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Aboriginal and Torres Strait Islander Health Performance Framework

2008 Report

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Executive Summary

This is the second report against the *Aboriginal and Torres Strait Islander Health Performance Framework* (HPF). The first report was published in 2006. The HPF has been developed under the auspice of the Australian Health Ministers' Advisory Council to provide the basis for measuring the impact of the *National Strategic Framework for Aboriginal and Torres Strait Islander Health* (NSFATSIH). The goal of the NSFATSIH is to ensure 'that Aboriginal and Torres Strait Islander peoples enjoy a healthy life equal to that of the general population that is enriched by a strong living culture, dignity and justice.' In December 2007, the Council of Australian Governments (COAG) reaffirmed its commitment to closing the gap on Indigenous disadvantage and endorsed a number of high level targets including to close the life expectancy gap within a generation. The HPF is also able to inform policy analysis, planning and program information to support closing the gap in Indigenous disadvantage.

This report finds that there have been improvements in some important aspects of health for Aboriginal and Torres Strait Islander peoples while some areas remain unchanged and others are worsening. These results can be used to review current commitments under the NSFATSIH and guide further comprehensive and coordinated effort through the commitment of COAG to close the gap in Indigenous disadvantage.

It is important to recognise that in some aspects data quality issues limit our ability to monitor the health outcomes and health system performance in relation to Aboriginal and Torres Strait Islander peoples (see technical appendix for details).

The health status of Aboriginal and Torres Strait Islander peoples

As identified in many other reports, this report finds significant disparities in health status between Aboriginal and Torres Strait Islander peoples and other Australians. These disparities are evident across the life cycle: from lower birthweight, earlier onset of some chronic diseases, much higher occurrence of a wide range of illnesses, higher prevalence of many stressors impacting on social and emotional wellbeing, higher death rates and lower life expectancy.

This report presents trends over time showing improvements in several important measures of the health of Aboriginal and Torres Strait Islander peoples. In particular:

Life expectancy: The latest estimates are that the gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Indigenous people is around 11.5 years for males and 9.7 years for females.

Mortality: All-cause mortality rates in the 3 jurisdictions for which there are good trend data decreased by 13% between 1991 and 2006, more so for females than males (15% compared with 9%).

Infant mortality: Infant mortality declined by 47% and perinatal mortality by around 51% over the same period and there was a significant closing of the gap.

Circulatory disease: Deaths caused by circulatory disease, the most common cause of death for Aboriginal and Torres Strait Islander peoples, declined at a faster rate for Aboriginal and Torres Strait Islander than other Australians, and the gap has narrowed.

Pneumonia: Hospitalisation for pneumonia for children aged 0–4 years declined at a faster rate than for other Australians, and the gap has narrowed.

Unfortunately there are areas of continuing concern:

Mortality gap: Despite the decline in all-cause mortality there has been no significant closing of the gap in overall mortality rates between Indigenous Australians and other Australians since 1991. The gap has widened for Indigenous males due to a faster decline in mortality for other males.

Chronic disease*:* This continues to be the leading cause of death. Fifty-nine per cent of excess deaths are caused by chronic diseases and there have been no significant improvements in mortality from these conditions e.g., respiratory disease, diabetes, cancer or kidney disease.

Injury and poisoning: Hospitalisation for injury and poisoning is twice as common.

End stage renal disease*:* Incidence has more than tripled over the last decade.

Low birthweight: This is increasing and is already twice as common for Aboriginal and Torres Strait Islander babies than other Australian babies.

Oral health: Aboriginal and Torres Strait Islander children have more decayed than filled teeth, indicating a large unmet need for dental care.

Sexually transmissible infections: Chlamydia and gonorrhoea infections have continued to increase in the latest period to 2006.

Hospitalisation: Hospitalisation rates for Aboriginal and Torres Strait Islander peoples are 40% higher than for other Australians. Hospitalisation rates in Queensland, Western Australia, South Australia and the Northern Territory are increasing much more rapidly than the rates for other Australians. The main factors causing the increase are admissions for renal dialysis, circulatory diseases and diabetes complications. The implications of the increase in hospitalisations are not clear. It may reflect increases in the incidence and prevalence of disease, improved access to primary health care, hospital care and/or better identification of Aboriginal and Torres Strait Islander people in hospital data.

Although the health status of Aboriginal and Torres Strait Islander peoples is improving, large disparities in the health status of Indigenous and non-Indigenous Australians persist. In fact, the relative gap between the two populations for many measures is widening because the rate of improvement for some causes has been greater for other Australians than for Aboriginal and Torres Strait Islander peoples over recent years.

The progress of recent years demonstrates that sustained and increased effort can lead to better health outcomes. Government investment, particularly in primary health care, is beginning to pay dividends in some areas.

Health Determinants

Health services are not the sole answer to the health problems of Aboriginal and Torres Strait Islander peoples. Improvements in the living conditions and economic and social circumstances of Aboriginal and Torres Strait Islander peoples will be necessary to ensure significant progress. There have been improvements in recent years including:

Access to functional housing: The proportion of the population living in discrete Indigenous communities connected to a town water supply increased from 17% in 2001 to 30% in 2006. The proportion of communities with no organised sewerage system dropped from 7% to 2%.

Education*:* The proportion of Indigenous students achieving the Year 3 literacy benchmarks and Year 5 numeracy benchmarks has increased. School retention rates at years 10 and 12 have improved over the last 5 years.

Employment: The employment rate for Indigenous Australians increased from 43% to 48% and the unemployment rate fell slightly from 13% to 9% between 1996 and 2006.

Issues for which there is continuing concern include:

Access to functional housing: Drinking water failed quality tests for 29% of discrete Indigenous communities not connected to a town water supply, 26% of discrete Indigenous communities experienced electricity interruptions of greater than 24 hours duration and 22% experienced sewerage system leaks or overflows of greater than 48 hours duration.

Overcrowding in housing: Approximately 25% of Indigenous Australians live in overcrowded households and this is more prevalent in remote areas.

Education: The proportion of Indigenous students achieving the reading, writing and numeracy benchmarks in Years 3, 5 and 7 remain below the corresponding proportions for all students.

Unemployment: Unemployment rates remain higher than the corresponding rates for non-Indigenous Australians.

Low income and the distribution of income: In 2006, 40% of Aboriginal and Torres Strait Islander people were in the bottom 20% of mean equivalised household incomes.

Community safety: Exposure to violence, child abuse and neglect, and contact with the criminal justice system, including imprisonment, are more likely to be experienced by Aboriginal and Torres Strait Islander peoples than other Australians. Trends in these areas are not encouraging and suggest these problems may have become worse over the last decade.

Transport: Fewer Indigenous households (72%) had ready access to motor vehicles (i.e., garaged or parked at or near their dwelling) compared with non-Indigenous households (87%) and this disparity is greater in remote areas (52% compared with 90%).

Health Behaviors

Significant improvements in the health of Aboriginal and Torres Strait Islander peoples can also be achieved through addressing the key modifiable risk factors impacting on health: smoking, physical activity, nutrition, alcohol consumption and substance use. The evidence presented in this report suggests there have been few improvements in these measures. In particular:

Smoking: Around half of Aboriginal and Torres Strait Islander adults smoke and this rate has not changed in a decade.

Risky/high risk alcohol consumption: Aboriginal and Torres Strait Islander adults were twice as likely as non-Indigenous adults to have abstained from alcohol consumption in the previous 12 months. An estimated 17% of Indigenous adults reported drinking at long-term risky/high risk levels. This rate was similar to the rate for non-Indigenous adults. Nineteen percent of Indigenous Australian adults drank at short-term risky/high risk levels at least once a week. This was twice the proportion reported for non-Indigenous adults Australians.

Physical activity: In 2004–05, 47% of Aboriginal and Torres Strait Islander people aged 15 years and over in non-remote areas reported being sedentary. This has increased from 37% in 2001. This was one and a half times the rate for other Australians.

Nutrition: Aboriginal and Torres Strait Islander people aged 12 years and over in non-remote areas reported lower than recommended daily levels of intake of vegetables and fruit in 2004–05. In remote areas, 20% of Indigenous people aged 12 years and over reported no usual daily fruit intake and 15% reported no usual daily intake of vegetables. The corresponding proportions for Indigenous people aged 12 years and over in non-remote areas were 12% and 2% respectively. Aboriginal and Torres Strait Islander people aged 12 years and over were twice as likely to report no usual daily fruit intake and 7 times as likely to report no daily vegetable intake as non-Indigenous Australians (ABS 2006a).

Overweight and obesity: Rates of overweight and obesity have increased steadily in the last decade. Among Indigenous people aged 15 years and over in non-remote areas, rates have increased from 51% to 60% over this period. Indigenous Australians were nearly twice as likely to be obese as non-Indigenous Australians.

Access to health care

The *2004–05 National Aboriginal and Torres Strait Islander Health Survey* found that 46% of Aboriginal and

Torres Strait Islander Australians reported accessing health care in the last 2 weeks (12 months for hospital admissions). This is similar to the non-Indigenous rates but lower than expected given the greater burden of illness experienced by Indigenous Australians. There were differences in the types of health care accessed. Indigenous Australians were twice as likely to visit casualty/outpatients and half as likely to see a dentist. Barriers to accessing health care included cost, cultural appropriateness and transport/distance/availability in area.

Hospital procedures: Approximately 55% of hospital episodes for Aboriginal and Torres Strait Islander Australians (excluding dialysis) had a procedure recorded compared with 80% of hospital episodes for other Australians. Rates of procedures were lower for nearly every type of condition.

Discharge against medical advice: Indigenous Australians were discharged from hospital against medical advice at 6 times the rate of other Australians.

Child and maternal health services

Measures related to child and maternal health suggest that there have been some improvements in recent years. These include:

Infant mortality: Infant mortality declined by 47% and perinatal mortality by around 51% between 1991 and 2005–2006.

Immunisation coverage for children: This has improved for Aboriginal and Torres Strait Islander children and the rates are close to those for other children.

Problems still persist in other areas of child and maternal health including:

Antenatal care: Access to antenatal care is high for Aboriginal and Torres Strait Islander women, but occurs later and less frequently than for other women.

Low birthweight: This is twice as common for babies born to Aboriginal and Torres Strait Islander mothers than other Australian babies and as indicated above, rates of low birthweight babies born to Indigenous mothers are increasing.

Smoking: Around a half of Indigenous Australian women smoke during pregnancy, 3 times the rate of other pregnant women. An estimated 28% of Aboriginal and Torres Strait Islander children aged 0–14 years live in households with a smoker who smoked at home indoors compared with 9% of non-Indigenous children.

Chronic ear disease: Rates of ear disease and hearing problems are 3 times those of the non-Indigenous population.

Social and emotional wellbeing

Social and emotional wellbeing is a holistic concept related to individual, family and community experience. Aboriginal and Torres Strait Islander peoples retain strong links to their traditional culture. In 2002, 54% of Aboriginal and Torres Strait Islander adults reported they identified with a clan or tribal group, 22% currently lived in traditional lands, and 68% had attended cultural events in the last 12 months. Family and community attachments are important factors in the lives of Aboriginal and Torres Strait Islander peoples.

The emotional well being of many Aboriginal and Torres Strait Islander peoples has been affected by past government policies, including family removal. Approximately 44% of Indigenous Australians aged 18 years and over reported that they or a relative had been removed from their natural family. A range of indicators suggest that the social and emotional wellbeing issues are significant for Indigenous Australians. These include:

Psychological distress: After adjusting for age, an estimated 27% of Aboriginal and Torres Strait Islander adults reported high levels of psychological distress compared with 13% of non-Indigenous adults.

Life stressors: Aboriginal and Torres Strait Islander adults report high levels of stressors in their lives, with 77% reporting that they had experienced at least one stressor in the last 12 months. The most common stressors reported were the death of a family member or close friend (42%), serious illness or disability (28%) alcohol-related problems (20%), a family member was sent to, or currently in, jail (19%).

Children and adolescents: A study in Western Australia found 24% of Aboriginal children aged 4 to 17 years were at high risk of clinically significant emotional or behavioural difficulties compared with 15% of all children.

Hospitalisation for mental health issues: Mental health-related conditions were the principal reason for 4.4% of hospital admissions for Aboriginal and Torres Strait Islander people. Indigenous males were hospitalised for mental health-related conditions at rates that were 2.4 times the rate of other Australian men, and Indigenous females at rates that were 1.6 times the rate for other Australian women. There is some evidence that there is an over-reliance on hospitalisation for mental health conditions rather than community services and lower access to specialised care.

Mortality for mental health issues: Mental health-related conditions are responsible for approximately 2.5% of the all deaths of Aboriginal and Torres Strait Islander people with rates for Indigenous Australians nearly twice that for non-Indigenous Australians.

Management of chronic illness

Chronic disease is a major cause of ill health and mortality for the Australian population, including Aboriginal and Torres Strait Islander peoples. Only one chronic disease circulatory disease has shown positive trends for Aboriginal and Torres Strait Islander peoples in recent years. Deaths rates for circulatory disease, and the gap in the rate of death from circulatory disease has narrowed between Aboriginal and Torres Strait Islander peoples and other Australians. However, 59% of greater than expected number of deaths for Aboriginal and Torres Strait Islander people are caused by chronic diseases and there have been no significant improvements in mortality from respiratory disease, diabetes, cancer or kidney disease.

Access to primary care services is a prerequisite to improved management of chronic illnesses and there are some positive signs in this respect. Several initiatives such as *Healthy for Life* are further developing the capacities of Aboriginal and Torres Strait Islander primary health care services to deliver well organised services for people with chronic illnesses (see measure 3.04). Improving chronic care services for Aboriginal and Torres Strait Islander Australians receiving care through mainstream general practitioners is also important. This will involve improving the accessibility of these services to Indigenous Australians and doctors offering the range of early detection and chronic disease management services that are available to Aboriginal and Torres Strait Islander Australians.

