreed that there were no existing culturally appropriate survey instruments to measure social and emotional wellbeing (DHFS, 1998). The Mental Health Promotion and Prevention National Action Plan for 1998–2003, a joint commonwealth, state and territory initiative, says that 'there is an urgent need to develop and evaluate the effectiveness of culturally valid holistic models of mental health promotion and prevention' (CDHAC 1998, p. 29);
- inaccuracies in available data as a result of misdiagnosis of people with symptoms of social and emotional distress. Certain behaviours which might be appropriate in terms of Aboriginal and Torres Strait Islander culture may be diagnosed as mental illness in non-Indigenous terms (HREOC 1993). The use of psychological tests based on concepts alien to Aboriginal culture is another potential source of inaccurate diagnosis. Misdiagnosis may also occur because of language communication problems, particularly in the elderly (HREOC 1993);
- under-reporting of mental and behavioural disorders and associated conditions because of the under-identification of Indigenous people in administrative records such as hospital and death records. This is referred to in various parts of this publication including Chapter 6, Chapter 8 and elsewhere in this chapter; and
- national surveys have not had sample sizes sufficiently large and/or geographically representative of the Indigenous population to produce results about mental health for Indigenous people. For example, the 1997 ABS National Survey of Mental Health and Wellbeing of Adults had a sample of about 10,000 people, and was not conducted in remote and sparsely settled parts of Australia. There were not enough Indigenous people in the sample to allow separate results to be reported. However, even if the survey had been able to produce results for Indigenous people, the questions used may not have been appropriate. A recent study by the Queensland Centre for Schizophrenia Research found that the questionnaire method of assessing Indigenous patients with mental illness was considered by Indigenous mental health consumers and carers to be the least culturally appropriate method to use (Gulash, undated). Because of the lack of culturally appropriate survey instruments and methods for Indigenous people, no information on mental health will be collected by the 2001 National Health Survey Indigenous supplementary sample. The issue will be reviewed for the 2004/5 Indigenous Health Survey. The Western Australian Aboriginal Child Health Survey, described in inset 9.8, will look at some psychosocial aspects of health in children. The ABS plans ongoing consultation with the Aboriginal and Torres Strait Islander community and other key stakeholders on appropriate methods for measuring Indigenous mental health.

RECENT NATIONAL STRATEGIC INITIATIVES AND FUTURE PLANS

Australian governments are increasingly committed to accountability in Aboriginal and Torres Strait Islander health and welfare, and to monitoring the effectiveness of programs and the evaluation of policies that are designed to improve the status of, and service delivery to, Aboriginal and Torres Strait Islander peoples. In addition, there has been an increasing emphasis on evidence-based approaches to policy and program development. This has resulted in growing demand for high quality, regularly reported Indigenous information and data at a range of geographic levels, for the development of performance indicators on service delivery and for the provision of time series on health status and social conditions.

National Indigenous Health Information Plan

In October 1997, the Australian Health Ministers' Advisory Council (AHMAC) adopted the ‘National Indigenous Health Information Plan...this time let’s make it happen’ (NIHIP) and asked the National Health Information Management Group (NHIMG) to oversee its implementation.

The NIHIP, which will be reviewed during 2002, contained 42 recommendations for the collection and maintenance of quality statistics on the health of Indigenous Australians. The plan's recommendations fall into three main areas: the development of an appropriate infrastructure for the collection and maintenance of Indigenous data; technical improvements required to support the collection of high quality statistics on Indigenous health; and effective national leadership and coordination to progress issues and strategies, across all jurisdictions (ATSIHWIU 1997).

An Implementation Working Group was appointed by NHIMG in 1998 to develop a set of priority areas from the Plan’s recommendations, identifying the lead agency responsible for progressing each of the goals. This Working Group was subsequently superceded by the National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data (NAGATSIHID), established by AHMAC in October 2000, which is taking responsibility for implementation of NIHIP from 2001, and will report to NHIMG.

ABS and AIHW, in conjunction with central health authorities and other key stakeholders, are undertaking a range of activities aimed at achieving a number of recommendations of the Plan. These include facilitating improvements in administrative data (the highest priorities being the improvement of Indigenous identification in hospital separation collections and births and deaths registrations data), improving data available through surveys, and improving population estimates (for a detailed outline of plans for improving survey data and population estimates, see above).

For birth and death registrations, work continues to be undertaken by States and Territories, in collaboration with the National Project Centre for Vital Statistics in the ABS Queensland Office, and with working groups organised through ABS Regional Offices.

National Indigenous Health Information Plan *continued*

Two AHMAC funded projects have been undertaken by ABS and AIHW in conjunction with State and Territory Health Departments. The first was undertaken by the Aboriginal and Torres Strait Islander Health and Welfare Information Unit (ATSIHWIU) to develop, implement and evaluate a method of assessing the completeness of identification of Indigenous people in hospital records. The second project emerged as an adjunct to the AHMAC initiative (see hospital separations, above) in response to the need to establish best practice procedures for collecting Indigenous status.

National Minimum Data Sets (NMDS) have been agreed that will provide information on Indigenous patients and clients in two community health service delivery areas relevant to the NIHIP recommendations. These are the Alcohol and Other Drug Treatment Services NMDS and the Community Mental Health Care NMDS, both of which include the Indigenous identifier as a reporting requirement. Data available from the Alcohol and Other Drug Treatment Services Collection will provide information on service utilisation, treatment protocols, and clients' alcohol and drug problems (including injecting drug use), and will report types of drugs used by clients according to the Australian Standard Classification of Drugs of Concern (ABS 2000c). The Community Mental Health collection will include information on service events, diagnosis and mental health legal status. Standard demographic characteristics of clients will be included in reports from both datasets. These national minimum datasets are expected to be available for reporting for the 2000–2001 period, and to be released during 2002.

National Aboriginal and Torres Strait Islander Community Services Information Plan

The collection of accurate data on the Indigenous clients of community services that are comparable both between sectors and jurisdictions, has been hindered in the past by inconsistencies in the methods used to collect the information. Although the ABS Indigenous identification standard is not widely used by community service agencies at this time, it has been introduced in programs such as Home and Community Care (HACC) and the Supported Accommodation Assistance Program (SAAP).

In April 1999, the Community Services Ministers' Advisory Council (CSMAC) approved funding for the development of principles and standards for community services Indigenous population data. This work was undertaken by ATSIHWIU, and was based upon a series of focus group discussions held with employees, managers and the Indigenous clients of each sector of community services from across Australia. In addition to the principles and standards work, separate reviews of the collection of Indigenous status in Child Protection and Welfare, the Supported Accommodation Assistance Program and Commonwealth/State Disability Agreement-funded agencies were completed. A draft Aboriginal and Torres Strait Islander Community Services Information Plan also forms part of the broader community services Indigenous principles and standards paper, which is currently under review, with publication anticipated in 2001.

Agreement on National Indigenous Housing Information

In December 1999, the Agreement on National Indigenous Housing Information was signed by the Commonwealth, States and Territories, the Aboriginal and Torres Strait Islander Commission, the Torres Strait Regional Authority, the ABS and the AIHW, formalising a commitment by all signatories to develop consistent, accurate, reliable and timely housing information. The agreement will be progressed by the National Indigenous Housing Information Management Forum, and data developments will be the responsibility of the National Indigenous Housing Information Implementation Committee (NIHIIC).

An important aspect of the agreement is an ongoing triennial work program of national Indigenous housing information projects. The main focus of NIHIIC will be the endorsement and revision of National Indigenous Housing Minimum Data Set/s and the maintenance, revision and development of data concepts, definitions and standards for Indigenous housing information. Data standards will be in a form that is suitable for inclusion in a National Housing Data Dictionary. Consultation with expert working groups in other areas of information and data development will be a key strategy for the work program. The work of NIHIIC will also provide a channel for making access to the development process more widely available to stakeholders in the national Indigenous housing arena.

PERFORMANCE INFORMATION

The development of mechanisms to monitor progress in Indigenous health will require the development of improved administrative data and benchmarks derived from service delivery systems, as well as the establishment of surveys and other collections that can sustain consistent and comparable reports over time. Work on performance information is currently in progress in a number of areas.

Annual summary of jurisdictional health performance indicators

There has been a collaborative effort between statistical agencies, health departments and Aboriginal and Torres Strait Islander organisations to design and refine datasets, for improving reporting on Aboriginal and Torres Strait Islander health and services. An interim indicator set was endorsed by the Australian Health Ministers Advisory Council (AHMAC) in 1998, and a refined set was endorsed in 2000. However data for the refined indicators may not be available for reporting before 2002.

The interim set of national performance indicators for Aboriginal and Torres Strait Islander health has been reported for 1998, and will continue for the 1999 and 2000 reporting periods. The interim indicators cover performance within a framework of nine aspects of health status, risk factors and service delivery. The first of these reports was compiled by OATSIH from separate jurisdictional data sources. The second report (due in the near future) has been compiled by AIHW in a similar way. The refined indicator set and a draft framework were developed through a project undertaken by the Co-operative Research Centre for Aboriginal and Tropical Health, in consultation with AIHW, OATSIH, Heads of Aboriginal Health Units (HAHU), NHIMG and NACCHO. The project identified the validity and reliability of data sources and reporting procedures.

Annual summary of jurisdictional health performance indicators *continued*

There are over 50 indicators in the refined set, covering mortality, morbidity, access to health services, health services impacts, workforce developments, risk factors, intersectoral issues, community development, and quality of service provision. For many jurisdictions, the data required to report on the indicators are either unavailable, of poor quality, or require substantial development in order to be reported. However, States and Territories have agreed to ongoing reporting of data on an annual basis, and to endeavour to make the improvements necessary for complete coverage of the indicators in future.

Government Service Review — Indigenous client data

The Indigenous Data Working Group of the Steering Committee for the Review of Commonwealth/State Service Provision (SCRCSSP) met for the first time in 2000 to progress the reporting of performance information on Indigenous clients of government services. The Steering Committee has requested that its Working Groups develop performance information that will provide an adequate assessment of service delivery and outcomes for Indigenous clients of government services.