In the long-term, improved management of chronic illness outside hospitals will reduce the need for hospital admissions. Currently potentially preventable chronic conditions account for 78% of ambulatory care sensitive hospital admissions for Aboriginal and Torres Strait Islander people (compared with 67% for other Australians), and these have increased significantly since 2001 (see measure 3.06). Good linkages to specialist care are also required for some chronic illnesses.

In the short and medium terms, it is likely that hospitalisations will increase as unmet needs are uncovered through better detection of chronic illnesses. However, better prevention and management of chronic conditions will have significant pay-offs in the future through reduced hospitalisations.

Strong comprehensive primary health care

The NSFATSIH identifies comprehensive primary health care as an immediate priority for action. Comprehensive primary health care provides an opportunity to deliver a range of services required to meet the complex health needs of Aboriginal and Torres Strait Islander peoples. This includes working collaboratively with private GPs, governments, communities and Indigenous services. A nationwide network of Aboriginal and Torres Strait Islander primary health care services is supported by federal, state and territory direct funding and increasingly through revenue from the Medical Benefits Scheme. There has been expansion of the sector over the last decade, with increased funding, staff and services delivered. This report identifies several positive developments in primary health care:

Usual source of care: Ninety-one per cent of Aboriginal and Torres Strait Islander people report that they usually went to the same GP or ‘Aboriginal medical service’.

Increased availability of staff and number of services delivered has occurred as a result of increased funding of Aboriginal and Torres Strait Islander primary health care services in recent years.

Access to prescription medicines has improved in remote areas through the section 100 arrangement for remote area Aboriginal and Torres Strait Islander primary health care services but remains significantly lower than for non-Indigenous Australians.

Nevertheless access to and utilisation of medical services is less than expected given higher levels of illness. Per person Medicare benefits for Indigenous people were 45% of the non-Indigenous average in 2004–05. Private general practice is a usual source of medical care for many Aboriginal and Torres Strait Islander people, but little is known about the appropriateness of these services.

The Aboriginal and Torres Strait Islander workforce

The *Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework* recognises that a competent health workforce is integral to ensuring that the health system has the capacity to address the needs of Aboriginal and Torres Strait Islander peoples.

Indigenous Australians continue to be under-represented in health professions. They make up 1% of the health workforce but represent 1.9% of the population aged 15 years and over.

Aboriginal and Torres Strait Islander people are also under-represented in training for various health professions. Improving participation by Indigenous Australians in training for health professions is a key priority across a broad range of disciplines including medicine, nursing, allied health, as well as for Aboriginal health workers.

Another major challenge is the recruitment and retention of staff in Aboriginal and Torres Strait Islander health services and in mainstream services located in areas with significant Aboriginal and Torres Strait Islander populations.

Resources

Various estimates have been made of the level of expenditure that would be required to address Aboriginal and Torres Strait Islander peoples’ need for health services based on the burden of illness, the higher costs in remote areas etc. Estimates range from 3 to 6 times the current national average per capita expenditure (Dwyer et al. 2004).

On a per person basis, average health expenditure for Aboriginal and Torres Strait Islander peoples is slightly higher than the expenditure for other Australians, by an estimated 17%. This contrasts with measures of health status showing mortality rates, infant mortality and the occurrence of a broad range of diseases at much higher levels (200% to 300% higher) for Aboriginal and Torres Strait Islander peoples.

Expenditure estimates show higher rates for Indigenous Australians for public hospital use and community health services and lower rates for medical services through the MBS (including GP services), dental services and medications compared with non-Indigenous Australians. Effective primary care underpins almost all the strategies that can be delivered through the health system, e.g., antenatal care, immunisation, early detection and screening and chronic disease management, and many of the strategies targeted at healthy behaviours. Strengthening the system of comprehensive primary care can be expected to have substantial benefits in terms of health outcomes.

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- Kim Stewart (NSW Health); and
- Haylene Grogan and Marianna Serghi (Queensland Health).

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- National Aboriginal and Torres Strait Islander Health Officials Network
- National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data
- Statistical Information Management Committee
- Australian Bureau of Statistics, in particular the National Centre for Aboriginal and Torres Strait Islander Statistics (preparation of specialised tables and technical support)
- Individuals with expertise in particular topics from various organisations who reviewed draft material.

Abbreviations

ABS	Australian Bureau of Statistics
ABCD	Audit and Best Practice for Chronic Disease
ACA	Aboriginal Councils and Associations Act
ACER	Australian Council for Educational Research
ACHS	Australian Council of Healthcare Standards
ACT	Australian Capital Territory
ADIS	Alcohol and Drug Information System
AGPAL	Australian General Practice Accreditation Limited
AGPSCC	Australian General Practice Statistics and Classification Centre
AHMAC	Australian Health Ministers Advisory Council
AIC	Australian Institute of Criminology
AIDS	Acquired Immune Deficiency Syndrome
AIHW	Australian Institute of Health and Welfare
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ARF	Acute Rheumatic Fever
ASCO	Australian Standard Classification of Occupation
ASGC	Australian Standard Geographical Classification
ATAGI	Australian Technical Advisory Group on Immunisation
ATSIPAT	Aboriginal and Torres Strait Islander Pharmacy Assistant Training
BAA	Be Active Australia: A framework for health sector action for physical activity 2005–2010
BBV	Blood Borne Viruses
BEACH	Bettering the Evaluation and Care of Health
BMI	Body Mass Index
CAI	Computer assisted interview
CDEP	Community Development Employment Projects
CHINS	Community Housing and Infrastructure Needs Survey
CIHI	Canadian Institute of Health Information
CMR	Cumulative Mortality Rate
CPI	Consumer Price Index
COAG	Council of Australian Governments
COPD	Chronic Obstructive Pulmonary Disease

DEEWR	Department of Education, Employment and Workplace Relations
DEST	Department of Education Science and Training
DHS	Department of Human Services
DMFT	Decayed, Missing, Filled Teeth (Adult – permanent teeth)
dmft	decayed, missing, filled teeth (Infant – deciduous teeth)
DoHA	Department of Health and Aged Care
EQuIP	Evaluation and Quality Improvement Program
FHBH	Fixing Houses for Better Health
FOBT	Faecal Occult Blood Test
GAS	Group A Streptococcal Bacterium
GP	General Practitioner
GPA+	General Practice Accreditation Plus
GPMP	General Practitioner Management Plan
HFL	Healthy for Life
HIV	Human Immunodeficiency Virus
HPF	Aboriginal and Torres Strait Islander Health Performance Framework – Health Performance Framework
HPV	Human papilloma virus
ICAP	Improving Care for Aboriginal and Torres Strait Islander Patients
IEP	Indigenous Employment Policy
IHD	Ischaemic Heart Disease
KRA	Key Result Area
Km	Kilometer
MBS	Medicare Benefits Scheme/Schedule
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
MCHS	Maternal and Child Health Service
NCVER	National Centre for Vocational Education Research
NACCHO	National Aboriginal Community Controlled Health Organisation
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSINSAP	National Aboriginal and Torres Strait Islander Nutrition Strategy and Action Plan
NATSIS	National Aboriginal and Torres Strait Islander Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NCI	National Cancer Institute (US)
NGO	Non-Government Organisation
NHMRC	National Health & Medical Research Council
NHPC	National Health Performance Committee
NHS	National Health Survey
NSFATSIH	National Strategic Framework for Aboriginal and Torres Strait Islander Health
NSW	New South Wales
NT	Northern Territory
OATSIH	Office for Aboriginal and Torres Strait Islander Health
ORIC	Office of the Registrar of Indigenous Corporations
PBS	Pharmaceutical Benefits Scheme/Schedule
PHERP	Public Health Education and Research Program
PMSS	Perinatal Morbidity Statistics System
QIC	Quality Improvement Council
Qld	Queensland
RACGP	Royal Australian College of General Practitioners
RHD	Rheumatic Heart Disease
SA	South Australia
SAR	Service Activity Reporting data
SCATSIH	The Standing Committee on Aboriginal and Torres Strait Islander Health
SCRGSP	Steering Committee for the Review of Government Services Provision
SIDS	Sudden Infant Death Syndrome
STI	Sexually transmissible infections
SWITCH TCA	Community Health program Registered Client Database Team Care Arrangement
TAFE	Technical and Further Education
Tas.	Tasmania
VAED	Victorian Admitted Episodes Dataset
VEMD	Victorian Emergency Minimum Dataset
VET	Vocational Education and Training
VCCR	Victorian Cervical Cytology Register
Vic.	Victoria
VII	Voluntary Indigenous Identifier
WIES	Weighted Inlier Equivalent Separation
WA	Western Australia
WAACHS	Western Australia Aboriginal Child Health Survey
WGIR	Working Group on Indigenous Reform
WHO	World Health Organization

Chapter 1 Introduction

This report is the second report against the *Aboriginal and Torres Strait Islander Health Performance Framework* (HPF). The HPF and the measures selected for reporting were developed through an extensive consultative process managed originally by the Standing Committee on Aboriginal and Torres Strait Islander Health (SCATSIH 2006). This second report provides trend data to monitor progress against the NSFATSIH 2003 to 2013 (NATSIHC 2003).

The HPF has been based on the National Health Performance Framework (NHPC 2001). The purpose of the HPF is to monitor progress of the health system and broader determinants of health in improving Aboriginal and Torres Strait Islander health. Health systems comprise all the organisations, resources and activities whose primary purpose is to improve health. Governments, through their stewardship role in policy, planning and program delivery, have a key role to play in defining vision and direction as well as exerting influence and measuring performance. The HPF comprises 3 tiers of performance as follows:

Tier 1 – health status and health outcomes: Measures of prevalence of disease or injury, human function, life expectancy and wellbeing. How healthy are people? Is it the same for everyone? What is the opportunity for improvement?

Tier 2 – determinants of health status: Measures of the determinants of health including socio-economic status, environmental factors and health behaviours. Are the factors that determine good health changing? Is it the same for everyone? Where and for whom are these factors changing?

Tier 3 – health systems performance: Measures of the health system including effectiveness, responsiveness, accessibility and sustainability, and how they are changing over time.

The tiers and domains of the HPF and selected measures are shown in Figure 1. The 3-tier structure of the HPF is particularly relevant to understanding health in the context of the new arrangements in Indigenous affairs. The shift in emphasis to a whole of government approach working in partnership with Aboriginal and Torres Strait Islander peoples makes the contribution of Tier 2, the determinants of health, a central rather than marginal part of the health policy picture. The HPF recognises the contribution that individuals and communities make to their own health status and acknowledges the holistic view of health that is valued by Indigenous Australians. There are several measures reported for the first time in this report that bring this perspective even more to the fore. These include measures of community functioning, governance and an index of disadvantage.

The HPF report will play an important role in documenting the impact of government policies and strategies on the health of Aboriginal and Torres Strait Islander peoples and how well the broader health system performs for this population. In particular this report aims to:

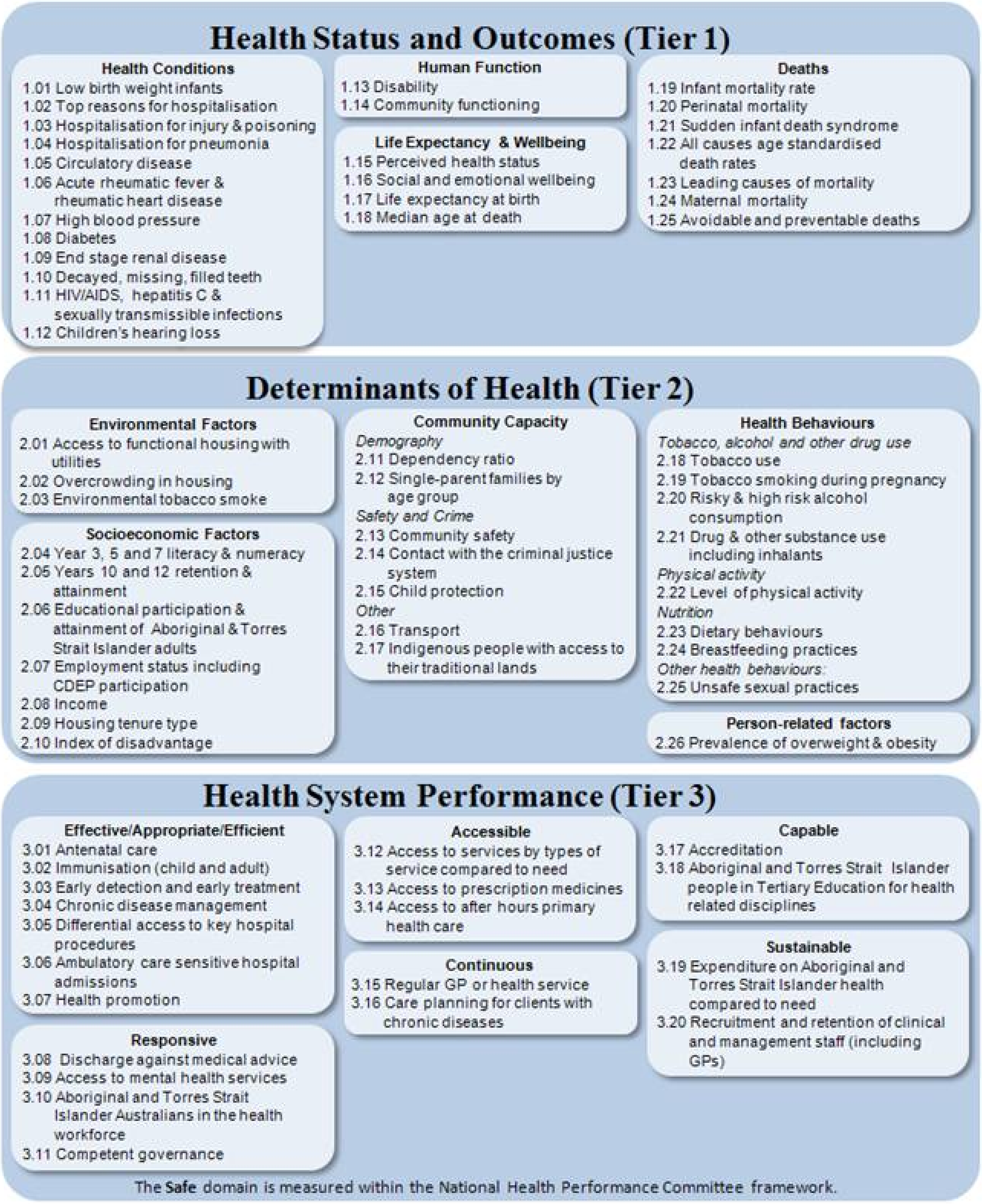
- Provide a quantitative account of the current state of play and progress in relation to health status and outcomes, determinants of health, and health system performance.
- Present information on policy implications.
- Articulate the relationships between determinants of health, health behaviours and health outcomes.
- Summarise the overall findings and implications for Aboriginal and Torres Strait Islander peoples and governments.