The 2001 Report on Government Services (SCRCSSP 2001) included an overview of data development, outlining the need for improvements in the collection of the Indigenous identifier as the major data quality issue. Currently, there is a lack of data across all the sectors required to support reporting against the performance framework. However, where data are both available and of good quality, publication of performance information should proceed even though coverage across all jurisdictions may not be possible.

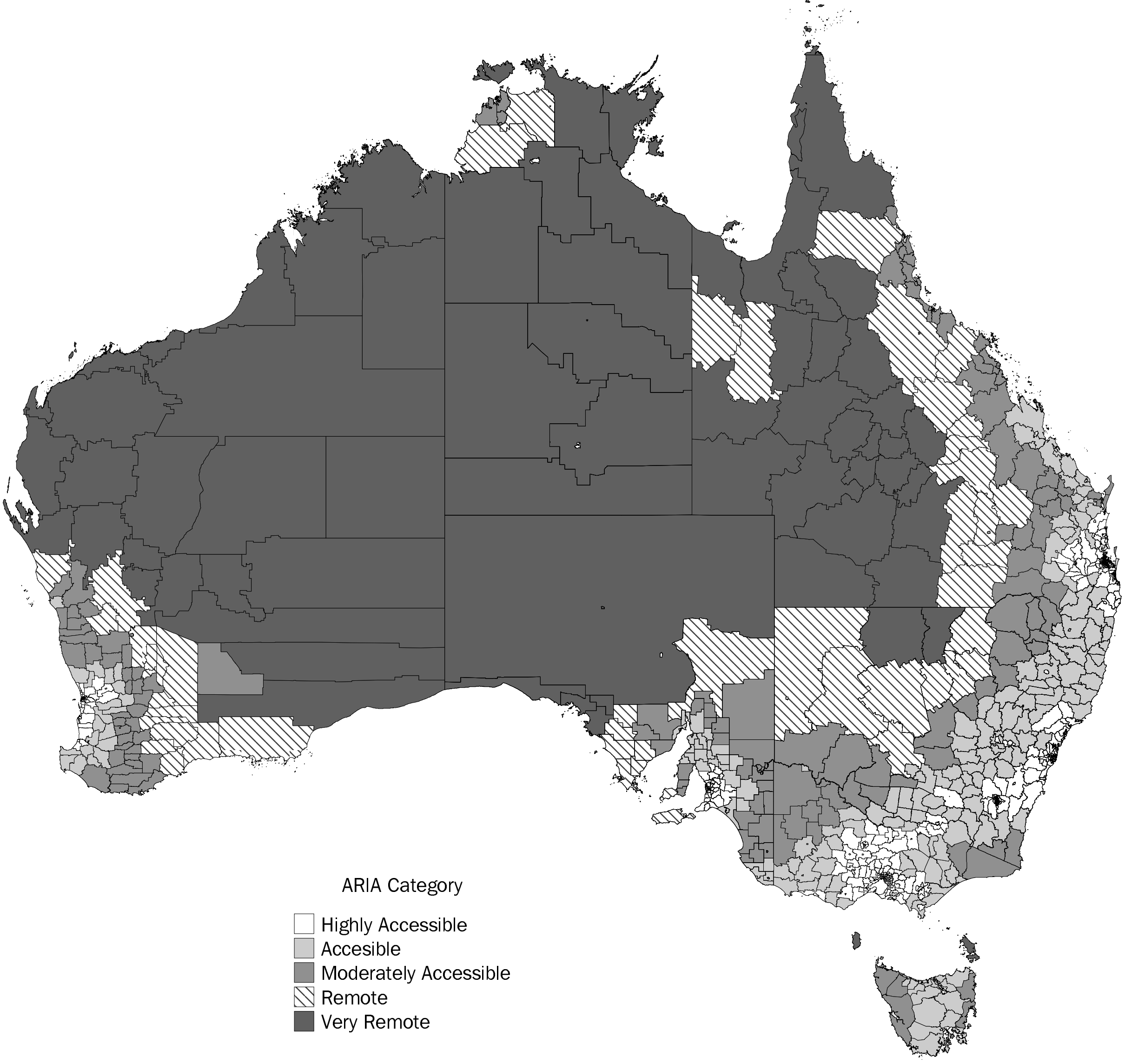
SUMMARY

The fundamental need for complete and consistent Indigenous identification in the range of collections used to measure the wellbeing of the Indigenous population, is being addressed and the level of attainment rising. The ABS standard question wording is recognised by the National Health Data Dictionary and National Community Services Data Dictionary, although the categories required for collection refer to the ABS output standard. Most jurisdictions have either updated their Indigenous identification questions to the ABS standard for birth registrations or have undertaken to do so, and most jurisdictions have adopted the ABS standard question wording on death registrations and medical cause of death forms. However, variation remains in the form and method of Indigenous identification in public hospital admissions. A number of developments are under way to improve the quality and completeness of Indigenous identification across the range of administrative data sources and the ABS and AIHW continue to work with each jurisdiction to improve recording.

To improve the analysis of Indigenous health and welfare, the quality of Indigenous population estimates is targeted for improvement through both the ABS Indigenous Enumeration Strategy and a range of Census evaluation activities, and 'experimental' intercensal Indigenous population estimates and projections are published. Also, a program of ABS national surveys has been put in place to deliver a range of information relevant to the health and welfare of Aboriginal and Torres Strait Islander people.

APPENDIX

A1 ARIA CLASSIFICATIONS



Source: ABS 2001b

A2 AGE LEFT SCHOOL(a)—1996

	Indigenous	*Non-Indigenous*
	%	%
14 and under	15.7	13.9
15	24.2	20.2
16	20.7	19.4
17	12.5	20.0
18	5.7	12.6
19	2.6	3.9
Still at school	6.0	4.8
Never attended school	2.8	0.7
Not stated	9.7	4.6
Total	**100.0**	**100.0**

(a) Persons aged 15 years and over. Excludes people for whom Indigenous status was not stated.

Source: ABS & AIHW 1999.

A3 HIGHEST POST-SCHOOL EDUCATIONAL QUALIFICATION(a)—1996

	Indigenous	*Non-Indigenous*
	%	%
Degree or higher	2.0	10.9
Diploma level	2.2	6.3
Skilled vocation	4.5	11.0
Basic vocation	1.9	3.0
No post school qualifications(b)	76.3	59.1
Not stated/inadequately described	13.0	9.7
Total	**100.0**	**100.0**

(a) Persons aged 15 years or more. Excludes people for whom Indigenous status was not stated.

(b) Includes persons with a qualification outside the scope of the Australian Bureau of Statistics Classification of Qualifications.

Source: ABS & AIHW 1999.

A4 OCCUPATION(a)—1996

	Indigenous	Non-Indigenous
	%	%
Managers and administrators	3.7	9.4
Professionals	10.2	17.3
Associate professionals	8.1	11.3
Tradespersons and related workers	11.1	13.1
Advanced clerical and service workers	2.2	4.3
Intermediate clerical, sales and service workers	17.0	16.0
Intermediate production and transport workers	9.7	8.6
Elementary clerical, sales and service workers	7.6	8.9
Labourers and related workers	24.3	8.6
Inadequately described	2.5	0.9
Not stated	3.5	1.6
Total	**100.0**	**100.0**

(a) Employed persons aged 15 years and over. Excludes those for whom Indigenous status was not stated.

Source: ABS & AIHW 1999.

A5 EMPLOYMENT SECTOR(a)—1996

	Indigenous	Non-Indigenous
	%	%
Government (b)	27.6	17.7
Private sector	52.9	80.0
CDEP(c)	14.9	. .
Not stated	4.6	2.3
Total	**100.0**	**100.0**

(a) Aged 15 years and over. Excludes people for whom Indigenous status and/or labour force status was not stated.

(b) Includes Commonwealth, State/Territory and local government.

(c) Community Employment Development Projects — not applicable for non-Indigenous persons.

Source: ABS & AIHW 1999.

A6 MEDIAN INDIVIDUAL INCOME, BY LABOR FORCE STATUS(a)—1996

	Indigenous	Non-Indigenous
	$	$
Employed—CDEP(b)	183	. .
Employed—other	407	493
Unemployed	123	113
Not in the labour force	155	145
Not stated	185	168
Total	**218**	**297**

(a) Persons aged 15 years and over. Excludes people for whom Indigenous status and/or labour force status was not stated.

(b) Community Employment Development Projects — not applicable for non-Indigenous persons.

Source: ABS & AIHW 1999.

A7 WEEKLY HOUSEHOLD INCOME—1996

	Indigenous	*Non-Indigenous*
	%	%
Nil	0.7	0.7
$1-–199	8.4	9.6
$200-–399	19.9	17.4
$400-–599	18.9	14.7
$600-–799	13.5	12.2
$800-–1 199	14.8	17.6
$1 200-–1 999	7.4	11.9
$2 000 and over	1.8	5.0
Insufficient information	14.8	10.8
Australia	**100.0**	**100.0**

Source: ABS & AIHW 1999.

A8 CENSUS COUNTS BY PLACE OF USUAL RESIDENCE, PERSONS OF TORRES STRAIT ISLANDER ORIGIN(a)(b)—1996

	no.	%
New South Wales	7 501	19.3
Victoria	3 102	8.0
Queensland (b)	21 132	54.4
South Australia	1 508	3.9
Western Australia	1 788	4.6
Tasmania	1 850	4.8
Northern Territory	1 769	4.6
Australian Capital Territory	180	0.5
Australia	**38 850**	**100.0**

(a) Includes the categories ‘Torres Strait Islander only’ and ‘Both Aboriginal and Torres Strait Islander’.

(b) Due to errors in data collection and processing, no data are available for Yam Island. It is estimated that at the time of the 1996 Census there were 150 Indigenous people on Yam Island, the majority of whom would be expected to be of Torres Strait Islander origin.

Source: ABS & AIHW 1999.