An important feature of the HPF is that it recognises that sustainable health gain will require not only an efficient, effective and equitable health system but also timely contributions from other sectors. Any framework for measuring health performance in relation to Aboriginal and Torres Strait Islander peoples must take account of the particular health and social issues that are likely to affect Indigenous Australians to a greater or different degree than other Australians. The HPF tracks changes in key measures outside of the health sector to provide a better context for interpreting changes in health outcomes and to provide a basis for constructive intersectoral dialogue.

Performance monitoring of the stewardship role of governments in their efforts to improve Aboriginal and Torres Strait Islander health is critical. In doing this, attention should be given to assessing not only the levels of access to appropriate care but the experiences of Aboriginal and Torres Strait Islander peoples in receiving care. Attention must also be given to the social and policy context of Aboriginal and Torres Strait Islander health and the complex relationships between determinants of health, the health system and health outcomes.

The HPF provides a policy-based report on the health status of Aboriginal and Torres Strait Islander peoples, the performance of the health system, and the situation in relation to the determinants of health.

Figure 1 – Aboriginal and Torres Strait Islander Health Performance Framework (HPF) Performance Measures



Health Status and Outcomes (Tier 1)

Health Conditions

1.01 Low birth weight infants
1.02 Top reasons for hospitalisation
1.03 Hospitalisation for injury & poisoning
1.04 Hospitalisation for pneumonia
1.05 Circulatory disease
1.06 Acute rheumatic fever & rheumatic heart disease
1.07 High blood pressure
1.08 Diabetes
1.09 End stage renal disease
1.10 Decayed, missing, filled teeth
1.11 HIV/AIDS, hepatitis C & sexually transmissible infections
1.12 Children's hearing loss

Human Function

1.13 Disability
1.14 Community functioning

Life Expectancy & Wellbeing

1.15 Perceived health status
1.16 Social and emotional wellbeing
1.17 Life expectancy at birth
1.18 Median age at death

Deaths

1.19 Infant mortality rate
1.20 Perinatal mortality
1.21 Sudden infant death syndrome
1.22 All causes age standardised death rates
1.23 Leading causes of mortality
1.24 Maternal mortality
1.25 Avoidable and preventable deaths

Determinants of Health (Tier 2)

Environmental Factors

2.01 Access to functional housing with utilities
2.02 Overcrowding in housing
2.03 Environmental tobacco smoke

Socioeconomic Factors

2.04 Year 3, 5 and 7 literacy & numeracy
2.05 Years 10 and 12 retention & attainment
2.06 Educational participation & attainment of Aboriginal & Torres Strait Islander adults
2.07 Employment status including CDEP participation
2.08 Income
2.09 Housing tenure type
2.10 Index of disadvantage

Community Capacity

Demography
2.11 Dependency ratio
2.12 Single-parent families by age group
Safety and Crime
2.13 Community safety
2.14 Contact with the criminal justice system
2.15 Child protection
Other
2.16 Transport
2.17 Indigenous people with access to their traditional lands

Health Behaviours

Tobacco, alcohol and other drug use
2.18 Tobacco use
2.19 Tobacco smoking during pregnancy
2.20 Risky & high risk alcohol consumption
2.21 Drug & other substance use including inhalants
Physical activity
2.22 Level of physical activity
Nutrition
2.23 Dietary behaviours
2.24 Breastfeeding practices
Other health behaviours:
2.25 Unsafe sexual practices

Person-related factors

2.26 Prevalence of overweight & obesity

Health System Performance (Tier 3)

Effective/Appropriate/Efficient

3.01 Antenatal care
3.02 Immunisation (child and adult)
3.03 Early detection and early treatment
3.04 Chronic disease management
3.05 Differential access to key hospital procedures
3.06 Ambulatory care sensitive hospital admissions
3.07 Health promotion

Responsive

3.08 Discharge against medical advice
3.09 Access to mental health services
3.10 Aboriginal and Torres Strait Islander Australians in the health workforce
3.11 Competent governance

Accessible

3.12 Access to services by types of service compared to need
3.13 Access to prescription medicines
3.14 Access to after hours primary health care

Continuous

3.15 Regular GP or health service
3.16 Care planning for clients with chronic diseases

Capable

3.17 Accreditation
3.18 Aboriginal and Torres Strait Islander people in Tertiary Education for health related disciplines

Sustainable

3.19 Expenditure on Aboriginal and Torres Strait Islander health compared to need
3.20 Recruitment and retention of clinical and management staff (including GPs)

The **Safe** domain is measured within the National Health Performance Committee framework.

Reporting against the HPF is designed to:

Promote Accountability: The HPF will be a significant public accountability tool for all governments, measuring achievement against their commitments to improve Aboriginal and Torres Strait Islander health.

Inform policy: The HPF will provide important information to inform the development of policy in Aboriginal and Torres Strait Islander health and in whole of government action on the determinants of health.

Inform research: The HPF will provide a valuable tool for those involved in research into Aboriginal and Torres Strait Islander health.

Foster informed debate: The HPF has the potential to become a key resource in informed public debate around Aboriginal and Torres Strait Islander health. It will add to material already available such as the *Expenditures on Health Services for Aboriginal and Torres Strait Islander People* (AIHW 2008e) and The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples 2008 (ABS & AIHW 2008).

The HPF covers the entire health system including Indigenous-specific services and programs, and mainstream services. It includes performance measures across the full continuum from inputs, processes, outputs, and intermediate outcomes to final outcomes. This enables short to medium-term measures of progress to be included, and accommodates the different stages of development of services and systems. The statistics in this report are the latest available but are sometimes a few years old and therefore may not reflect the impact of recent action.

Structure of this report

Chapter 2 summarises key messages that have emerged through the analysis of indicators and consultations with stakeholders. The chapter also draws out some of the major linkages between the 3 Tiers of the HPF.

Chapter 3 presents a brief overview of existing national strategies and policies. *The National Strategic Framework for Aboriginal and Torres Strait Islander Health* (NSFATSIH) provides an overarching framework for national state and territory government action in this area.

Chapters 4, 5 and 6 present data and policy analysis for each of the tiers, with information for each measures presented over 2 to 3 pages. For each measure there is a discussion of why the measure is important, the results from analysis of the measure, and implications.

By necessity, the material presented on each measure is succinct, and in some cases only touches on the major features of complex issues. Additional data analyses conducted for this project will be available at www.aihw.gov.au/indigenous/publications.cfm.

Data Limitations

There are well documented problems with the quality and availability of data about Aboriginal and Torres Strait Islander health issues. These limitations include the quality of data on all key health indicators including mortality and morbidity, uncertainty about the size and composition of the Indigenous population and a paucity of available data on other health issues such as access to health services (see Technical Appendix). The following should be noted when interpreting the data analyses:

Under-identification: Under-identification of Aboriginal and Torres Strait Islander people is the main issue in most administrative data collections. Under-identification is a major problem in hospital morbidity and mortality data collections, particularly for some states and territories. As a result, some measures presented in this report are based on analysis of data for selected jurisdictions only (e.g., mortality data are currently only published for Queensland, South Australia, Western Australia and the Northern Territory). In the primary care setting, only a minority of GPs have effective routine Indigenous identification processes in place. Therefore, any Indigenous data generated through GPs are currently problematic, such as for the BEACH survey, or data drawn indirectly, e.g., GP-initiated pathology requests as reflected in the *National Notifiable Diseases Surveillance System***.** A study of Indigenous identification in the BEACH survey found twice as many Indigenous Australian encounters as usually collected, suggesting the survey consistently undercounts Indigenous Australians visiting doctors (Britt et al. 2007). Under-identification is due to various factors, e.g., whether the Indigenous status question is asked in the first instance, consistency in the way the question is asked, and differing responses depending on the situation. Decisions on which data to include have been based on the most recent evaluations (see the Technical Appendix). Work is underway to improve data quality. In future, more comprehensive data will be available for some measures.

Coverage by jurisdictions: Due to the under-identification issues described above, for some collections data analysis has been limited to jurisdictions with known better quality data. Longer term mortality trends are limited to South Australia, Western Australia and the Northern Territory, representing 32% of the country's Indigenous population, as these jurisdictions have been shown to have adequate coverage for mortality data (plus Queensland from 1998).

Indigenous status question: A standard wording for Aboriginal and Torres Strait Islander identification has been developed and endorsed nationally. However, the standard question and categories are not used in all data collections. For example, in the national perinatal data Indigenous status is based on the mother. This means that babies with an Aboriginal and/or Torres Strait Islander father and a non-Indigenous mother are not systematically identified as Indigenous (approximately 30% of Indigenous babies).

Chapter 2 Key Messages

Major Findings

It is now apparent that the health of Aboriginal and Torres Strait Islander peoples is improving for a number of measures. This shows good progress against many of the goals of the *National Strategic Framework for Aboriginal and Torres Strait Islander Health* (NSFATSIH). This chapter summarises those areas where there has been improvement and highlights areas where these data suggest that concerted effort will be needed if the COAG commitment to close the gap in Indigenous disadvantage and the goals of the NSFATSIH are to be achieved. The areas of success can be used to guide this renewed effort.

Reasons for optimism

National Strategic Framework Goal:
To ensure that Aboriginal and Torres Strait Islander peoples enjoy a healthy life equal to that of the general population that is enriched by a strong living culture, dignity and justice.

In Queensland, Western Australia, South Australia and the Northern Territory, all-cause mortality (measure 1.22) decreased by 13% between 1991 and 2006, more so for females than males (15% compared with 9%). Infant mortality (measure 1.19) declined by 47% and perinatal mortality (measure 1.20) by 51%. Indigenous infant and perinatal mortality declined at a faster rate than for other infants and the gap has narrowed.

Even for chronic diseases, which have become much more frequent among Aboriginal and Torres Strait Islander peoples in recent years (as they have among all Australians), there are signs of improvement: mortality from circulatory disease (measure 1.23), the most common cause of death for Aboriginal and Torres Strait Islander people, declined at a faster rate for Aboriginal and Torres Strait Islander people than other Australians, and the gap between the two populations narrowed. Unfortunately, there was no improvement in mortality rates from other chronic diseases (measure 1.23).

Hospitalisation is becoming more common for Aboriginal and Torres Strait Islander people. This does not necessarily indicate deterioration in health status. It should be noted that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the number of reported hospital separations for Indigenous Australians. Also, changes in access, primary care delivery, hospital policies and practices all impact on the level of hospitalisation over time. An increase in hospitalisation rates may reflect better health care access rather than a worsening of health.

Overall, there is some cause for optimism. While there is a long way to go, government investments, particularly in strengthening primary health care, are beginning to pay dividends through improved Aboriginal and Torres Strait Islander health.

Areas of concern

Although Aboriginal and Torres Strait Islander health status is improving, the very large disparities between Indigenous and other Australians remain. In fact, the relative gap between the two populations for many measures is widening because the rate of improvement has been greater for other Australians than for Aboriginal and Torres Strait Islander peoples over recent years. The severe health problems of Aboriginal and Torres Strait Islander peoples can be overcome; the progress of recent years demonstrates that with sustained and increased effort even more can be achieved in the future.

The analysis of measures of the health status of Aboriginal and Torres Strait Islander peoples reinforces the findings of significant disparities between Aboriginal and Torres Strait Islander peoples and other Australians that have been presented in many reports including, most recently, *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander People 2008* (ABS & AIHW 2008). These disparities are evident from the commencement of the life cycle, in infant mortality and low birthweight, in the much higher levels of occurrence of many conditions such infectious diseases, diabetes, cardiovascular disease, kidney disease, poor oral health and hearing loss, in many signs of distress and poorer social and emotional wellbeing, in higher levels of disability, and in significantly lower life expectancy. While these disparities persist, this report provides some new perspectives on these issues, particularly by providing a time-series perspective and an analysis of regional variation.

Health determinants

National Strategic Framework
Key Result Area Six:
Wider strategies that impact health

The HPF highlights a range of factors impacting on health but which government health portfolios cannot directly influence. These include environmental factors, such as functional housing (measure 2.01) and overcrowding in housing (measure 2.02); socio-economic factors, such as educational participation and attainment (measures 2.04, 2.05 and 2.06), employment (2.07), income (2.08) and housing tenure (2.09), safety and crime (measures 2.13, 2.14, 2.15) and transport (2.16). Other factors, such as demography (2.11 and 2.12) and access to traditional lands (2.17) are also identified. Key findings include:

Access to basic utilities including a safe water supply, sewerage and electricity remains problematic for many remote communities (measure 2.01).