A9 AGE DISTRIBUTION, TORRES STRAIT ISLANDER AND ABORIGINAL POPULATIONS—1996

	Torres Strait Islander only, living in the Torres Strait area	*Torres Strait Islander only, not living in the Torres Strait area*	*Both Torres Strait Islander and Aboriginal*	*Aboriginal only*	*All Australia*
	%	%	%	%	%
0–14 years	41	37	44	40	22
15–34 years	31	34	32	36	30
35–54 years	18	20	17	18	28
55 years and over	10	9	7	6	20
Total	**100**	**100**	**100**	**100**	**100**
	no.	no.	no.	no.	no.
Total	**5 396**	**23 350**	**10 106**	**314 120**	**17 752 829**

Source: ABS & AIHW 1999.

A10 PROFICIENCY IN ENGLISH—1996

	Torres Strait Islander only, living in the Torres Strait area	*Torres Strait Islander only, not living in the Torres Strait area*	*Both Torres Strait Islander and Aboriginal*	*Aboriginal only*	*All Australia*
	%	%	%	%	%
Speaks English only	18	75	84	81	82
Speaks another language at home					
and speaks English well or very well	54	16	10	12	12
and speaks English not well or not at all	23	4	4	4	3
Total	*77*	*20*	*14*	*16*	*15*
Not stated	5	4	2	3	3
Total	**100**	**100**	**100**	**100**	**100**

Source: ABS & AIHW 1999.

A11 AGE LEFT SCHOOL(a)(b)—1996

	Torres Strait Islander only, living in the Torres Strait area	*Torres Strait Islander only, not living in the Torres Strait area*	*Both Torres Strait Islander and Aboriginal*	*Aboriginal only*	*All Australia*
	%	%	%	%	%
14 years or under	14	14	14	16	14
15 years	14	22	23	25	20
16 years	21	19	19	21	19
17 years	20	15	15	12	19
18 years or more	15	11	10	8	16
Still attending	6	7	7	6	5
Never attended	1	1	3	3	1
Not stated	10	11	10	10	7
Total	**100**	**100**	**100**	**100**	**100**

(a) Persons aged 15 years and over.

(b) Based on the question ‘How old was the person when he or she left primary or secondary school?’

Source: ABS & AIHW 1999.

A12 HIGHEST POST-SCHOOL EDUCATIONAL QUALIFICATION(a)—1996

	Torres Strait Islander only, living in the Torres Strait area	*Torres Strait Islander only, not living in the Torres Strait area*	*Both Torres Strait Islander and Aboriginal*	*Aboriginal only*	*All Australia*
	%	%	%	%	%
Has qualification					
Tertiary qualification(b)	3.0	4.5	4.1	4.2	16.5
Skilled vocational qualification	2.5	6.6	5.1	4.4	10.7
Basic vocational qualification	1.8	2.4	2.2	1.9	2.9
Total	*7.3*	*13.6*	*11.4*	*10.5*	*30.0*
No post-school qualification(c)	80.4	71.6	75.1	76.6	58.1
Inadequately described or not stated	12.3	14.8	13.5	12.9	11.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Persons aged 15 years and over.

(b) Includes associate diploma, undergraduate diploma, Bachelor degree, post-graduate diploma and higher degree.

(c) Includes persons with a qualification outside the scope of the Australian Bureau of Statistics Classification of Qualifications.

Source: ABS & AIHW 1999.

A13 PERSONAL INCOME(a)—1996

	Torres Strait Islander only, living in the Torres Strait area	*Torres Strait Islander only, not living in the Torres Strait area*	*Both Torres Strait Islander and Aboriginal*	*Aboriginal only*	*All Australia*
Median weekly income ($)	195	229	195	188	292
Proportion with income less than $300 per week (%)	68	60	65	68	51

(a) Persons aged 15 years and over.

Source: ABS & AIHW 1999.

A14 LABOUR FORCE STATUS(a)—1996

	Torres Strait Islander only, living in the Torres Strait area	*Torres Strait Islander only, not living in the Torres Strait area*	*Both Torres Strait Islander and Aboriginal*	*Aboriginal only*	*All Australia*
	%	*%*	*%*	*%*	*%*
Employed					
CDEP(b)	21	1	4	6	<1
Other	30	42	36	32	55
Total	*51*	*44*	*40*	*38*	*55*
Unemployed	5	10	12	12	6
Not in the labour force	41	43	45	45	37
Not stated	3	4	3	5	2
Total	**100**	**100**	**100**	**100**	**100**
Unemployment rate(c)	9	19	23	23	9
Participation rate(d)	56	54	51	50	60

(a) Persons aged 15 years and over.

(b) Community Development Employment Project scheme.

(c) Unemployed persons as a proportion of all persons in the labour force (that is, employed plus unemployed).

(d) Persons in the labour force (employed plus unemployed) as a proportion of all persons.

Source: ABS & AIHW 1999.

A15 CHARACTERISTICS OF TORRES STRAIT ISLANDER, ABORIGINAL, AND OTHER HOUSEHOLDS—1996

	Torres Strait Islander, in the Torres Strait area	*Torres Strait Islander, not in the Torres Strait area*	*Aboriginal*	*Other*	*Total Australian*
Average number of people per household (no.)	4.7	3.4	3.7	2.7	2.7
Households with more than two people per bedroom(a) (%)	24.0	5.2	7.6	0.8	1.0
Median weekly income ($)	618	538	539	632	630
Housing tenure (%)					
Owned/being purchased	13.6	38.2	30.2	70.7	70.0
Rented					
Private landlord	2.6	26.9	23.4	17.6	17.7
Government agency	14.3	19.4	23.9	5.1	5.4
Community/co-operative housing	31.0	5.6	10.3	0.4	0.5
Other	15.9	5.5	7.0	3.4	3.5
Total	*63.8*	*57.3*	*64.6*	*26.5*	*27.0*
Other /not stated	22.7	4.4	5.3	2.9	2.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Excludes dwellings where number of bedrooms was not stated. Bedsitters and dwellings with no bedrooms were treated as equivalent to one bedroom.

Source: ABS & AIHW 1999.

A16 UNDERGRADUATE COMMENCEMENTS, ENROLMENTS AND COMPLETIONS(a)

	1997 Completions		*1998 Commencements*		*1998 Enrolments*	
Field of Study	*no.*	*Indigenous as % of total*	*no.*	*Indigenous as % of total*	*no.*	*Indigenous as % of total*
Health						
Health, general	5	5.38	10	5.41	13	2.47
Dentistry(b)	—	—	1	0.34	6	0.53
Health support activities(c)	82	9.57	164	10.98	327	8.55
Health sciences and technologies(d)						
Nursing (basic or post-basic)	62	0.87	108	1.21	239	1.03
Other HST	10	0.54	30	0.96	55	0.64
Total HST	*72*	*0.80*	*138*	*1.14*	*294*	*0.92*
Medical science, medicine						
Medical science	—	—	2	0.36	3	0.20
Medicine	3	0.25	10	0.82	49	0.76
Total medical science, medicine	*3*	*0.20*	*12*	*0.68*	*52*	*0.65*
Rehabilitation services(e)	3	0.23	8	0.36	43	0.59
Total health	**165**	**1.26**	**333**	**1.84**	**735**	**1.4**
Welfare						
Counselling(f)	—	—	—	—	1	1.04
Social work	15	1.25	41	1.85	115	1.94
Welfare studies	23	4.50	21	3.07	62	3.36
Early childhood education(g)	49	3.52	101	4.24	207	3.11
Special education(h)	2	0.70	1	0.23	8	0.81
Total welfare	**89**	**2.62**	**164**	**2.85**	**393**	**2.53**

(a) For students identified as Indigenous.

(b) Includes dentistry and dental therapy.

(c) Includes health support activities (general), health administration, health counselling, health surveying and environmental health, and health support activities (other).

(d) Includes health sciences and technologies (general), nursing (basic), nursing (post-basic), medical radiography, medical technology, nutrition and dietetics, optometry, pharmacy, podiatry, and health sciences and technologies (other).

(e) Includes rehabilitation services (general), occupational therapy, physiotherapy, speech pathology/audiology, and rehabilitation services (other).

(f) Includes educational counselling and counselling (not health or educational).

(g) Includes early childhood education and post-initial early childhood education.

(h) Includes initial special teacher education and post-initial special teacher education.

Source: ABS & AIHW 1999.

A17 SMOKER STATUS(a)(b)—1995

	Indigenous	Non-Indigenous
	%	%
MALES		
Smoker	53.5	27.0
Ex-smoker	21.4	32.4
Never smoked	24.6	40.7
FEMALES		
Smoker	43.6	20.5
Ex-smoker	21.7	22.4
Never smoked	34.5	57.1

(a) Persons aged 18 years and over. Excludes people living in remote areas.

(b) Directly age-standardised to the 1991 Australian population.

Source: ABS data available on request, NHS 1995.

A18 ALCOHOL CONSUMPTION AND RISK LEVEL(a)(b)(c)—1995

	Indigenous	Non-Indigenous
	%	%
MALES		
Drinks alcohol(d)	55.3	65.7
Low risk level	32.8	55.3
Medium risk level	10.8	5.4
High risk level	11.7	5.0
FEMALES		
Drinks alcohol(d)	33.2	45.8
Low risk level	27.1	39.7
Medium risk level	3.3	4.8
High risk level	2.9	1.3

(a) Persons aged 18 years and over. Excludes people living in remote areas.

(b) Directly age-standardised to the 1991 Australian population.

(c) Refer to the Glossary for definition of risk levels.

(d) Refers to consumption of alcohol in the week prior to the survey.

Source: ABS data available on request, NHS 1995.