Twenty-five per cent of Aboriginal and Torres Strait Islander people aged 18 years and over live in overcrowded housing, with higher prevalence in remote areas (measure 2.02).

School retention rates for young Indigenous Australians are lower at Years 10 and 12 when compared with other young people, although there have been improvements over the last 5 years (measure 2.05). Aboriginal and Torres Strait Islander students are not achieving the same levels of literacy and numeracy as other Australian students at Years 3, 5 and 7 (measure 2.04).

While unemployment rates remain high, the employment rate for Indigenous Australians increased from 43% to 48% and the unemployment rate fell slightly from 13% to 9% between 1996 and 2006 (measure 2.07).

Adjusted for household size, incomes for Aboriginal and Torres Strait Islander people are 67% of the Australian average. Forty per cent of Aboriginal and Torres Strait Islander people are in the bottom quintile of income, compared with 20% of other Australians (measure 2.08).

Aboriginal and Torres Strait Islander people are much more likely to be the victims of violence (measure 2.13). Child abuse and neglect are also major problems (measure 2.15). Rates of contact with the criminal justice system, including imprisonment, are far higher for Aboriginal and Torres Strait Islander peoples than for other Australians (measure 2.14). Trends in these areas are not encouraging and suggest these problems may have become worse over the last decade.

Health behaviours

National Strategic Framework Priority:
To address the pre-determinants of chronic disease

A substantial body of evidence has found that significant improvements in the health of populations can be achieved by promoting positive health-related behaviours. Positive cultural, social and economic factors help make healthy choices viable. Alternatively, poor community functioning, poverty, disadvantage and stress support unhealthy behaviours—smoking, insufficient physical activity, poor nutrition, risky alcohol consumption and risky drug use.

Smoking (measures 2.18 and 2.19) is a major modifiable risk factor with severe health consequences. Around 50% of Aboriginal and Torres Strait Islander adults smoke, more than twice the rate for other Australians. There has been no improvement over the last decade. Evidence on the effectiveness of anti-smoking programs targeting Aboriginal and Torres Strait Islander peoples is limited. While tobacco is identified as a priority in the NSFATSIH, lack of any apparent impact is cause for concern.

An estimated 47% of Aboriginal and Torres Strait Islander adults living in non-remote areas reported levels of physical activity that are classified as sedentary. After adjusting for age differences this was one and a half times the rate for other Australians (measure 2.22). This is an increase from the 37% of Aboriginal and Torres Strait Islander adults living in non-remote areas who were physically inactive in 2001.

In 2004–05, Aboriginal and Torres Strait Islander adults were twice as likely as non-Indigenous adults to have abstained from alcohol consumption in the previous 12 months. However, an estimated 17% of Indigenous Australian adults reported drinking at long-term risky/high risk levels. After adjusting for differences in the age structure of the two populations, this rate was similar to the rate for non-Indigenous adults. Nineteen percent of Indigenous Australian adults drank at short-term risky/high risk levels at least once a week. After adjusting for differences in the age structure of the two populations, this was twice the proportion reported for non-Indigenous adults.

In 2004–05, 24% of Aboriginal and Torres Strait Islander people aged over 12 years living in non-remote areas reported a low usual daily vegetable intake and 58% reported a low usual daily fruit intake (measure 2.23). After adjusting for age, Aboriginal and Torres Strait Islander people aged 12 years and over were twice as likely to report no usual daily fruit intake and 7 times as likely to report no daily vegetable intake as non-Indigenous Australians (ABS 2006a). Significantly more Indigenous Australians living in remote areas report no usual intake of vegetables or fruit compared with Indigenous Australians living in non-remote areas.

The consequences of lower rates of physical activity and poor nutrition are seen in higher prevalence rates of obesity (measure 2.26). In 2004–05, an estimated 28% of adult Aboriginal and Torres Strait Islander males and 34% of females reported a Body Mass Index (BMI) that was classified as obese. Indigenous Australians were nearly twice as likely to be obese as non-Indigenous Australians. Levels of overweight and obesity have increased steadily in the last decade.

The combined impact of these modifiable risk factors should be a cause for major concern for the future burden of chronic disease among Aboriginal and Torres Strait Islander peoples. While some of the measures in this report suggest that access to services to manage established disease is having a positive impact, there is less indication of improvement in appropriate primary prevention. When the lack of progress against modifiable behavioural risk factors is brought together with the limited progress on the other health determinants noted above, there are reasonable grounds for concern that the recent improvements in Aboriginal and Torres Strait Islander peoples' health may stall or reverse.

Many Aboriginal and Torres Strait Islander peoples live in difficult social and economic environments. The challenge of creating health-promoting environments and building health literacy is difficult. However, it can be, and has been, done (Rowley et al. 2000). The health sector can take a leadership role in putting programs in place, working with communities, families and individuals to address health behaviours.

Relationships between socio-economic factors and health behaviours

'Inequities in health, avoidable health inequalities, arise because of the circumstances in which people grow, live, work, and age, and the systems put in place to deal with illness. The conditions in which people live and die are, in turn, shaped by political, social, and economic forces'(Commission on Social Determinants of Health 2008). Throughout this report associations between health (mostly unhealthy) behaviours and the presence of health conditions have been reported, particularly in relation to tobacco smoking, physical inactivity, risky or high risk alcohol consumption and inadequate diet. The origins of health behaviours themselves are located in a complex range of environmental socio-economic and community factors. Evidence from general population studies shows that these particular modifiable health behaviours act, in various combinations, to increase the risks for adverse health outcomes such as ischaemic heart disease, stroke, diabetes and some cancers and to increase the prevalence of biological risk factors such as high body mass, high cholesterol levels and hypertension. Other health behaviours such as infant breastfeeding, adequate diet and physical exercise have a protective impact on health.

Table 1 presents a summary of how 4 key socio-economic factors (household income, education, employment and housing tenure type) are associated with some of the key health behaviours.

Current smoker status: Higher proportions of Aboriginal and Torres Strait Islander people than other Australians are current smokers (see measure 2.18). These proportions vary across socio-economic status groups, based on associations observed from survey data. The proportion of Indigenous Australians in the lowest quintile of equivalised household income who are current smokers is 1.7 times the proportion of those in the two highest quintiles (see Table 1). Ratios of a similar order are observed between Indigenous adults whose highest level of schooling was Year 9 or below, relative to those who had completed Year 12 (a ratio of 2.0), between Indigenous adults who are unemployed relative to those who are employed (a ratio of 1.8) and between those who are renters relative to those who own their dwelling (1.5).

Where comparative data are available to calculate ratios for the non-Indigenous population, they are observed to be similar for the two populations (Table 1). This suggests that, as well as the higher prevalence of current smoking in the Aboriginal and Torres Strait Islander population in general, a higher propensity to be a current smoker is associated with greater socio-economic disadvantage in a manner that is similar to the patterns evident in the non-Indigenous population.

Alcohol consumption: As reported for measure 2.20 (Risky and high risk alcohol consumption), the propensity for Aboriginal and Torres Strait Islander persons to engage in long-term risky or high risk alcohol consumption is similar to that for non-Indigenous persons, but for short-term risky or high risk alcohol consumption the prevalence for Aboriginal and Torres Strait Islander persons is about twice that of non-Indigenous persons. Differences between different socio-economic status groups in prevalence of risky and high risk alcohol consumption were only evident in the national data on education and housing tenure. Indigenous adults whose highest level of schooling was Year 9 or below, were 1.5 times as likely to report short-term risky/high risk drinking at least once per week in the last 12 months relative to those who had completed Year 12. This relationship was similar when comparing renters with home owners.

Physical inactivity: A higher proportion of Indigenous Australians whose highest level of schooling was Year 9 or below reported low levels of physical activity (1.8 times) relative to those who had completed Year 12.

Dietary behaviours: For Indigenous Australians, dietary behaviours that are less conducive to good health appear to be associated with more disadvantaged socio-economic status. Overall, babies of Aboriginal and Torres Strait Islander mothers are nearly twice as likely to be never breastfed than other Australian babies (see measure 2.24 Breastfeeding practices). The proportion of babies aged up to 3 years who have never been breastfed is 3.6 times as high for those whose Aboriginal and Torres Strait Islander mothers are in the lowest quintile for equivalised household income than those in the two highest quintiles. The proportion is also more than twice as high for those renting accommodation than for owners.

Aboriginal and Torres Strait Islander Australians were twice as likely to report no usual daily fruit intake and 7 times as likely to report no daily vegetable intake as non-Indigenous Australians (see measure 2.23). Strong associations with socio-economic status are also evident. Indigenous Australians reporting no usual daily vegetable intake are more likely to be in the lowest quintile of equivalised income (a ratio of 10 compared with the highest quintiles) and to have a housing tenure type of renter (a ratio of 15 compared with people with a tenure type of owner).

Overweight or obesity: Aboriginal and Torres Strait Islander males were 1.6 times as likely as other Australian males to be obese, while Aboriginal and Torres Strait Islander females were twice as likely (2.2) as other Australian females (measure 2.26) to be obese. However, the prevalence rates for Indigenous Australians do not appear to be associated with socio-economic status, as indicated by ratios of prevalences close to 1 in Table 1.

Table 1 – Relationship between selected socio-economic factors and selected health behaviours and overweight and obesity, by Indigenous status [(c)], 2004–05

	Current smoker		Alcohol Risk Level			Physical Inactivity	Dietary Behaviours			Over-weight or Obese
			Long-term risk[(a)]	Short Term Risk in last 12 months[(b)]	Short Term Risk at least once a week in last 12 months[(b)]		Baby Never Breast-feed	No usual daily vegetable intake	No usual daily fruit intake	
	Indig	Non-Indig.	Indig	Indig	Indig	Indig	Indig	Indig	Indig	Indig
Household income										
1st quintile (lowest)	55.3*	32.4*	15.0	49.0	20.0	51.6	29.3	7.8	16.8	59.1
4th and 5th quintile (highest)	33.1*	20.5*	20.0	63.0	15.0	43.6	8.1	0.8	8.8	61.5
Ratio	1.7*	1.6*	0.8	0.8*	1.3	1.2	3.6*	10.1*	1.9*	1.0
Highest year of school completed										
Year 9 or below	57.9*	37.5*	17.5	46.4	20.9	60.8	n.a	7.7	16.9	56.8
Year 12	28.6*	17.0*	12.2	59.4	13.5	34.4	n.a	3.8	9.4	63.7
Ratio	2.0*	2.2*	1.4	0.8*	1.5*	1.8*	n.a	2*	1.8*	0.9
Employment										
Employed	41.5*	23.0*	19.0	61.0	21.0	45.1	n.a	5.0	14.3	60.6
Unemployed	75.9*	41.5*	20.0	67.0	23.0	38.0	n.a	4.0	14.4	59.3
Not in the labour force	53.7*	26.0*	12.0	43.0	16.0	51.8	n.a	6.8	15.6	59.6
Ratio Unemployed/ Employed	1.8*	1.8*	1.1	1.1	1.1	0.8	n.a	0.8	1.0	1.0
Housing Tenure Type										
Renter	57.4	n.a	15.0	54.0	21.0	49.0	24.3	7.4	16.4	48.5
Owner	37.4	n.a	19.0	55.0	14.0	45.0	11.5	0.5	11.1	59.0
Ratio	1.5*	n.a	0.8	1.0	1.5*	1.1	2.1	14.8*	1.5*	0.8*

* Statistically significant difference between Indigenous and non-Indigenous rate

(a) Includes long-term 'risky' and 'high risk' drinking, i.e., average consumption in excess of (i) for males: 4 standard drinks per day amounting to 29 or more standard drinks per week; (ii) for females 2 standard drinks per day amounting to 15 or more standard drinks per week

(b) Includes short-term 'risky' and 'high risk' drinking, i.e., consumption in excess of (i) for males: 6 standard drinks of more on any one day; (ii) for females: 4 standard drinks of more on any one day.

(c) Data for smoking, alcohol and overweight and obesity are for persons aged 18 years and over. Data for physical inactivity and dietary behaviours are for persons aged 15 years and over.

Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Relationships between socio-economic factors, health behaviours and health status

The socio-economic factors presented in Table 1 are also associated with some key measures of health status. Table 2 presents associations with reported heart/circulatory conditions, diabetes and self-reported health status, based on analyses of the 2004–05 NATSIHS and the 2004–05 NHS. Table 3 presents associations between key health behaviours and these three health status measures.

Diabetes: There was a statistically significant difference in prevalence of diabetes when comparing the proportion of Indigenous Australians who are renters with home owners (ratio of 1.7). The associations for employment and income were not statistically significant. Those who are overweight/obese were twice as likely to have diabetes as those who are not.

Self-assessed health status: Aboriginal and Torres Strait Islander Australians who reported their health status as fair or poor, were more likely to live in households with an equivalised income in the lowest quintile (2.1 times as likely as those in the two highest quintiles), have left school at Year 9 or earlier (1.4 times as likely as those who attended school to Year 12) and be a renter (1.4 times as likely as those who were home owners). Those who smoke, those who reported low levels of physical activity and those who reported poor diet are more likely to report fair/poor health status.

Heart/Circulatory conditions: These data show an association between higher prevalence of these heart/circulatory conditions and higher levels of socio-economic disadvantage. A higher proportion of Indigenous Australians not in the labour force reported heart/circulatory problems than those who are employed. Those with reported physical activity levels categorised as low or sedentary are 2.5 times more likely to have heart/circulatory problems than those with high physical activity levels. Those who are overweight/obese were 1.4 times as likely to have heart/circulatory problems as those who were not.

Table 2 – Relationship between selected socio-economic factors and reported heart/circulatory disease, diabetes and fair/poor health status, by Indigenous status, persons aged 15 years and over 2004–05

	Has heart/circulatory problems		Has diabetes		Self Assessed Health Status: Fair/Poor	
	Indig	Non-Indig.	Indig	Non-Indig.	Indig	Non-Indig.
Household income						
1st quintile (lowest)	28.2	25.7	17.9*	6.0*	35.1*	28.6*
4th and 5th quintile (highest)	22.0	17.5	11.5*	3.5*	16.5*	8.4*
Ratio	1.3	1.5	1.6	1.7*	2.1*	3.4*
Highest year of school completed						
Year 9 or below	30.0*	24.6*	17.3*	6.0*	34*	28*
Year 12	23.6	18.4	14.4*	3.8*	24*	11*
Ratio	1.3	1.3*	1.2	1.6*	1.4*	2.5*
Employment						
Employed	22.5*	17.0*	12.5*	3.2*	18*	9*
Unemployed	28.2	13.6	22.2*	3.7*	37	21
Not in the labour force	30.3*	25.9*	17.3*	5.5*	38*	26*
Ratio Unemployed/Employed	1.3	1.8	1.8	1.2	2.1	2.3*
Housing Tenure Type						
Renter	18.4	n.a	10.9	n.a	23.6	n.a
Owner	17.3	n.a	6.6	n.a	17.3	n.a
Ratio	1.1	n.a	1.7*	n.a	1.4*	n.a

* Statistically significant difference between Indigenous and non-Indigenous rate

Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Table 3 – Relationship between selected health behaviours and overweight and obesity and reported heart/circulatory disease, diabetes and fair/poor health status, by Indigenous status[(a)], 2004–05

	Has heart/circulatory problems		Has diabetes		Self Assessed Health Status: Fair/Poor	
	Indig	Non-Indig.	Indig	Non-Indig.	Indig	Non-Indig.
Smoker status						
Current daily smoker	29.0*	19.4*	12.7*	3.5*	34.9*	21.7*
Not current daily smoker	27.7*	22.9*	18.5*	4.8*	26.0*	14.3*
Ratio	1.0	0.8*	0.7*	0.7	1.3*	1.5*
Risky/high risk alcohol consumption in last 12 months						
Yes	31.0*	20.5*	8.1*	2.9*	34.9*	13.6*
No	28.1*	22.8*	17.4*	5.0*	29.7*	16.4*
Ratio	1.1	0.9	0.5*	0.6*	1.2	0.8
Physical activity						
Low/sedentary	27.5*	21.9*	13.6*	4.8*	32.4*	17.9*
Moderate	21.9	21.0	12.1*	4.0*	25.4*	10.3*
High	11.0	15.4	11.2	2.6	19.3*	6.2*
Ratio low/sedentary to high	2.5*	1.4*	1.2	1.8*	1.7*	2.9*
Eats vegetables daily						
Yes	27.0*	21.4*	14.9*	4.5*	28.8*	15.4*
No	24.5	27.0	23.7*	3.4*	34.5*	28.1*
Ratio	1.1	0.8	0.6	1.3	0.8*	0.5*
Eats fruit daily						
Yes	27.1*	21.5*	15.5*	4.5*	28.3*	15.0*
No	24.9	19.6	12.6*	3.5*	34.6*	22.6*
Ratio	1.1	1.1	1.2	1.3	0.9*	0.7*
Overweight/Obese						
Yes	29.3*	23.8*	17.7*	5.9*	29.8*	17.3*
No	20.6	18.5	8.7*	2.9*	26.7*	12.8*
Ratio	1.4*	1.3*	2.0*	2.0*	1.1	1.3*

* Statistically significant difference between Indigenous and non-Indigenous rate

(a) Data for smoking, alcohol and overweight and obesity are for persons aged 18 years and over. Data for physical inactivity and dietary behaviours are for persons aged 15 years and over.

Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Child and maternal health

National Strategic Framework Priority:
Child and Maternal health

Improving child and maternal health is one of the priority areas for reform identified by COAG. This report presents a range of indicators relevant to this priority. There have been major improvements in several measures of child and maternal health for Aboriginal and Torres Strait Islander peoples in recent years. Since the 1990s, perinatal and infant mortality rates (measures 1.19 and 1.20) have improved considerably. Although these rates remain considerably higher than for other Australians, the trends demonstrate that large improvements have been achieved and provide optimism that they can continue.

Immunisation coverage is high for Aboriginal and Torres Strait Islander children, only slightly below other Australian children (measure 3.02).

Other measures do not demonstrate similar success. Low birthweight is twice as common for babies born to Aboriginal and Torres Strait Islander mothers as for other Australian babies and there has been no improvement in birthweight of infants nationally since 1991 (measure 1.01). Around 3 times as many Aboriginal and Torres Strait Islander mothers smoked during pregnancy compared with other mothers (measure 2.19). Despite rates of ear disease and hearing problems that are 2 or 3 times those of the non-Indigenous population (measure 1.12), the mainstream health system data show that GP and hospital service delivery rates (apart from tympanoplasty) are not significantly different. The only national data available on ear disease in Aboriginal and

Torres Strait Islander children are self-reported, from parents in national surveys, and suggests that there has been no improvement in levels of ear disease in non-remote areas in the past decade and some limited improvement in remote communities since 2001 (measure 1.12).

Data on dental health are even scarcer for Aboriginal and Torres Strait Islander children. The data available demonstrate much greater levels of tooth decay and lower levels of dental care than for other Australian children. In the Northern Territory, the only jurisdiction for which trend data are available, there has been no improvement in dental health since 1991 (measure 1.10). Dental disease in childhood is readily treated but Aboriginal and Torres Strait Islander children do not have ready access to high quality dental care.

On the other hand, the high levels of immunisation coverage demonstrates that primary health care services can deliver an effective health care intervention to almost all Aboriginal and Torres Strait Islander children when adequately resourced and organised.

Antenatal care provides a major opportunity to intervene at the earliest stages of human development. Ninety-six per cent of Aboriginal and Torres Strait Islander women access antenatal care at some point in their pregnancy (measure 3.01). However, compared with other women, access generally occurs later in the pregnancy and less frequently despite the priority accorded antenatal care in various state and national strategies. Further attention to strategies to improve this measure is warranted. The data show a strong relationship between attending antenatal care and improved child health. For example, 13% of Indigenous mothers who attended antenatal care had low birthweight babies compared with 39% who did not attend antenatal care (measure 3.01). Mothers who smoked were also more likely to have low birthweight baby (measure 2.19). Antenatal care provides opportunities to address health risks.

The child and maternal health measures illustrate the fundamental importance of improving comprehensive primary health care for Aboriginal and Torres Strait Islander communities. However, health services, either primary care or acute services, are not the sole answer to the health problems of Aboriginal and Torres Strait Islander peoples. The clearest illustration of this is the failure to achieve improvements in the birthweight of Aboriginal and Torres Strait Islander babies. While antenatal care and other primary health care are effective at improving pregnancy outcomes, improvements in the living conditions and economic and social circumstances of Aboriginal and Torres Strait Islander peoples, including housing and environment, education and employment, nutrition and substance use (particularly tobacco—measure 2.18) have a role to play in reducing the excess levels of low birthweight.

Social and Emotional Wellbeing

National Strategic Framework
Key Result Area Four and Priority:
Emotional and social wellbeing

Improving the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples is one of the priorities and key result areas of the National Strategic Framework.

The *Social and Emotional Wellbeing Framework* recognises the strengths, resilience and diversity of Aboriginal and Torres Strait Islander communities. In 2004–05, approximately 77% of Indigenous Australians reported they had experienced at least one stressor in the last 12 months. Aboriginal and Torres Strait Islander peoples are far more likely to experience the threat of physical violence. Young Aboriginal and Torres Strait Islander women are particularly at risk of serious injury from interpersonal violence, but men and women of all ages are subject to serious injury far more frequently than other Australians and these are more likely to cause death (measures 1.03, 1.23 and 2.13).

The very high death rates of Aboriginal and Torres Strait Islander people in their middle adult years deprive their families and communities of husbands, wives, parents and grandparents.

Although around one-quarter of Aboriginal and Torres Strait Islander people are teetotalers, the high levels of high risk drinking cause serious damage to not only the drinkers, but their families and wider communities (measure 2.20). The high levels of mental illness (measure 1.16), of substance use (measure 2.21), and suicide (measure 1.16) all testify to the challenges faced by many Aboriginal and Torres Strait Islander peoples.

The financial stress experienced by a majority of Aboriginal and Torres Strait Islander households indicates not only that they are severely limited in their ability to cope with an immediate crisis, but are also unable to accumulate resources (measure 2.08). The levels of family disruption, the stressors faced by many Aboriginal and Torres Strait Islander children, and the high degree of risk of serious long-term emotional or behavioral difficulties in which many of these children live mean their transition to adulthood is likely to be characterised by a range of risks and challenges not experienced by other Australian children.

Unfortunately we have no reliable national trend data on most direct measures of the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples, so we do not know whether stressors are slowly reducing or increasing.

Health services have limited capacity to address the underlying social and economic difficulties that beset many Aboriginal and Torres Strait Islander families and communities. Mental health services can improve management of those with established mental illness, and

early intervention may prevent emotional problems in some young people developing into serious long-term illness or death from suicide or other destructive behavior (measure 3.03). The development of social and emotional wellbeing services in Aboriginal and Torres Strait Islander-specific primary health care services may also be able to ameliorate some of these problems.

Mental health services are in high demand in Australia the recent Council of Australian Governments Mental Health Reform package signals a major commitment by all governments to improve access. The inadequacies are particularly apparent for Aboriginal and Torres Strait Islander peoples (measure 3.09). For other chronic diseases such as diabetes and hypertension, there have been developments in our understanding of how to detect them early and slow the development of complications. For mental health services, this process has hardly begun and must start from a much lower base.

Management of Chronic Illness

Chronic illnesses are one of the most pressing health issues for all Australians. For Aboriginal and Torres Strait Islander peoples these diseases commence at younger ages, involve more complications and co-morbidities and lead to higher death rates, particularly in younger middle age. Circulatory, renal, endocrine (particularly diabetes), cancer and respiratory diseases account for 59% of excess deaths of Aboriginal and Torres Strait Islander people relative to other Australians (measure 1.23). While death rates for circulatory diseases are falling for Aboriginal and Torres Strait Islander peoples, and the gap in circulatory disease mortality is closing, there has been less progress for other chronic diseases, and cancer mortality rates are rising.

Reducing the impact of chronic disease on Aboriginal and Torres Strait Islander adults is a major theme of the NSFATSIH. Addressing health behaviours (such as smoking, nutrition, physical inactivity and risky alcohol consumption) that contribute to the development of chronic diseases, and the progression of these diseases, is a key priority. An additional focus should be to improve the capacity and performance of health services to manage chronic diseases, particularly cardiovascular, diabetes, renal, respiratory disease and cancer. Significantly better management can be achieved through early detection and early treatment by primary health care services (measure 3.03). Organised ongoing management of these chronic diseases (measure 3.04) by primary health care services and, for some conditions, specialist services, can delay the progression of these diseases and the development of complications.

Access to primary health care services (measures 3.12, 3.14 and 3.15) is a prerequisite to improved management of chronic illness. The introduction of MBS items targeted for Aboriginal and Torres Strait Islander peoples is an opportunity to create more systematic processes within primary care, however, uptake is currently low (measure 3.03). There are opportunities for primary health care providers to benchmark the extent to which their systems reflect the current state of knowledge on the management of chronic illness (measure 3.04).

Aboriginal and Torres Strait Islander peoples experience significant barriers to accessing prescription medicines (measure 3.13) which are often vital in managing chronic illnesses. There have been recent successes in the area, particularly with the Section 100 arrangements for health services located in remote areas, but access to pharmaceuticals for Indigenous peoples is still below that of other Australians.

Good linkages between primary and specialist services are also important. Aboriginal and Torres Strait Islander peoples need to be able to access effective specialist and hospital care when required (measure 3.05).

Chronic illnesses are a major factor contributing to excess hospitalisations for Aboriginal and Torres Strait Islander peoples (measure 3.06). In the long-term, improved management of these conditions outside hospitals will reduce avoidable hospital admissions. However, in the short and medium terms, it can be anticipated that hospitalisation rates may increase, as unmet needs are uncovered through better detection of chronic illnesses and barriers to access are reduced.

Strong Comprehensive Primary Health Care

National Strategic Framework Priority:
Strengthen comprehensive primary health care

Key Result Area One:
Community controlled primary health care services

Key Result Area Two:
Health Delivery Framework

The NSFATSIH places the development of strong comprehensive primary health care as one of the top priorities and key result areas for governments. Effective primary care underpins almost all the strategies that can be delivered through the health system, e.g., antenatal care, immunisation, early detection and screening, and chronic disease management (measures 3.01, 3.02, 3.03, 3.04).

Aboriginal community controlled health services are services initiated, planned and governed by local Aboriginal communities through their elected Aboriginal board of directors. A nationwide network of community controlled and other Aboriginal and Torres Strait Islander primary health care services, supported by federal, state and territory direct funding, and increasingly through revenue from the Medical Benefits Scheme, provide primary medical services and a wide range of other services. There has been expansion of the sector over the last decade, with increased funding, staffing levels and services delivered.