A19 ESTIMATES AND PROJECTIONS OF THE INDIGENOUS POPULATION—1991–2006

Year	*New South Wales*	*Victoria*	*Queensland*	*South Australia*	*Western Australia*	*Tasmania*	*Northern Territory*	*Australian Capital Territory*	***Australia(a)***
ESTIMATED RESIDENT POPULATION									
1991	97 784	20 259	93 191	19 809	50 891	13 783	46 874	2 614	**345 381**
1992	100 027	20 678	95 341	20 204	51 859	14 058	47 850	2 699	**352 897**
1993	102 375	21 127	97 590	20 633	52 873	14 351	48 817	2 785	**360 736**
1994	104 799	21 586	99 884	21 083	53 910	14 654	49 788	2 872	**368 765**
1995	107 284	22 073	102 257	21 557	55 031	14 975	50 811	2 964	**377 146**
1996	*109 925*	*22 598*	*104 817*	*22 051*	*56 205*	*15 322*	*51 876*	*3 058*	***386 049***
PROJECTED POPULATION — LOW SERIES (b)									
1996	*109 925*	*22 598*	*104 817*	*22 051*	*56 205*	*15 322*	*51 876*	*3 058*	***386 049***
1997	112 167	23 002	107 558	22 503	57 263	15 581	52 782	3 161	**394 214**
1998	114 411	23 403	110 324	22 953	58 321	15 841	53 687	3 266	**402 404**
1999	116 652	23 801	113 111	23 405	59 382	16 106	54 587	3 372	**410 615**
2000	118 895	24 195	115 919	23 857	60 441	16 373	55 480	3 480	**418 841**
2001	121 142	24 586	118 749	24 313	61 505	16 644	56 364	3 589	**427 094**
2002	123 405	24 974	121 601	24 770	62 577	16 917	57 236	3 699	**435 381**
2003	125 692	25 363	124 473	25 229	63 658	17 193	58 096	3 809	**443 715**
2004	128 006	25 753	127 375	25 692	64 752	17 470	58 944	3 921	**452 114**
2005	130 348	26 145	130 311	26 161	65 857	17 747	59 780	4 034	**460 583**
2006	132 716	26 541	133 288	26 633	66 976	18 023	60 610	4 149	**469 135**
PROJECTED POPULATION — HIGH SERIES (b)									
1996	*109 925*	*22 598*	*104 817*	*22 051*	*56 205*	*15 322*	*51 876*	*3 058*	***386 049***
1997	117 912	23 541	111 004	22 969	58 342	16 727	53 147	3 377	**407 216**
1998	126 402	24 507	117 454	23 907	60 522	18 257	54 416	3 723	**429 386**
1999	135 421	25 496	124 174	24 866	62 744	19 923	55 680	4 099	**452 602**
2000	144 994	26 507	131 169	25 848	65 005	21 739	56 928	4 508	**476 899**
2001	155 159	27 540	138 446	26 852	67 313	23 715	58 162	4 950	**502 339**
2002	165 958	28 595	146 010	27 878	69 669	25 863	59 377	5 428	**528 981**
2003	177 433	29 677	153 865	28 927	72 076	28 196	60 570	5 944	**556 891**
2004	189 629	30 784	162 029	29 999	74 534	30 731	61 738	6 504	**586 151**
2005	202 579	31 918	170 515	31 098	77 042	33 480	62 885	7 110	**616 830**
2006	216 323	33 079	179 338	32 220	79 600	36 465	64 015	7 766	**649 009**

(a) Includes Jervis Bay Territory.

(b) See text for details about ‘low series’ and ‘high series’ estimates and projections.

Source: ABS 1998c, ABS 1998d.

A20 EXPERIMENTAL ESTIMATED RESIDENT POPULATION—30 JUNE 1996

Age group (years)	*Aboriginal(a)*	*Torres Strait Islander(a)*	*Aboriginal and Torres Strait Islander*	***Total Indigenous***
		MALES		
0–4	25 049	2 228	986	**28 263**
5–9	24 028	2 028	828	**26 884**
10–14	21 012	1 867	698	**23 577**
15–19	17 058	1 573	510	**19 141**
20–24	16 149	1 434	466	**18 049**
25–29	14 464	1 248	394	**16 106**
30–34	12 354	1 074	321	**13 749**
35–39	10 507	946	324	**11 777**
40–44	8 338	820	246	**9 404**
45–49	6 498	719	189	**7 406**
50–54	4 641	489	159	**5 289**
55–59	3 204	395	96	**3 695**
60–64	2 382	332	80	**2 794**
65–69	1 567	247	57	**1 871**
70–74	927	150	35	**1 112**
75+	1 092	208	51	**1 351**
Total	*169 270*	*15 758*	*5 440*	***190 468***
		FEMALES		
0–4	24 282	2 137	899	**27 318**
5–9	22 719	1 980	780	**25 479**
10–14	20 441	1 722	705	**22 868**
15–19	16 829	1 494	550	**18 873**
20–24	16 672	1 420	496	**18 588**
25–29	15 915	1 242	478	**17 635**
30–34	13 763	1 070	377	**15 210**
35–39	11 665	923	293	**12 881**
40–44	9 082	893	243	**10 218**
45–49	6 986	710	216	**7 912**
50–54	4 822	476	153	**5 451**
55–59	3 611	408	112	**4 131**
60–64	2 772	357	104	**3 233**
65–69	2 055	283	62	**2 400**
70–74	1 220	195	48	**1 463**
75+	1 542	283	96	**1 921**
Total	*174 376*	*15 593*	*5 612*	***195 581***

(a) Excludes those people who identified as both Aboriginal and Torres Strait Islander origin.

Source: ABS data available on request.

A21 INDIGENOUS IDENTIFIER, BIRTH AND PERINATAL COLLECTIONS

			Question asked about		
	Question wording	*Possible responses*	*Mother*	*Father*	*Child*
	BIRTH REGISTRATION FORM				
New South Wales	Is the mother/father of Aboriginal or Torres Strait Islander origin? (For persons of mixed origin, tick both "Yes" boxes).	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N
Victoria	Is mother/father of Aboriginal or Torres Strait Islander Origin? (If of both Aboriginal and Torres Strait Islander origin, tick both 'Yes' boxes)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N
Queensland	Is the mother/father of Aboriginal or Torres Strait Islander origin? (If of both Aboriginal and Torres Strait Islander origin, tick both YES boxes)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N
South Australia	Is the mother/father of Aboriginal or Torres Strait Islander origin? (For persons of mixed origin, tick both "Yes" boxes).	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N
Western Australia	Is the mother/father of Aboriginal or Torres Strait Islander origin? (if of both Aboriginal and Torres Strait Islander origin, cross both 'Yes' boxes)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N
Tasmania	Is the mother/father of Aboriginal or Torres Strait Islander origin? (If of both Aboriginal and Torres Strait Islander origin, tick both 'Yes' boxes.)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N
Northern Territory	Is the child/mother/father of Australian Aboriginal or Torres Strait Islander Origin?	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	Y
Australian Capital Territory	Are the parents of Aboriginal or Torres Strait Islander origin? (if both tick both "yes" boxes) Mother: Father:	No Yes, Aboriginal origin Yes, Torres Strait Islander origin	Y	Y	N

A21 INDIGENOUS IDENTIFIER, BIRTH AND PERINATAL COLLECTIONS—*continued*

	Question wording	*Possible responses*	*Question asked about* *Mother*	 *Father*	 *Child*
		PERINATAL COLLECTION			
New South Wales	Indigenous status:	Aboriginal Torres Strait Islander Aboriginal and Torres Strait Islander None of the above	Y	N	N
Victoria	Aboriginal: (Mother)	No Aboriginal Torres Strait Islander	Y	N	N
Queensland	Ethnic origin:	Caucasian/European Australian Aboriginal Torres Strait Islander Asian Other (specify)	Y	N	N
South Australia	Race:	Caucasian Aboriginal Asian Torres Strait Islander (TSI) Aboriginal and TSI Other	Y	N	N
Western Australia	Ethnic origin:	Caucasian Aboriginal/TSI Other: (blank line)	Y	N	N
Tasmania	No actual question. A series of tick boxes is provided.(a)	Aboriginal Aboriginal/Torres St. Islander Torres St. Islander Other	Y	N	N
Northern Territory	Aboriginality:	Aboriginal Non Aboriginal	Y	N	Y
Australian Capital Territory	Ethnic origin (Mother)	Aboriginal Non Aboriginal	Y	N	N

(a) Tasmanian perinatal collections officer instructs all midwives to ask the ABS standard question on Indigenous status.

Source: Information provided by State and Territory Health Departments and Registrars-General.

A22 INDIGENOUS IDENTIFIER, DEATH REGISTRATION AND MEDICAL CAUSE OF DEATH FORMS

	Question wording	*Possible responses*
	DEATH NOTIFICATION FORM	
New South Wales	Was the deceased of Aboriginal or Torres Strait Islander origin? (For persons of mixed origin, tick both "Yes" boxes).	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
Victoria	Was the deceased of Aboriginal or Torres Strait Islander origin?	Yes No
Queensland	Was the deceased of Aboriginal or Torres Strait Islander origin? (If of both Aboriginal and Torres Strait Islander origin, tick both "Yes" boxes.)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
South Australia	Was the deceased of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
Western Australia	Was the deceased of Aboriginal or Torres Strait Islander origin? (if of both Aboriginal and Torres Strait Islander origin, corss both 'Yes' boxes)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
Tasmania	Was the deceased of Aboriginal or Torres Strait Islander origin? (If of both Aboriginal and Torres Strait Islander origin, tick both "Yes" boxes.)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
Northern Territory	Was the deceased of Australian Aboriginal or Torres Strait Islander Origin?	No Yes, Australian Aboriginal or Yes, Torres Strait Islander origin
Australian Capital Territory	Was the deceased of Aboriginal or Torres Strait Islander origin? (If both tick both "yes" boxes)	No Yes, Aboriginal origin Yes, Torres Strait Islander
	MEDICAL CERTIFICATE CAUSE OF DEATH FORM	
New South Wales	Was the deceased of Aboriginal or Torres Strait Islander origin? (For perons of both Aboriginal and Torres Strait origin, mark both "Yes" boxes).	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
Victoria	Was the deceased of Aboriginal or Torres Strait Islander origin?	blank line
Queensland	Was the deceased of Aboriginal or Torres Strait Islander origin? (If of both Aboriginal and Torres Strait Islander origin, tick both "Yes" boxes.)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
South Australia	Of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal T.S.I.
Western Australia	Aboriginal	Yes No
Tasmania	Was the deceased of Aboriginal or Torres Strait Islander origin? (If of both Aboriginal and Torres Strait Islander origin, tick both "Yes" boxes.)	No Yes, Aboriginal origin Yes, Torres Strait Islander origin
Northern Territory	Was the deceased of Australian Aboriginal origin? 'Was the deceased of Torres Strait Islander origin?	Yes No
Australian Capital Territory	Was the deceased of Aboriginal or Torres Strait Islander origin (if both tick both "yes" boxes)?	No Yes, Aboriginal origin Yes, Torres Strait Islander

Source: Information provided by State and Territory Health Departments and Registrars-General.