One positive finding from this report is that 91% of Aboriginal and Torres Strait Islander people report that they usually went to the same GP or Aboriginal medical service (measure 3.15). This suggests high levels of a usual source of medical care. Thirty per cent report that their usual source of care is an ‘Aboriginal medical service’ and 60% report a ‘doctor’ (GP) as the usual source of care. ‘Aboriginal medical services’ are the usual source of care for 76% of Aboriginal and Torres Strait Islander people living in very remote areas. While there are positive signs, enhancing the capacity of the primary health care sector to meet the needs of Aboriginal and Torres Strait Islander Australians remains a challenge. Consultations undertaken to inform the preparation of this report identified that many Aboriginal and Torres Strait Islander primary care services are still struggling to respond to immediate demand involving acute illnesses, and do not always have the capacity to deliver the comprehensive early intervention and chronic disease management services that are required.

The Aboriginal and Torres Strait Islander Health Workforce

National Strategic Framework
Key Result Area Three:
A competent health workforce

Aboriginal and Torres Strait Islander peoples continue to be under-represented in health professions (measure 3.10), and in training for various health professions (measure 3.18).

Another major challenge is the recruitment and retention of staff in Aboriginal and Torres Strait Islander health services and in mainstream services located in areas with significant Aboriginal and Torres Strait Islander populations (measure 3.20).

Addressing the issues within the Aboriginal and Torres Strait Islander health workforce is one of the key result areas for the NSFATSIH. The *Aboriginal and Torres Strait Islander Health Workforce Strategic Framework 2002* (SCATSIH 2002) recognises the importance of coordination across the Commonwealth, state and territory governments and partnerships with training providers, mainstream and community controlled health providers. It sets out several objectives and strategies for addressing these issues, including increasing the numbers of Aboriginal and Torres Strait Islander people working across all health professions.

In 2006, Aboriginal and Torres Strait Islander people aged 15 years and over accounted for 1% of the health workforce, but comprised 1.9% of this population (measure 3.10). Increasing the representation of Aboriginal and Torres Strait Islander peoples in the health workforce requires increased participation in training for health-related disciplines. In 2006, an estimated 1.6% of all undergraduate students enrolled in health-related courses were Aboriginal or Torres Strait Islander (measure 3.18). Improving participation in training for health professions is a key priority across a broad range of disciplines including medicine, nursing, allied health, as well as for Aboriginal health workers. Educational institutions that have been successful in achieving high levels of enrollment of Aboriginal and Torres Strait Islander students typically take a comprehensive approach to establishing good links with communities, prospective students and their families, and having available Indigenous medical or health support units (Minniecon & Kong 2005). Ongoing support and development of Aboriginal and Torres Strait Islander staff is important to staff retention and developing more responsive health services.

Resources

National Strategic Framework
Key Result Area Eight:
Resources and finance

On a per person basis, average health expenditure for Aboriginal and Torres Strait Islander people in 2001–02 was 17% higher than the expenditure for other Australians (measure 3.19). In contrast, measures of health status show mortality rates (measures 1.17 and 1.25), infant mortality (measure 1.19) and the occurrence of a broad range of diseases (measures 1.04, 1.05, 1.06, 1.07, 1.08, 1.09, 1.10, 1.11 and 1.12) to be much higher in Aboriginal and Torres Strait Islander peoples.

Various estimates have been made of the level of expenditure that would be required to address Aboriginal and Torres Strait Islander health service needs based on the burden of illness, the higher costs in remote areas. Dwyer et al. (2004, p. 71) concluded that 'total health spending on Indigenous populations would need to be increased to a level between 3 and 6 times the current national average per capita expenditure to achieve equitable access to effective care'. Experience over recent years has demonstrated increased resourcing can lead to a significantly improved level of service provision in Aboriginal and Torres Strait Islander primary care services.

Demographics

The trends highlighted above provide several pointers for setting priorities in planning, resourcing and evaluating services for Aboriginal and Torres Strait Islander peoples. Another issue that underpins planning is the impact of the significantly younger age structure of the Aboriginal and Torres Strait Islander population. In 2006, 38% of Indigenous people were aged under 15 years compared with 19% of non-Indigenous Australians. This younger age profile presents a challenge as health and other services for children and young people need to be adequately resourced, as well as developed and delivered in culturally sensitive ways. However, the younger age structure also represents a tremendous opportunity. With well designed and delivered antenatal care and early childhood programs, along with effective interventions helping young adults to adopt healthy behaviours, there is an opportunity to temper the emergence of chronic illnesses and their devastating consequences in this group of younger people. While it is vital that there is focus on ensuring improvement of health for Aboriginal and Torres Strait Islander peoples across their life course, it is important to take account of demographic composition in planning for resource requirements and service delivery for Aboriginal and Torres Strait Islander peoples.

Data quality

National Strategic Framework
Key Result Area Seven:
Data, research and evidence

The absence of quality data from a variety of sources remains a significant impediment to a full understanding of the health of Aboriginal and Torres Strait Islander Australians and the performance of health services. Governments made a commitment to addressing these issues under the NSFATSIH (Key Result Area 7) and a range of initiatives have been implemented.

An Indigenous identifier was introduced in Medicare in 2002 and participation has gradually increased since then. To date, approximately 40% of Aboriginal and Torres Strait Islander people have chosen to identify in this way. Identification of Aboriginal and Torres Strait Islander patients by GPs has much room for improvement. Little is known about the use of specialist medical practitioners by Aboriginal and Torres Strait Islander peoples. Hopefully, by the time the third HPF report has been prepared, significant progress will have been made on these data issues. AHMAC has an important leadership role in this regard.

Chapter 3 National Health Policies and Strategies

The Council of Australian Governments (COAG) has committed to closing the gap on Indigenous disadvantage and in particular to:

- closing the life expectancy gap within a generation (see measure 1.17)
- halving the gap in mortality rates for Indigenous children under five within a decade (see measure 1.19)
- ensuring all Indigenous four year olds in remote communities have access to early childhood education within five years
- halving the gap for Indigenous students in reading, writing and numeracy within a decade (see measure 2.04)
- halving the gap for Indigenous students in Year 12 attainment or equivalent attainment rates by 2020 (see measure 2.05)
- halving the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade (see measure 2.07).

COAG has established 7 working groups to advance reforms in various policy spheres, including working groups on Indigenous Reform, the Productivity Agenda, Health and Ageing, and Housing. These working groups have explicit terms of reference relating to social inclusion and outcomes for Aboriginal and Torres Strait Islander peoples. They will also have responsibility for developing new Specific Purpose agreements and National Partnership agreements between the Australian Government and the States/Territories. The Working Group on Indigenous Reform (WGIR) has responsibility for ensuring that improved outcomes for Indigenous peoples are incorporated into these new national agreements, with a view to achieving the 6 COAG targets.

On 5 April 2008, the Prime Minister announced that he would provide an annual report to Parliament on progress towards the achievement of these targets. Work on the structure and content of this report is being progressed through the WGIR. The *Health Performance Framework* is being used to inform the development of reports on progress in closing the gap in Indigenous disadvantage.

Seven 'building blocks' have been identified which set out the various spheres of activity that need to be addressed in a coordinated fashion if the targets are to be achieved. These building blocks reflect the need for a whole of government approach, and emphasise the influence that social, economic and environmental factors have on overall health outcomes.

The building blocks are:

1. early childhood
2. education and supporting school attendance
3. access to primary health care
4. economic participation and active welfare
5. healthy home environments
6. safety and freedom from violence
7. leadership and governance.

The National Indigenous Health Equality Council has also been established to provide advice on the development of further relevant targets, policies and programs to achieve the targets, particularly those relating to child mortality and life expectancy.

In July 2008, COAG leaders agreed to sustained engagement and effort by all governments over the next decade and beyond to achieve the Close the Gap targets for Indigenous peoples. COAG agreed that further work on developing broader reform agenda proposals be considered later in 2008.

The COAG agenda builds on the endorsement, in July 2003, by all Australian Health Ministers of the *National Strategic Framework for Aboriginal and Torres Strait Islander Health* (NSFATSIH). The key goal of the NSFATSIH is: 'To ensure that Aboriginal and Torres Strait Islander peoples enjoy a healthy life equal to that of the general population that is enriched by a strong living culture, dignity and justice' (NATSIHC 2003, p7).

All Australian governments are rolling out programs, both mainstream and those addressing Aboriginal and Torres Strait Islander Australians specifically to support this goal of closing the gap in Indigenous disadvantage. Details of these programs are also included in regular reports against the NSFATSIH. Governments report annually on health activities and biennially on whole of government programs. These reports will be available on the Department of Health and Ageing website. Details of these programs are not included in this report.

The HPF recognises that an effective, efficient and equitable health system is an essential component for any whole of Government effort that seeks to address Indigenous health. In addition, action is required in areas such as education, employment, transport and nutrition to achieve sustainable health gains. The NSFATSIH acknowledges the need for 'concerted action both across and beyond the health sector to address the complex and inter-related factors that contribute to the causes and persistence of health problems amongst Aboriginal and Torres Strait Islander people' (NATSIHC 2003, p1). The Framework encourages the health sector to 'contribute to action on the agendas of other portfolios through research, advocacy, partnerships and linkages' (NATSIHC 2003, p24).

Chapter 4 Health Status and Outcomes (Tier 1)

Measures in Tier 1 consist of indicators of health status and outcomes. These measures do not directly relate to specific health services or programs, but rather provide an overall indication of current status and recent trends in the health status of Aboriginal and Torres Strait Islander peoples on a range of health issues. Tier 1 measures cover 4 domains: health conditions; human function; life expectancy and wellbeing; and deaths. Within these domains, measures cover the issues of:

Child and maternal health

- low birthweight infants (1.01)
- dental health (1.10)
- hearing loss (1.12)
- infant mortality (1.18)
- perinatal mortality (1.19)
- Sudden Infant Death Syndrome (1.20)
- maternal mortality (1.23)

Chronic diseases

- top reasons for hospitalisation (1.02)
- circulatory disease (1.05)
- rheumatic heart disease (1.06)
- high blood pressure (1.07)
- diabetes (1.08)
- end stage renal disease (1.09)
- leading causes of mortality (1.22)
- avoidable and preventable deaths (1.24)

Injury

- hospitalisations for injury and poisoning (1.03)

Communicable diseases

- hospitalisation for pneumonia (1.04)
- acute rheumatic fever (1.06)
- HIV/AIDS, hepatitis C and sexually transmissible infections (1.11)

Human function

- disability (1.13)
- community functioning (1.14)

Social and emotional wellbeing (1.16)

Overall health status

- perceived health status (1.15)
- life expectancy at birth (1.17)
- median age at death (1.18)
- all-causes age-standardised death rates (1.22)

Tier 1 is closely related to the other two tiers. Improvements in health outcomes shown by Tier 1 measures are dependent on changes in the immediate and underlying determinants of health reported in Tier 2, and in the access to and effectiveness of health system performance reported in Tier 3.

Many of the implications and policy questions raised by Tier 1 measures are about the ability of governments, Aboriginal and Torres Strait Islander peoples and all Australians to improve the circumstances in which Aboriginal and Torres Strait Islander peoples live (Tier 2) and the effectiveness of the health systems that they use (Tier 3). Improvements in Tier 1 measures will occur only as Aboriginal and Torres Strait Islander peoples are able to live healthier lives and are able to use high quality health services according to need.

1.01 Low birthweight infants

WHY IS IT IMPORTANT? Low birthweight (new born babies weighing less than 2500g) is associated with premature birth or sub-optimal intrauterine environments (fetal growth retardation). Low birthweight infants are at a greater risk of dying during the first year of life and are prone to ill health in childhood. Low birthweight babies may also be more vulnerable to illness in adulthood. There is some evidence, as yet inconclusive, that low birthweight babies are more likely to develop chronic diseases in adulthood, including diabetes and renal disease.

Risk factors include socio-economic disadvantage, the size and age of the mother, the number of babies previously born to the mother, the mother's nutritional status, smoking and other risk behaviours, illness during pregnancy, multiple births and the duration of pregnancy (SIMC 2004; Australian Medical Association 2005; ABS & AIHW 2008; Eades et al. 2008).

FINDINGS: In the period 2003–05, low birthweight was more than twice as common among babies born to Aboriginal and Torres Strait Islander mothers than other Australian babies (13% compared with 6%). For babies born to Aboriginal and Torres Strait Islander mothers, the low birthweight rate has increased by 16% between 1991 and 2005. Low birthweight also increased for other Australian babies, but by a lesser amount (9%). Therefore the gap is widening.

Longer-term data on national time-trends are not available for Aboriginal and Torres Strait Islander births. However, in the Northern Territory, the low birthweight rate declined from around 15% in the period 1986–88 to 13% in the period 1998–2000, but this improvement did not continue in more recent years. There is a small degree of variation in the low birthweight rate between states. The low birthweight rate was highest in the Australian Capital Territory and South Australia (around 18% of births). The Australian Capital Territory figure should be treated with caution due to small numbers and the provision of maternity services for women from New South Wales. The low birthweight rates are lowest in Queensland and New South Wales (around 12% of live births). In 2005, the mean birthweight for infants born to Aboriginal and Torres Strait Islander mothers was 3,155 grams compared with 3,376 grams for other babies.

Babies who are born prematurely and babies who are multiple births are more likely to be low birthweight for both non-Indigenous and Indigenous mothers. However, these factors do not explain the difference in birthweight. Low birthweight non-preterm births and singleton births were almost 3 times as high among babies born to Indigenous mothers as among babies born to non-Indigenous mothers.