A23 INDIGENOUS IDENTIFIER, PUBLIC HOSPITAL ADMISSIONS(a)

State/Territory	*Question wording*	*Possible responses*
New South Wales	Indigenous status:	Aborigine Torres Strait Is. Both A & TSI Neither A or TSI
Victoria	Are you/is the person/is (name)/of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal Yes, Torres Strait Islander
Queensland	Indigenous status(b)	(blank box)
South Australia	Race:	Caucasian Aboriginal Asian Other TSI Both A & TSI Unknown
Western Australia	Indigenous status:(c)	Abor not TSI TSI not Abor Abor and TSI Other
Tasmania	Are you of Aboriginal or Torres Strait origin?	Aboriginal Torres Strait Islander Aboriginal/Torres Strait Not applicable Not stated
Northern Territory	Race: please circle one of the following categories;	Aboriginal but not Torres Strait Islander Torres Strait Islander but not Aboriginal Aboriginal and Torres Strait Islander Not Aboriginal or Torres Strait Islander Not stated
Australian Capital Territory	Origin:	Australian Non-Aboriginal Australian Aboriginal European Asian Other

(a) Different forms or computer entry screens may be in use in different hospitals within a State or Territory.

(b) Queensland Health has instructed hospitals to use the ABS standard question.

(c) Health Department (Western Australia) have instructed staff to ask 'Are you of Aboriginal or Torres Straight Islander descent?'.

Source: Information provided by State and Territory Health Departments.

A24 INDIGENOUS IDENTIFIER, SELECTED COMMUNITY SERVICES COLLECTIONS

	Question wording	*Possible responses*
Child care		
Census of Child Care Services (Children's Services Program)	Additional needs/cultural background:	'Aboriginal or Torres Strait Islander background' is one of several options.
Child welfare and protection		
New South Wales	Aboriginality	Yes No Unknown
Victoria	Aboriginal/Torres Strait (a)	Yes No Unknown
Queensland	not available	
South Australia	Cultural group: Abor Clan group:	'Aboriginal or Torres Strait Islander' is one of ten options, including 'unknown'.
Western Australia	About child:(b)	Indigenous Non-Indigenous Unknown
Tasmania	Is the child, young person, baby's mother, or baby's father of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal Yes, Torres Strait Islander Not Stated
Northern Territory	Ethnicity:	Aboriginal Torres Strait Islander Aboriginal and Torres Strait Islander Neither Aboriginal or Torres Strait Islander Not stated
Australian Capital Territory	Ethnicity of mother/father: Aboriginal/TSI?	Yes No
Housing assistance		
Supported Accommodation Assistance Program (SAAP) National Data Collection Agency Client Collection	Does the client identify as being of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal person yes, Torres Strait Islander person yes, both
Correctional services		
National Prisoner Census	Aboriginality: The racial origin group to which the person considers him/herself to belong.	Aboriginal Torres Strait Islander(c) Non-Aboriginal Unknown/Not stated
Disability support services		
Commonwealth-State Disability Agreement (CSDA) Minimum Data Set Consumer Form 1999	Are you (the consumer) of Indigenous origin?	Yes, of Aboriginal origin Yes, of Torres Strait Islander origin No Not known

	Question wording	*Possible responses*
Aged care services		
Home and Community Care (HACC) Service Users Characteristics(d)	Are you of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal Yes, Torres Strait Islander
Aged Care Assessment Program Minimum Data Set (residential aged care)	Are you of Aboriginal or Torres Strait Islander origin?	No Yes, Aboriginal Yes, Torres Strait Islander

(a) Indigenous status may be left unknown until case is subsantiated, but must be recorded as Yes or No if case substantiated, or case closed without substantiation.

(b) No specific question is asked. A field officer may indicate a child's Indigenous status (based on the field officer's own assessment) on an intake form.

(c) Instructions specify that if Torres Strait Islanders are not separately identified, they should be coded as Aboriginal.

(d) A HACC Minimum Data Set, which includes the ABS standard question on Indigenous status, was implemented in 2001.

Source: ABS 2001f; AIHW 2000a; information provided by State and Territory community service agencies and the Australian Institute of Health and Welfare.

EXPLANATORY NOTES

INTRODUCTION

1 Information in this publication is drawn from many sources, including the Census of Population and Housing, a number of surveys conducted by the Australian Bureau of Statistics (ABS) and other organisations, and from a variety of administrative data sources. A brief description of the surveys conducted by the ABS is provided in the following paragraphs. The terms used in each survey are explained in the glossary. Additional sources referenced within the publication are listed in the reference list.

2 The tenth Revision of the International Statistical Classification of Diseases and Related Health Problems, and its use in hospital separations data and in deaths registrations is described below.

CENSUS OF POPULATION AND HOUSING

3 The main objective of the Census of Population and Housing is to measure the number of people in Australia and their key characteristics, at a given point in time. The Census is a count of the whole population, and provides a reliable basis for making future estimates of the population of each State, Territory and local government area. These population estimates are used for the distribution of government funds, and to determine the number of seats per State and Territory in the Commonwealth Parliament. In addition, the knowledge of the characteristics of the population gained through the Census is used to support the planning, administration and policy development activities of governments, businesses and other users.

4 The Census is the largest statistical collection undertaken by the ABS and is conducted every five years. Due to the unavailability of results from the 2001 Census at the time of writing, results from the thirteenth census, conducted on 6 August 1996, are used in this publication.

COMMUNITY HOUSING AND INFRASTRUCTURE NEEDS SURVEY (CHINS)

5 The 1999 CHINS was conducted by the ABS on behalf of the Aboriginal and Torres Strait Islander Commission. The survey collected housing and management information from Aboriginal and Torres Strait Islander housing organisations, and a range of community infrastructure information for those locations identified as discrete Indigenous communities (see Glossary).

6 The 1999 CHINS was not the first survey carried out on Indigenous community housing and infrastructure. In 1992, ATSIC commissioned the Housing and Community Infrastructure Needs Survey (HCINS) which collected housing and infrastructure information from Aboriginal and Torres Strait Islander people across Australia. However, the data collection methods employed by the HCINS varied between jurisdictions, affecting attempts to aggregate the data at a national level. There are also differences between the methodologies and definitions used in the 1992 HCINS and the 1999 CHINS, which prevent comparisons between the results of the two surveys being made. An ABS technical paper discussing these issues in more detail will be available later this year.

COMMUNITY HOUSING AND INFRASTRUCTURE NEEDS SURVEY (CHINS) *continued*

7 The 2001 CHINS, to be conducted in conjunction with the 2001 Census of Population and Housing, will collect information which will allow a comparison of housing conditions, community infrastructure and access to services, for 1999 and 2001.

8 For further information about CHINS, see ABS 2000f, or contact the ABS National Centre for Aboriginal and Torres Strait Islander Statistics in Darwin, which manages the data on behalf of the Aboriginal and Torres Strait Islander Commission.

NATIONAL ABORIGINAL AND TORRES STRAIT ISLANDER SURVEY (NATSIS)

9 The NATSIS was the first national survey of Australia's Indigenous people and was part of the government response to a recommendation by the Royal Commission into Aboriginal Deaths in Custody. It was primarily designed to provide information at the national level on the social, demographic, economic and health status of Indigenous people and was conducted by the ABS in 1994.

10 Prior to, and during, the development stages of the survey, there was widespread consultation with Indigenous people and organisations to ensure that the information collected was relevant to Indigenous people and was collected in a culturally appropriate manner.

11 The survey was based on personal interviews with a sample of Indigenous people selected according to a methodologically sound random sampling design. Indigenous people were recruited and trained to interview the 15,700 Indigenous people selected in the sample. For children under 13 years of age, information was provided by an adult responsible for the child, and children between 13 and 17 years old were interviewed with the parent's or guardian's consent. A subset of questions was asked of any non-Indigenous people in the household. A sample of prisoners was included in the survey to ensure that estimates would reflect the characteristics and attitudes of all Indigenous people, including those in prison.

12 The questionnaire covered the areas of family and culture, health, housing, education and training, employment and income, and law and justice.

13 More information on the survey is available in ABS 1995.

NATIONAL HEALTH SURVEY (NHS)

14 The 1995 NHS was conducted throughout the 12-month period February 1995 to January 1996. The survey was designed to obtain national benchmark information on a range of health-related issues, and to enable the monitoring of trends in health over time.

NATIONAL HEALTH SURVEY (NHS) *continued*

15 In the course of the survey, information about health status, health actions and health-related behaviours was obtained from a sample of nearly 55,000 residents of private and non-private dwellings. A private dwelling was defined as a house, flat, home unit, caravan, garage, tent and any other structure being used as a private place of residence at the time of the survey, including improvised dwellings. Non-private dwellings included hotels and motels, hostels, boarding houses and caravan parks. Hospitals, nursing homes and convalescent homes were excluded from the survey, as were prisons, reformatories and single quarters of military establishments.

16 Households were selected at random, using a stratified multi-stage area sample, which ensured that persons within each State and Territory had a known and, in the main, equal chance of selection in the survey. At the request of health authorities in Victoria, South Australia, the Northern Territory and the Australian Capital Territory, the survey sample in those areas was increased to enhance the reliability of estimates.

17 To enhance the reliability of estimates for the Indigenous population and facilitate direct comparisons with the health characteristics of non-Indigenous Australians, a supplementary sample of around 1,000 Indigenous respondents was obtained for the survey, bringing the total sample of Indigenous persons responding to the survey to approximately 2,000. Indigenous results from the NHS reported in this publication include records from all Indigenous respondents with adequately completed forms, with the exception of those living in remote areas. This is in contrast to results from the NHS used in this publication for the non-Indigenous sample, where records that did not form part of fully responding households were deleted.

18 Due to concerns about the data quality of some of the responses from Indigenous participants living in remote areas, and after an extensive investigation into the issue, the statistics in this publication exclude responses from all people, Indigenous and non-Indigenous, living in those areas identified by the ABS as being sparsely settled (see Glossary).

19 For more information, see ABS 1999c.

NATIONAL NUTRITION SURVEY

20 The National Nutrition Survey was conducted by the ABS between February 1995 and March 1996. The survey was a joint project of the ABS and the Commonwealth Department of Health and Family Services, and involved a sub-sample of respondents in the 1995 NHS. Information about food and nutrition consumption habits was collected from approximately 13,800 people aged two years and over. There were too few Aboriginal and Torres Strait Islander participants to allow for separate Indigenous estimates.

21 More information on the survey is available in ABS 1997c.

TENTH REVISION OF INTERNATIONAL CLASSIFICATION OF DISEASES (ICD-10)

22 Previous publications in this series reported hospital separations and procedures using the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). This edition uses the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM). The ICD-10-AM classification was developed by the National Centre for Classification in Health.

23 ICD-10-AM has been used by New South Wales, Victoria, the Australian Capital Territory and the Northern Territory since July 1998, and by the other States from July 1999. For the 1998–99 hospital data presented in this report, the Australian Institute of Health and Welfare (AIHW) mapped the data reported in ICD-9-CM to ICD-10-AM, in a single national dataset (AIHW 2000c).

24 ICD-10-AM has 21 chapters covering diseases and external causes, and a supplementary chapter on factors influencing health status and contact with health services. These chapters generally have the same subject matter as those of ICD-9-CM. The order of the chapters has changed slightly and the ICD-9-CM chapter on ‘Diseases of the nervous system and sense organs’ has been divided into ‘diseases of the nervous system’, ‘diseases of the eye and adnexa’, and ‘diseases of the ear and mastoid process’. Some diseases and conditions have been relocated (see AIHW 2000c).

25 The ICD-10-AM procedures classification is not based on the ICD-9-CM procedures classification, and so cannot be easily compared with it, although the chapter structure is broadly similar. ‘Dental services’ have been separated from ‘procedures on the nose, pharynx, and mouth’. A separate chapter for ‘procedures on the breast’ has been introduced, whereas previously these procedures were classified under ‘operations on the integumentary system’. Procedures previously classified under the ICD-9-CM chapter on ‘miscellaneous diagnostic and therapeutic procedures’ have been split into chapters on ‘chemotherapeutic and radiation oncology’, imaging services, allied health interventions, and ‘non-invasive, cognitive and interventions not elsewhere classified’. In addition, some procedures in ICD-10-AM are categorised under a different body system to that used for ICD-9-CM (see AIHW 2000c).

26 The tenth revision of the International Classification of Diseases (ICD-10) was adopted for Australian use for deaths registered from 1 January 1999. However, to identify changes between the ninth and tenth revisions, deaths for 1997 and 1998 have been coded to both revisions. In this publication, ‘underlying cause of death’ data for 1997–99, have been coded to the tenth revision. The introduction of ICD-10 has broken the ‘underlying cause of death’ series, particularly at the more detailed level of classification.

TENTH REVISION OF INTERNATIONAL CLASSIFICATION OF DISEASES (ICD-10) *continued*

27 For more information on the differences between ICD-9 and ICD-10, in relation to death registration data, see ABS 1997a.

28 All 'multiple cause of death' data in this publication are coded to the tenth revision. For 'underlying cause of death', accidental and violent deaths are classified according to the external cause, that is, to the circumstances of the accident or violence which produced the fatal injury, rather than to the nature of the injury.

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Services
AHL	Aboriginal Hostels Limited
AHMAC	Australian Health Ministers' Advisory Council
AHS	Australian Housing Survey
AIDS	Acquired Immune Deficiency Syndrome
AIHW	Australian Institute of Health and Welfare
ANZDATA	The Australia and New Zealand Dialysis and Transplant Registry
AP	Anangu Pitjantjatjara
ARIA	Accessibility/Remoteness Area Index
ASCO	Australian Standard Classification of Occupations
ASGC	Australian Standard Geographical Classification
ATSIC	Aboriginal and Torres Strait Islander Commission
ATSIHWIU	Aboriginal and Torres Strait Islander Health and Welfare Information Unit
AVGAS	Aviation Gasoline
BEACH	Bettering the Evaluation and Care of Health
BMI	Body mass index
CD	Collection District
CDEP	Community Development Employment Projects
CDHAC	Commonwealth Department of Health and Aged Care
CHINS	Community Housing and Infrastructure Needs Survey
CSDA	Commonwealth/State Disability Agreement
CSHA	Commonwealth/State Housing Agreement
CSMAC	Community Services Ministers' Advisory Council
CSP	Children’s Services Program
CVD	Cardiovascular Disease
DFaCS	Department of Family and Community Services
DHFS	Department of Health and Family Services
ERP	Estimated Resident Population
ESRD	End stage renal disease
GP	General medical practitioner
GSS	General Social Survey
GPSCU	General Practice Statistics and Classification Unit
HACC	Home and Community Care
HAHU	Heads of Aboriginal Health Units
HCINS	Housing and Community Infrastructure Needs Survey
HIV	Human Immunodeficiency Virus
HREOC	Human Rights and Equal Opportunity Commission
ICD	International Classification of Diseases
ICD-9-CM	International Classification of Diseases, ninth revision, clinical modification
ICD-10-AM	International Classification of Diseases, tenth revision, Australian modification
IES	Indigenous Enumeration Strategy
ISS	Indigenous Social Survey
MACS	Multifunctional Aboriginal Children’s Services
MBS	Medical Benefits Scheme

ABBREVIATIONS *continued*

NACCHO	National Aboriginal Community Controlled Health Organisations
NATSIS	National Aboriginal and Torres Strait Islander Survey
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NDARC	National Alcohol and Drug Research Centre
NDS	National Drug Strategy
NDSHS	National Drug Strategy Household Survey
nec	not elsewhere classified
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NHS(I)	National Health Survey (Indigenous)
NIHIIC	National Indigenous Housing Information Implementation Committee
NHIMG	National Health Information Management Group
NIHIP	National Indigenous Health Information Plan (also known as the National Aboriginal and Torres Strait Islander Health Information Plan)
NMDS	National Minimum Data Sets
NNDSS	National Notifiable Diseases Surveillance System
NNS	National Nutrition Survey
NPHP	National Public Health Partnership
OATSIH	Office for Aboriginal and Torres Strait Islander Health (part of CDHAC)
PBS	Pharmaceutical Benefits Scheme
PES	Post Enumeration Survey
RRMA	Rural, Remote and Metropolitan Areas Classification
SAAP	Supported Accommodation Assistance Program
SCRCSSP	Steering Committee for the Review of Commonwealth/State Service Provision
SLA	Statistical Local Area
SMR	Standardised Mortality/Morbidity Ratio
WHO	World Health Organization
. .	Not applicable
—	Nil or rounded to zero

GLOSSARY

Aboriginal	A person who identifies himself or herself to be of Aboriginal origin. See also Indigenous.
Aboriginal and Torres Strait Islander Commission (ATSIC) Region	ATSIC Regions are legally prescribed areas for the purposes of administration by the Commission and for the election of members to that Commission. At the time of the 1996 Census, there were 36 ATSIC Regions, which together covered all of Australia.
Accessibility/Remoteness Index of Australia (ARIA)	The Accessibility/Remoteness Index of Australia (ARIA) was developed to provide a standard measure of the relative degree of remoteness of all parts of Australia. It was commissioned by the Commonwealth Department of Health and Aged Care, and constructed by the National Key Centre for Social Applications of Geographical Information Systems at the University of Adelaide. The index measures remoteness in terms of distance by road from population centres offering a range of services, such as education and health services (CDHAC 1999). The population of the service centre is used as an indicator for the availability of services, while distance from service centres is used as a proxy for the degree of remoteness from those centres (ABS 2001b). Areas are grouped into five categories: ‘highly accessible’, ‘accessible’, ‘moderately accessible’, ‘remote’ and ‘very remote’. Map A1 shows the ARIA classification by Collection District (CD—see below) for Australia. ARIA categories, as presented in this publication for ABS census are calculated at the Collection District level by taking the average ARIA score across a CD, while for 1999 CHINS, and OATSIH and NACCHO-sourced data, ARIA categories are constructed from ARIA index values calculated for the exact location of the community. The ABS has incorporated the concepts of ‘urban/rural’ and ‘remoteness’ within the Australian Standard Geographical Classification (ASGC). The ARIA categories are included in the 2001 edition of the Australian Standard Geographical Classification (ASGC).
Accessible	Category of the ARIA classification (see above). Areas in the accessible category have an ARIA score of 0.2 to 2.39. In these areas, geographic distance imposes some restriction upon accessibility to the widest range of goods, services and opportunities for social interaction.

Alcohol consumption Measures related to alcohol consumption vary from survey to survey.

In the National Aboriginal and Torres Strait Islander Survey, participants were asked: 'How long ago was the last time you had a drink of alcohol?' Possible answers ranged from 'during the last week' to '12 months ago or more', or 'never'. No information was collected about the amount of alcohol consumed.