The proportion of low birthweight babies born to Aboriginal and Torres Strait Islander mothers was highest among mothers living in the most socio-economically disadvantaged areas (14% compared with 13% in the least disadvantaged) and those living in remote and very remote areas (15% and 14% respectively compared with 13% in major cities). In remote areas, babies born to Indigenous mothers were almost 3 times as likely as babies born to non-Indigenous mothers to be of low birthweight.

Whilst for the non-Indigenous population it was the younger mothers who had the highest proportion of low birthweight babies (8%), for Indigenous mothers the percentage of low birthweight babies was highest in the 35+ age group (16%).

Smoking is one of the risk factors for low birthweight. Aboriginal and Torres Strait Islander mothers smoke during pregnancy at around 3 times the rate of non-Indigenous mothers (see measure 2.19).

Compared with other countries, low birthweight is a more severe problem for Indigenous babies in Australia. For the most recent period, low birthweight babies were 7% of babies born to American Indian and Alaskan native mothers on reserves compared with 8% of other US babies; 7% of babies born to Maori mothers compared with 6% of all New Zealand babies; 5% of Canadian First Nation babies compared with 6% of all Canadian babies (D'Espaignet et al. 2003). In Canada, the main birthweight problem amongst Aboriginal peoples is high birthweight (4000g and over), linked with diabetes (Health Canada 2005).

IMPLICATIONS: Efforts to improve the birthweight of Aboriginal and Torres Strait Islander children do not appear to have been successful since the mid-1990s. The issue impacts Aboriginal and Torres Strait Islander babies in all states and territories.

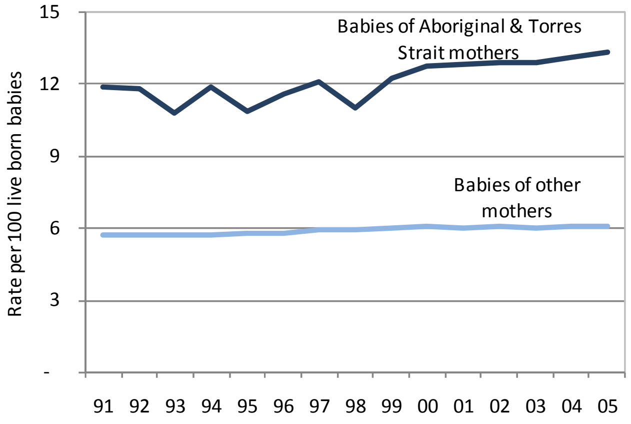
A major contributor to the excess of low birthweight in babies born to Aboriginal and Torres Strait Islander mothers is pre-term delivery, which was more common in Aboriginal and Torres Strait Islander babies than other babies. Two-thirds of low birthweight babies were born pre-term in the period 2003–05 (Aboriginal and Torres Strait Islander 68%, other 61%).

Appropriate antenatal care and a healthy environment for the mother can improve the chances that the baby will have a healthy weight. Some comprehensive mother and child programs for Aboriginal and Torres Strait Islander women in Australia have significantly improved pregnancy outcome measures including rates of low birthweight (Herceg 2005). While improvements in health services such as antenatal and acute care for pregnant women are important to reduce the occurrence of pre-term delivery and improve fetal growth during pregnancy, the reasons for premature delivery are not well understood. Health services have only limited success in improving fetal growth and preventing premature birth. Equally important to early access to antenatal care are factors such as reducing the prevalence of smoking, reducing the number of early teenage pregnancies, improving the nutrition and growth of girls during their childhood and adolescence, as well as their nutrition during pregnancy, reducing violence against women, improving the educational attainment, and improving the overall social and economic conditions for Indigenous Australian women and their families.

Maternal and child health is recognised as a key priority in the NSFATSIH and by governments across Australia who are implementing a range of programs in this area. In July 2008, the Council of Australian Governments agreed in principle to a National Partnership with joint funding of around $564 million over 6 years to address the needs of Indigenous children in their early years. Australian governments share the objective of improving early childhood outcomes of Indigenous children by addressing the high levels of disadvantage to give them the best start in life. The Australian Government's policy *New Directions: An Equal Start in Life for Indigenous Children* will provide Aboriginal and Torres Strait Islander children and their mothers with access to antenatal care; standard information about baby care; practical advice and assistance with parenting; monitoring of developmental milestones by a primary health care service; and health checks for children. Both the *Healthy for Life and Health@Home Plus* programs aim to improve access to antenatal, postnatal care and child health care. These programs aim to improve pregnancy, birth and child health outcomes (including birthweight) and reduce the incidence of illness for Aboriginal and Torres Strait Islander babies and children. States and territories invest heavily in the area of Indigenous early childhood, e.g., through their provision of maternal and child health services.

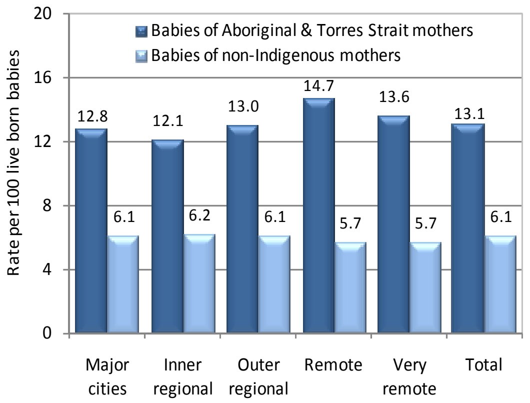
Australian governments are working collaboratively to develop *National Evidence-Based Antenatal Care Guidelines*, which will provide nationally consistent guidance on optimal care, including culturally appropriate recommendations, for the antenatal period.

Figure 2 – Low birthweight babies per 100 live births, by Indigenous status of mother, Australia 1991–2005



Source: AIHW analysis of National Perinatal Statistics Unit (NPSU) National Perinatal Data Collection

Figure 3 – Low birthweight babies per 100 live births, by Indigenous status of mother and remoteness, 2003–2005



Source: AIHW analysis of National Perinatal Statistics Unit (NPSU) National Perinatal Data Collection

Table 4 – Low birthweight babies per 100 live births, by Indigenous status of mother and state/territory, 1998–2000 and 2003–2005

	Babies of Indigenous mothers			Babies of non-Indigenous mothers		
	1998–2000	2001–2003	2003–2005	1998–2000	2001–2003	2003–2005
New South Wales	11.0	12.2	12.0	5.7	5.8	5.7
Victoria	13.4	12.7	14.3	6.2	6.3	6.3
Queensland	10.8	11.5	11.7	6.1	6.2	6.3
Western Australia	13.3	14.5	14.7	5.8	5.8	6.0
South Australia	15.7	17.6	17.5	6.3	6.2	6.4
Australian Capital Territory	16.7	19.1	17.7	6.8	6.5	7.1
Northern Territory	12.7	13.3	14.3	7.2	6.0	6.6
Australia	12.0	12.9	13.1	6.0	6.1	6.1

Source: AIHW analysis of National Perinatal Statistics Unit (NPSU) National Perinatal Data Collection

1.02 Top reasons for hospitalisation

WHY IS IT IMPORTANT? Hospitalisation rates indicate 2 main issues: the occurrence of serious acute illness and conditions requiring inpatient hospital treatment in a population, and the access to and use of hospital inpatient treatment by people with such conditions (see also measure 3.06). Hospitalisation rates for a particular disease do not directly indicate the level of occurrence of that disease in the population. For diseases that usually do not cause serious enough illness to require admission to hospital, a high level of occurrence will not be reflected in a high level of hospitalisation. Hospitalisation rates are calculated based on the number of hospital episodes rather than on the number of individual people who are hospitalised. A person who has frequent admissions for the same disease is counted multiple times in the hospitalisation rate for that disease. For example, each kidney dialysis treatment is counted as a separate hospital episode, so that each person receiving 3 dialysis treatments per week contributes approximately 150 hospital episodes per year. It is important to separate hospitalisation rates for dialysis from rates for other conditions. Measures of hospitalisation are also impacted by the availability of primary care services (see measure 3.06), and the lack of alternative services.

FINDINGS: After adjusting for age differences in the two populations, the hospitalisation rate (excluding dialysis) for Aboriginal and Torres Strait Islander peoples in the 2 years to June 2006 was 394 per 1,000 population compared with 302 per 1,000 population for other Australian, i.e., 1.4 times as high.

Hospital episodes for care involving dialysis accounted for 41% of hospitalisations for Aboriginal and Torres Strait Islander people (compared with 11% for other Australians) and their hospitalisation rate was 11 times as high as that for other Australians (see measure 1.09). Hospitalisation rates for Aboriginal and Torres Strait Islander peoples were around 3 times as high as for endocrine nutritional and metabolic diseases conditions (including diabetes–see measure 1.08)) and respiratory conditions (see measure 1.04). Other conditions in which hospitalisation rates were between 1.7 and 2.5 times as high as for Aboriginal and Torres Strait Islander peoples were skin conditions (commonly serious skin infections, especially in children), infectious diseases, injury (see measure 1.03), mental illness (see indicators 1.07 and 3.09) and circulatory diseases (see indicators 1.05, 1.06 and 1.07).

The key conditions for which there were more hospitalisations for Aboriginal and Torres Strait Islander compared with other Australians include dialysis (an excess of 173,000 admissions), respiratory conditions (an excess of 20,000 admissions) and injury and poisoning (an excess of 18,000 admissions).

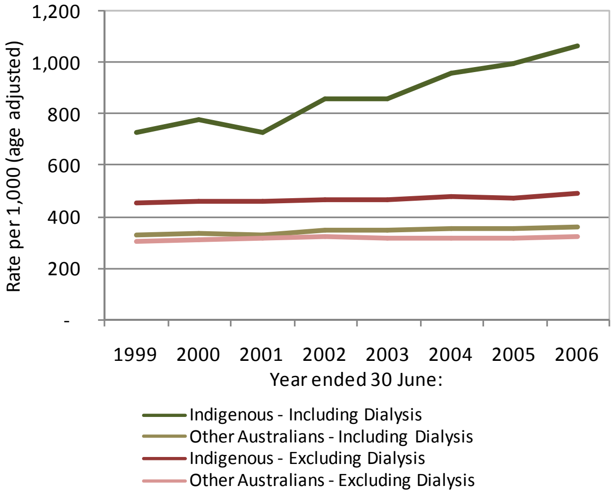
Between 1998–99 and 2005–06, the hospitalisation rate for Aboriginal and Torres Strait Islander peoples in Queensland, Western Australian, South Australia and the Northern Territory increased significantly at an annual rate of 46 per 1,000, compared with an annual rate of 9 per 1,000 for other Australians. The gap has therefore widened significantly. The main reasons for the increase in the rates for Aboriginal and Torres Strait Islander peoples were: dialysis (where the gap has increased from 13.3 to 15.5 times the rates of other Australians) and circulatory conditions (where the gap has increased from 1.6 to 1.9). For skin conditions the gap decreased from 3.2 to 2.8 and for endocrine, nutritional, and metabolic conditions the gap also decreased from 4.7 to 4.0.

Admissions to hospital are higher for Aboriginal and Torres Strait Islander peoples across all age groups below 65 years although the differences are less pronounced for children aged 5–14 years.

IMPLICATIONS: In the 2-year period July 2004–June 2006 there were approximately 190,500 hospital episodes of Aboriginal and Torres Strait Islander peoples for dialysis treatment in the 6 jurisdictions analysed. Dialysis episodes for Aboriginal and Torres Strait Islander people are increasingly reflecting the very high and rising number of Aboriginal and Torres Strait Islander people with kidney failure, and the low number of Aboriginal and Torres Strait Islander patients receiving kidney transplants (see measure 1.09). Excluding dialysis, infectious diseases (including skin and respiratory infections), injury, circulatory diseases and chronic metabolic conditions (in particular diabetes) are the conditions causing the greatest excess of hospitalisations for Aboriginal and Torres Strait Islander peoples. Hospitalisation for mental illness and childbirth are also more common for Aboriginal and Torres Strait Islander peoples than for other Australians.

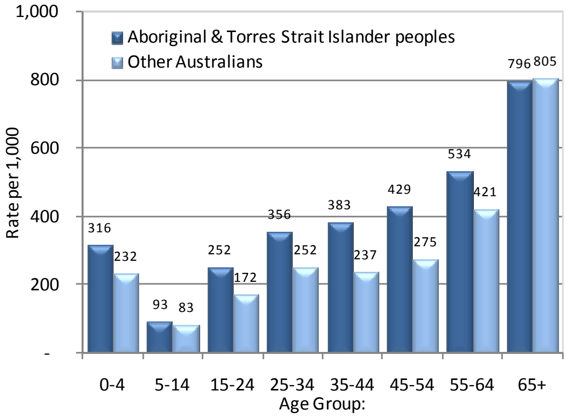
The 30% higher hospitalisation rate for Aboriginal and Torres Strait Islander peoples is less than expected given the much greater occurrence of disease and injury and much higher mortality rates. It is more likely that the moderately higher hospitalisation rate represents under-utilisation of acute care services relative to need. Excess hospitalisations for specific diseases for Aboriginal and Torres Strait Islander peoples is not an accurate measure of excess occurrence of these diseases. Until the incidence of many health problems is reduced, hospitalisation rates for Aboriginal and Torres Strait Islander peoples will continue to increase as their need for acute care is more adequately met. Reductions in excess hospitalisation will eventually occur through concerted action to reduce incidence and prevalence of the underlying conditions, and prevent or delay complications, through more comprehensive primary health care and actions to address underlying determinants of health, rather than through actions within the hospital sector itself.