In the National Health Survey, risk level was derived from the reported average daily consumption of alcohol during the week prior to interview, and grouped into relative risk levels as defined by the National Health and Medical Research Council as follows:

CONSUMPTION PER DAY

	Males	*Females*
Relative risk	*mls*	*mls*
Low	Less than 50	Less than 25
Moderate	50–75	25–50
High	Greater than 75	Greater than 50

Risk level as defined by the National Health and Medical Research Council is based on regular consumption levels of alcohol. Indicators derived in the National Health Survey do not take into account whether consumption in the reference week was more, less, or the same as usual, or whether consumption was regular.

Before/after school care Also known as Outside School Hours Care. Provides care for school-aged children before and/or after school during the school term.

Body mass index (BMI) A person's weight in kilograms (kg) divided by the square of his or her height in metres (m), that is, kg/m^2. BMI was based on measured height and weight in the National Aboriginal and Torres Strait Islander Survey and self-reported height and weight in the National Health Survey. Persons were categorised into one of four groups according to their BMI. The groups used are consistent with recommendations of the National Health and Medical Research Council.

BODY MASS INDEX

Underweight	Less than 20
Acceptable	20–25
Overweight	Greater than 25–30
Obese	Greater than 30

Bounded Locality See Section of State.

Capital city All State and Territory capital city Statistical Divisions.

Care and protection orders	Includes children 'for whom the community services department has a responsibility as a result of some formal legal order or an administrative/voluntary arrangement. Only orders issued for protective reasons are included' (AIHW 1998, p. 85). This definition is more inclusive than what was used in previous years, so results presented here are not comparable with results from years prior to 1997 (see AIHW 1998 and 1999b for more details).
Closed support periods	Support periods that had finished before the end of the reporting period.
Collection district (CD)	The Census Collection District (CD) is the smallest geographical area defined in the Australian Standard Geographical Classification (ASGC). It has been designed for use in the Census of Population and Housing as the smallest unit for collection, processing and output of data (except Work Destination Zones). CDs also serve as the basic building block in the ASGC and are used for the aggregation of statistics to larger ASGC areas, and some census-specific areas, such as Commonwealth and State electoral divisions and CD-derived Postal Areas (ABS 1996a).
Community Development Employment Projects (CDEP)	The CDEP scheme enables members of Aboriginal and Torres Strait Islander communities to exchange unemployment benefits for opportunities to undertake work and training in activities which are managed by a local Aboriginal or Torres Strait Islander community organisation. The CDEP scheme is funded and supported through the Aboriginal and Torres Strait Islander Commission, which provides grants to participating community organisations to employ community members.
Community health centre	A facility that provides a range of medical and health related services to the community. The centre may also provide advice to people on issues such as sexually tansmitted diseases, immunisation and family planning. In remote areas not all of these services may be available, but the centre would usually have nurses, health workers and/or doctors in regular attendance.
Congenital malformation	Structural or anatomical abnormalities that are present at birth, usually resulting from abnormal development in the first three months of pregnancy.
Dialysis (haemodialysis, peritoneal dialysis)	A treatment for end stage renal disease, where the work of the kidneys is performed artificially. In haemodialysis, the patient's blood is passed through a semi-permeable tube where it is cleansed and pumped back into the body. Haemodialysis needs to be performed a few times a week for several hours at a time, either at a hospital/clinic, or at home. In peritoneal dialysis, the patient's abdomen is used instead of the tube. Fluid is passed into the abdomen via a semi-permanent catheter. As the patient's blood is cleansed, the fluid is drained and refilled, using gravity. This takes place 4–5 times daily. Continuous ambulatory peritoneal dialysis, where the patient is able to move around, is the most common form of peritoneal dialysis. It can be performed either at home or in a hospital/clinic.

Discrete Indigenous community	A geographical location with a physical or legal boundary that is inhabited or intended to be inhabited predominantly (more than 50%) by Indigenous people, with housing and infrastructure that is either owned or managed on a community basis.
DMFT	Used to measure the number of decayed, missing or filled permanent (adult) teeth. It is derived by adding the number of teeth which are decayed, missing or have been filled due to caries (i.e. tooth decay).
dmft	Used to measure the number of decayed, missing or filled deciduous (infant) teeth. It is derived by adding the number of teeth which are decayed, missing or have been filled due to caries (i.e. tooth decay).
Drinker	See Alcohol consumption.
Employed	In the census, employed people are those aged 15 years or more who, during the week prior to census night: ▪ worked for payment or profit; or ▪ had a job from which they were on leave or otherwise temporarily absent; or ▪ were on strike or stood down temporarily; or ▪ worked as unpaid helpers in a family business.
Estimated Resident Population (ERP)	The official Australian Bureau of Statistics estimate of the Australian population. The ERP is based on results of the Census of Population and Housing and is compiled as at 30 June of each census year, and is updated quarterly between censuses. These intercensal estimates of the resident population are revised each time a population census is taken. The Indigenous ERP is considered to be experimental because satisfactory data on births, deaths and migration are not generally available, and because of the volatility of counts of the Indigenous population between censuses. See Chapter 9 for more details.
Family	A family is defined by the Australian Bureau of Statistics as two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household. Some households contain more than one family. Non-related persons living in the same household are not counted as family members (unless under 15 years of age).
Family day care	A network of care givers who provide care for children aged 1–12 years in the carer's own home.
Fertility rate	Represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates throughout her reproductive life.

Fetal death (stillbirth)	Death prior to the complete expulsion or extraction from its mother of a product of conception of 20 or more completed weeks of gestation or of 400 grams or more of birthweight (criteria used for the State and Territory perinatal collections).
Fetal death rate	The number of fetal deaths in a year per 1,000 total births in the same year.
First aid clinic	A facility where an individual can receive life-saving or pain-relieving primary aid.
Highly accessible	Category of the ARIA classification (see above). Areas in the highly accessible category have an ARIA score of 0 to 0.19. In these areas, geographic distance imposes minimal restrictions upon accessibility to the widest range of goods, services, and opportunities for social interaction.
Health Care Card	These cards provide for medical and/or related services free of charge or at reduced rates to recipients of Commonwealth government pensions or benefits.
Hospital separation	Refers to the process by which an admitted patient completes an episode of care in hospital, by being discharged, transferring to another hospital or care facility, or dying. A hospital separation record refers to a patient's administrative record on discharge from hospital. The record gives demographic details such as age, sex and Indigenous status, as well as reasons for hospitalisation, and treatments or procedures performed.
Hostels	A supervised lodging. Some hostels provide accommodation and care for older people who, because of their frailty are unable to stay in their own home and require daily assistance. Others provide accommodation for other groups such as students, people undergoing rehabilitation for substance dependence, or homeless people.
Household	A household is defined as: ▪ a group of two or more related or unrelated people who usually reside in the same dwelling, who regard themselves as a household, and who make common provision for food or other essentials for living; or, ▪ a person living in a dwelling who makes provision for his/her own food and other essentials for living, without combining with any other person (that is, a lone person household).
Household income	Household income is the sum of the personal incomes of each resident aged 15 years or more present in the household. In the census, persons who were temporarily absent on census night, had nil or negative income, or did not state their income, are not included in the census tally of household income.
Incidence	The number of new cases of a particular illness commencing during a given period in a specified population (see also Prevalence).

Income	Refers to regular gross weekly income, which is the income before tax, superannuation, health insurance, or other deductions are made. Gross income includes family allowance, family allowance supplement, pensions, unemployment benefits, student allowances, maintenance (child support), superannuation, wages, overtime, dividends, rents received, interest received, business or farm income (less operation expenses) and workers compensation received.
Independent housing	Refers to housing which is categorised as owner-occupied, a rooming house, hostel, hotel or private board, public or community housing, private rental, living rent-free or in a car, tent, park, street or squat.
Indigenous	Persons who self-identified as being of Aboriginal and/or Torres Strait Islander origin. See also Aboriginal, and Torres Strait Islander.
Indigenous family	An Indigenous family is one in which either the reference person or his/her spouse is of Aboriginal and/or Torres Strait Islander origin.
Indigenous household	In the Census, an Indigenous household is a family household where any family in the household is defined as an Indigenous family (see above), or a lone person household where the lone person is of Aboriginal and/or Torres Strait Islander origin. Group households are not included. In the AHS, an Indigenous household is defined as any household containing at least one person of Aboriginal and/or Torres Strait Islander origin aged 15 years or over.
Industry	This variable describes the industries in which employed people (aged 15 years and over) work, and is coded to the Australian and New Zealand Standard Industrial Classification (ANZSIC) (ABS 1993).
Infant mortality	Deaths of children under one year of age.
Jurisdiction	As used in this publication, refers to the States and Territories of Australia.
Koori	The preferred term used to describe Indigenous people in some parts of south-eastern Australia.
Labour force status	Identifies whether a person aged 15 years or over is employed, unemployed, or not in the labour force. See also Employed, Unemployed, Not in the labour force.
Landlord type	For rented dwellings, this variable provides information on the person or organisation from whom the dwelling is rented. The landlord is classified as: Private Landlord; Real Estate Agent; State/Territory Housing Authority; Community or Co-operative Housing Group; Employer-Government; Employer-Other; or Other.

Life tables	A life table is a statistical model used to show the life expectancy and hence the levels of mortality at different ages. It depicts the mortality experience of a hypothetical group of newborn babies thoughout their lifetimes. Life tables may be complete or abridged, depending on the age interval used in their compilation. Complete life tables such as those for the Australian population contain data by single years of age, while abridged life tables, such as those for the Indigenous population, contain data for five-year age groups. Life tables are presented separately for each sex (ABS 1999b).
Long-day care centre	A day care centre that is open for at least eight hours a day and at least 48 weeks a year. Caters mostly for under school-age children whose parents are in the paid workforce, are looking for work, or are in education or training.
Long-term health condition	Refers to medical conditions (illness, injury or disability) which have lasted at least six months, or which the respondent expects to last for six months.
Low birthweight	Birthweight of less than 2,500 grams.
Major Urban	See Section of State.
Median income	Median income is the midpoint of the distribution of income.
Moderately accessible	Category of the ARIA classification (see above). Areas in the moderately accessible category have an ARIA score of 2.4 to 5.94. In these areas, geographic distance imposes a moderate restriction upon accessibility to the widest range of goods, services, and opportunities for social interaction.
Morbidity	Any departure, subjective or objective, from a state of physiological or psychological wellbeing.
Neonatal death	Death of a liveborn infant within 28 days of birth.
Neonatal mortality rate	The number of neonatal deaths in a year per 1,000 live births in the same year.
Not in the labour force	Includes people aged 15 years or more who were neither employed nor unemployed. This category includes people who were retired, pensioners and people engaged in home duties. See also Employed, Unemployed, Labour force status.
Nursing homes	Cater for people who are highly dependent and need a lot of daily help with personal care and ongoing nursing.
Occasional care	Provides care mainly for under school-age children. These services cater mainly for families who require short-term care for their children.
Occupation	In the census this variable describes the main job held by employed people (aged 15 years and over) during the week prior to census night.

Other Urban See Section of State.

Out of home placements Defined as ‘out of home overnight care for children and young people under 18 years of age, where the State or Territory makes a financial payment’ (AIHW 1998, p. 37). Placements in certain types of facilities are not included. See AIHW (1998, 1999b) for more details.

Overcrowding There is currently no universally accepted defintion of overcrowding, and sources cited in this publication vary according to one or more criteria.

Jones (1999) employs the definition recommended by the Australian Institute of Health and Welfare, developed for the Review of Commonwealth State Housing Provision 1997, which complies with a ‘bedroom occupancy standard of one bedroom per married or de facto couple, one bedroom per adult household member, and a maximum of 2 dependent children per bedroom. Two categories of overcrowding apply to this standard:

- ‘moderate overcrowding’ describes a situation in which ‘there is one bedroom less than is needed to satisfy the occupancy standard’;
- ‘high overcrowding’ describes a situation ‘where two or more bedrooms would be needed to satisfy the occupancy standard.

The 1999 Australian Housing Survey (ABS 2001c) uses the Canadian National Occupancy Standard, the criteria for which are:

- there should be no more than two persons per bedroom;
- children less than 5 years of age of different sexes may reasonably share a bedroom;
- children 5 years of age or older of opposite sex should have separate bedrooms;
- children less than 18 years of age and of the same sex may reasonably share a bedroom;
- single household members 18 years or over should have a separate bedroom, as should parents or couples.

Participation rate Number of persons in the labour force (that is, employed plus unemployed) expressed as a percentage of the population aged 15 years and over. The participation rate is calculated excluding those who did not state their labour force status. See also Labour Force, Employed, Unemployed, Not in the labour force.

Perinatal death/mortality A fetal or neonatal death.

Perinatal mortality rate The number of perinatal deaths per 1,000 total births in the same year.

Place of enumeration The place where a person was located when counted on census night.

Post-school educational qualification	This variable describes the level of the highest post-school educational qualification gained (e.g. bachelor degree, diploma, etc.). Level of attainment is coded as defined by the Australian Bureau of Statistics Classification of Qualifications.
Pre-school/kindergarten	Provide programs to prepare children for their first year at school. Generally operate on a short day sessional basis and are closed during school holidays.
Prevalence	The number of instances of a specific disease present in a given population at a designated point in time (see also Incidence).
Principal diagnosis (in hospital separations data)	The diagnosis established to be chiefly responsible for a patient's hospitalisation.
Principal procedure	The most significant hospital procedure (see below) performed for treatment of a principal diagnosis.
Private dwelling	In the Census, this refers to a building or structure in which a household lives. Houses under construction, derelict houses, vacant tents, or converted garages are not counted nor are hotels, guest houses, prisons, hospitals or other communal dwellings.
Procedure (hospital)	A clinical intervention that is surgical in nature; carries a procedural risk; carries an anaesthetic risk; requires specialised training; and/or requires special facilities or equipment only available in an acute setting. Because a procedure is not undertaken every time a patient visits hospital, the number of hospital separation always exceeds procedures recorded.
Recent conditions	Medical conditions (illness, injury or disability) experienced in the two weeks prior to interview. May include long-term conditions experienced in the period.
Reference person (Census)	The reference person is the person who is used as the basis for determining the familial and non-familial relationships within a household. It is usually the person identified as Person 1 on the census Household Form.

Reference person (AHS) The reference person for each household is determined by applying the following selection criteria, to all usual residents aged 15 years and over in the household, until a single appropriate reference person is identified:

- the person with the highest tenure type ranked from top down as owner without a mortgage, owner with a mortgage, renter, other tenure; or
- the person with the highest income; or
- the eldest person.

For example, in a household containing a lone parent with a non-dependent child, the person with the highest tenure is the reference person. If the non-dependent child is an owner with a mortgage and the lone parent lives in the dwelling rent-free, the non-dependent child will be the reference person. If both individuals have the same tenure, the one with the higher income will be the reference person, and if both individuals have the same income, the reference person is the elder.

Remote The term used in 1995 NHS data to indicate those living in sparsely settled areas. Results for people living in remote areas are not included in the NHS results reported in this publication. See also Sparsely settled area.

'Remote' also forms part of the Rural, Remote and Metropolitan Areas Classification (RRMA). RRMA has been used to classify the geographic location of medical practitioners, as reported in Chapter 4. In this case, the 'remote' zone includes remote centres (urban centre population greater than or equal to 5,000) and other remote areas (urban centre population less than 5,000), each having an 'index of remoteness' greater than 10.5. More information on RRMA is available elsewhere (Department of Primary Industries and Energy & Department of Human Services and Health 1994).

'Remote' is also a category in the ARIA classification (see above). Areas in the remote category have an ARIA score of 5.95 to 10.49. In these areas, geographic distance imposes a high restriction upon accessibility to the widest range of goods, services, and opportunities for social interaction.

Risk factor An aspect of lifestyle or behaviour, a health condition, an environmental exposure, or an inborn or inherited characteristic, known to be associated with health-related conditions considered important to prevent.

Rural Balance See Section of State.

Rural Rural localities and towns with a total population of under 1,000 people. Most remote Aboriginal and Torres Strait Islander communities are included in this category. See also Section of State.

'Rural' also forms part of the Rural, Remote and Metropolitan Areas Classification (RRMA). RRMA has been used to classify the geographic location of medical practitioners, as reported in Chapter 4. In the classification, 'rural' zone includes small rural centres (urban centre population between 10,000 and 24,999), large rural centres (urban centre population between 25,000 and 99,000), and other rural centres (urban centre population less than 10,000), with each having an index of remoteness less than 10.5. More information on RRMA is available elsewhere (Department of Primary Industries and Energy & Department of Human Services and Health 1994).

Satisfactory dwelling/dwelling that meets needs of household Respondents in the AHS were asked whether the dwelling met the needs of the occupants. If the answer was no, they were asked to identify specific problems with the dwelling.

Section of State Within a State or Territory, each Section of State represents an aggregation of non-contiguous geographic areas of a particular urban/rural type.

The Sections of State within each State and Territory are:

- Major Urban—all urban centres with a population of 100,000 and over;
- Other Urban—all urban centres with a population of 1,000 to 99,999;
- Bounded Locality—all population clusters of 200 to 999 people; and
- Rural Balance—the rural remainder of the State or Territory.

An additional category (offshore, shipping and migratory Collector Districts) includes people who were enumerated on off-shore oil rigs, drilling platforms and the like, aboard ship in Australian waters, or on an overnight journey by train or bus. There is one such category for each State and the Northern Territory. This category is not used in this publication.

Self-assessed health status Refers to respondents' perception of own general health status. In the NHS and the NATSIS, respondents were asked to rate their health as excellent, very good, good, fair, or poor.

Smoker status	The definitions of smoking vary slightly from survey to survey. In the NATSIS, smoking referred to cigarette smoking only. A current smoker was a person who answered 'yes' or 'sometimes' when asked whether he or she smoked cigarettes (including packet and roll-your-own). In the NHS, smoking referred to the smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, but excluded chewing tobacco and smoking of non-tobacco products. A 'current smoker' was a person who reported smoking tobacco at the time of the survey. 'Regular smoking' was defined as smoking one or more cigarettes (or pipes or cigars) per day on average. An 'ex-smoker' was a person who said he or she did not smoke at the time of interview, but had done so in the past. People who said they had never smoked tobacco were categorised as 'never smokers'.
Sparsely settled area	Refers to Statistical Local Areas (SLAs) in which the dwelling density for the SLA as a whole was less than 0.057 dwellings per square kilometre (or 57 dwellings per 100 square kilometres). In 1995, about 156,200 people lived in sparsely settled areas, of whom about 68,400 were Indigenous and 87,800 were non-Indigenous. Results from the 1995 NHS for people from sparsely settled areas are not included in this publication.
Statistical Local Area (SLA)	Statistical Local Areas are areas defined in the Australian Standard Geographical Classification (ASGC), which consist of one or more Collection Districts (CDs). They can be based on Legal Local Government Areas, or parts thereof, or any unincorporated area. They cover, in aggregate, the whole of Australia, without gaps or overlaps.
Torres Strait Islander	A person who identifies himself or herself to be of Torres Strait Islander origin. See also Indigenous.
Unemployed	In the census, unemployed people are those who, during the week prior to census night, did not have a job but were actively looking for work (either full-time or part-time) and were available to start work.
Unemployment rate	The unemployment rate is the number of unemployed people expressed as a percentage of the labour force (that is, employed plus unemployed persons).
Urban	See Section of State.
Usual Residence	Refers to the place where the person has lived or intends to live for a total of 6 months or more.
Very remote	A category in the ARIA classification (see above). Areas in the very remote category have an ARIA score of 10.5 to 15. In these areas, geographic distance imposes the highest restriction upon accessibility to the widest range of goods, services, and opportunities for social interaction.

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Readers are referred to the List of abbreviations for the key to abbreviations used in the reference list.

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