Figure 4 –Age-standardised hospitalisation rates by Indigenous status, Qld, WA, SA and NT, 1998–99 to 2005–06



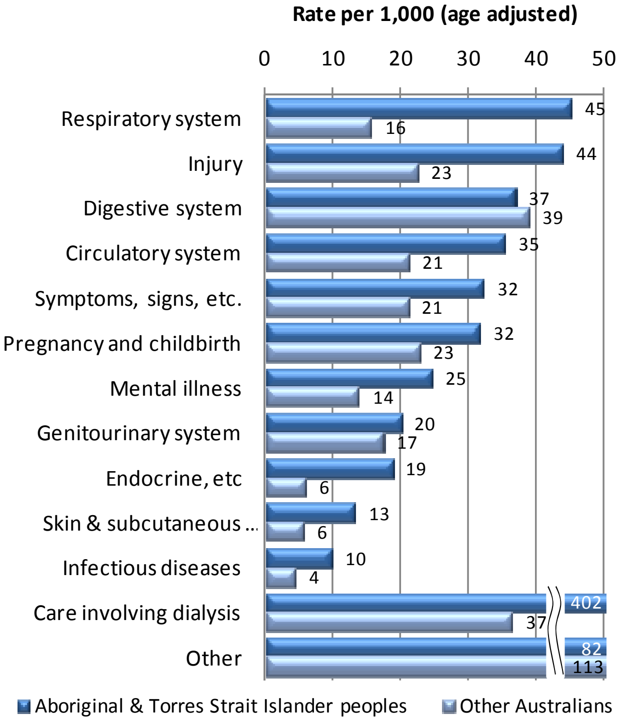
Source: AIHW analysis of National Hospital Morbidity Database

Figure 5 – Age-specific hospitalisation rates (excluding dialysis) by Indigenous status, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



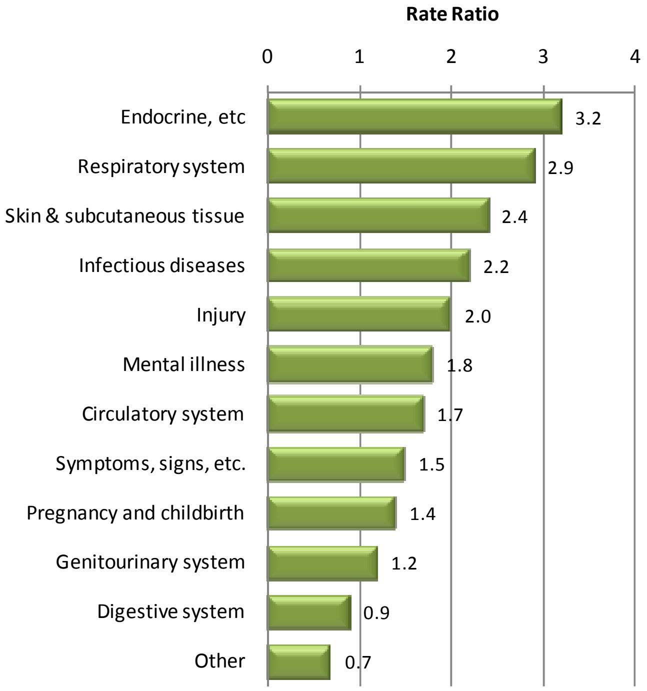
Source: AIHW analysis of National Hospital Morbidity Database

Figure 6 – Age-standardised hospitalisation rates by principal diagnosis and Indigenous status, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Figure 7 – Hospitalisation rate ratios (Aboriginal and Torres Strait Islander to other Australians) by principal diagnosis in NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

1.03 Hospitalisation for injury and poisoning

WHY IS IT IMPORTANT? Accidental and intentional injury has long been known to be much more common among Aboriginal and Torres Strait Islander peoples than other Australians. In more recent years, intentional self-harm and suicide has also become more common among Aboriginal and Torres Strait Islander peoples. Injuries can cause long-term disadvantage for Aboriginal and Torres Strait Islander peoples including: loss of cultural knowledge and wisdom, and the chance of a full life; the burden on caregivers for people with disabilities; decreased workplace productivity; and continuation of the cycle of grief among families, friends and Aboriginal and Torres Strait Islander communities. Hurt, loss and suffering can increase the risk of physical injury, especially if the feelings are severe, prolonged, or widespread in a community. There is a need to build on the existing capacity for resilience and to address systemic issues that reduce people's capacity to make health-enhancing choices and the likelihood they will do so (Aboriginal and Torres Strait Islander Injury Prevention Action Committee 2004) .

FINDINGS: Hospitalisations for injury reflect hospital attendances for the condition rather than the extent of the problem in the community. Hospitalisations for injury and poisoning are the third most common reason for hospital admission for Aboriginal and Torres Strait Islander peoples. Injury hospitalisation for Aboriginal and Torres Strait Islander peoples occur at twice the rate of other Australians.

For other Australians, injury hospitalisation rates are much higher in the elderly (aged 65 and over) than in younger age groups. This mainly reflects much higher rates of falls for elderly people. For people aged under 65 years, injury hospitalisation rates for males are much higher than for females.

Injury hospitalisation has a very different pattern for Aboriginal and Torres Strait Islander peoples. Severe injury has a much greater impact on young and middle-aged Indigenous Australians. Female hospitalisation rates are similar to male rates in most age groups. Rates peak in early adult age groups for both males and females.

Between 1998–99 and 2005–06 the injury hospitalisation rate for Aboriginal and Torres Strait Islander peoples showed no significant change in Queensland, Western Australia, South Australia and the Northern Territory combined. However, hospitalisations for assault, the major cause of injury, have declined by around 12% over the period (16% for males, 9% for females).

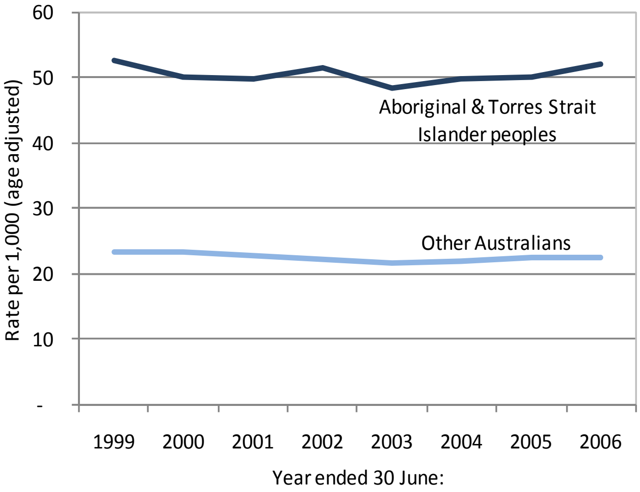
Assault is the leading cause of injury requiring hospitalisation for Aboriginal and Torres Strait Islander peoples, responsible for 22% of injury hospitalisations for males and 32% for females in the 2 years to June 2006. After adjusting for the age differences in the two populations, hospitalisation for injuries caused by assault is 35 times as high for Aboriginal and Torres Strait Islander women than other Australian women, and 8 times higher for men. Assault against women is the overwhelmingly dominant reason why Aboriginal and Torres Strait Islander female injury rates are so much higher than those for other Australian women. Indigenous Australians are also more likely to be re-admitted to hospital for interpersonal violence than other Australians (Meuleners et al. 2008). Most other causes of injury are approximately twice as common for Aboriginal and Torres Strait Islander peoples, and there is much less difference between males and females in these ratios for other causes of injury. Other leading causes of injury include accidental falls (17%), exposure to inanimate mechanical forces (12%), complications of medical care (10%) and transport accidents (10%). Rates vary across jurisdictions, with the highest rates in the Northern Territory and Western Australia.

Over the period 2002–2006, the second most common cause of death among Indigenous Australians was external causes (injury and poisoning) (16%). After adjusting for differences in the age structure of the two populations Indigenous Australians died from injury and poisoning at nearly 3 times the rate of non-Indigenous Australians. The most common type of external cause of mortality among Indigenous Australians was intentional self-harm (suicide), followed by transport accidents and assault. Indigenous Australians died from intentional self-harm and transport accidents at 2 and 3 times the rate of non-Indigenous Australians respectively. Indigenous Australians died from assault at 10 times the rate of non-Indigenous Australians.

IMPLICATIONS: All-causes of injury have a greater effect on Aboriginal and Torres Strait Islander peoples than on other Australians. There were no significant changes in hospitalisation for injury in the period 1998–99 to 2005–06. Although all-causes of injury are more common among Aboriginal and Torres Strait Islander peoples than other Australians, assault is overwhelmingly the most important injury prevention issue for both men and women. The rate for assault is 35 times as high for Indigenous women than for other Australian women. Hospitalisation rates for intentional self-harm for Aboriginal and Torres Strait Islander peoples are twice as high as for other Australians, which highlights the need for interventions focused on emotional well being (see measure 1.16).

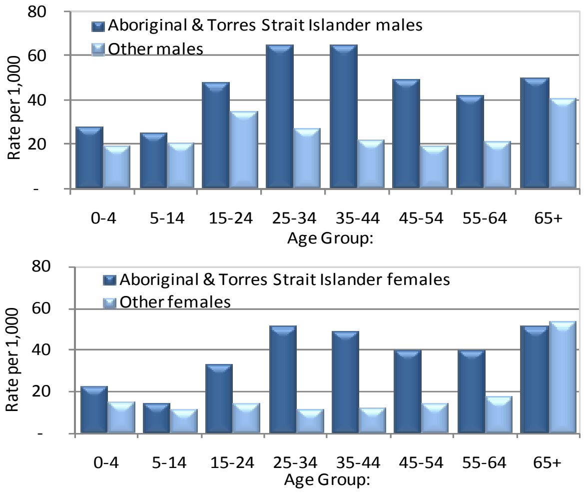
Various national and jurisdictional initiatives have been developed to address Aboriginal and Torres Strait Islander safety. The *National Aboriginal and Torres Strait Islander Safety Promotion Strategy* includes injury prevention and safety promotion issues specific to Aboriginal and Torres Strait Islander communities including intentional and unintentional injury, violence, alcohol-related injuries, self-harm and harm to others.

Figure 8 – Age-standardised hospitalisation rates for Injury and Poisoning, Aboriginal and Torres Strait Islander peoples and other Australians, Qld, WA, SA and NT, 1998–99 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 9 – Age-specific hospitalisation rates for a principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Table 5 – Age-standardised hospitalisations for external causes of Injury and Poisoning for Aboriginal and Torres Strait Islander peoples by sex, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006

External Cause:	Males			Females			Persons		
	%	Rate	Ratio	%	Rate	Ratio	%	Rate	Ratio
Assault	22.4	10.7	7.5*	31.7	10.9	35.3*	26.5	10.8	12.3*
Accidental falls	17.6	9.7	1.5*	16.4	8.4	1.2*	17.1	9.1	1.3*
Exposure to inanimate mechanical forces	14.5	5.8	1.4*	8.6	2.5	1.9*	11.9	4.1	1.5*
Complications of medical and surgical care	8.7	6.5	1.6*	11.7	6.3	1.8*	10.0	6.3	1.7*
Transport accidents	11.3	4.7	1.2*	7.1	2.3	1.4*	9.5	3.5	1.3*
Other accidental exposures	7.8	3.8	1.2*	5.5	2.2	1.4*	6.8	3.0	1.3*
Intentional self-harm	4.8	2.3	2.5*	8.3	2.8	1.9*	6.3	2.5	2.2*
Exposure to animate mechanical forces	4.9	1.9	2.1*	2.9	1.0	2.6*	4.0	1.4	2.2*
Exposure to electric current/smoke/ fire/animals/nature	4.0	1.7	2.5*	2.9	0.9	2.4*	3.5	1.3	2.4*
Accidental poisoning by and exposure to noxious substances	2.2	0.9	1.8*	2.9	1.0	2.0*	2.5	1.0	1.9*
Other external causes	1.4	0.7	2.9*	1.7	0.6	2.7*	1.5	0.7	2.8*
Total	**100.0**	**48.8**	**1.9***	**100.0**	**39.1**	**2.1***	**100.0**	**43.9**	**2.0***
Total number of hospitalisations for injury or poisoning:	20,504			15,998			36,505		

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of National Hospital Morbidity Database

Table 6 – Age-standardised hospitalisations for external causes of Injury and Poisoning for Aboriginal and Torres Strait Islander peoples by sex and jurisdiction, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006

	Male			Female			Persons		
	Number	Rate	Ratio	Number	Rate	Ratio	Number	Rate	Ratio
New South Wales	4,937	37.4	1.4*	3,332	27.5	1.5*	8,269	32.4	1.5*
Victoria	877	34.4	1.3*	614	24.2	1.3*	1,491	28.8	1.3*
Queensland	5,760	48.1	1.7*	4,100	34.8	1.9*	9,860	41.2	1.7*
Western Australia	4,152	66.3	2.7*	3,638	58.1	3.4*	7,790	62.1	3.0*
South Australia	1,342	54.0	2.2*	1,113	43.4	2.4*	2,455	48.5	2.2*
Northern Territory	3,439	63.3	2.5*	3,201	59.5	3.9*	6,640	61.4	3.0*
Australia	**23,482**	**53.5**	**2.0***	**18,203**	**42.6**	**2.3***	**41,685**	**48.0**	**2.1***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of National Hospital Morbidity Database

1.04 Hospitalisation for pneumonia

WHY IS IT IMPORTANT? Aboriginal and Torres Strait Islander Australians experience considerably greater mortality and morbidity from pneumonia and invasive pneumococcal disease than other Australians. In Central Australia, Aboriginal children under 4 years had 11 times the relative risk, and adults aged 15 to 49 had a twenty fold greater risk than other adults in same age group (Torzillo et al. 1995). Aboriginal children in Central Australia have attack rates for acute lower respiratory tract infection that are similar to those in developing countries (Torzillo et al. 1999). Although hospitalisation statistics reflect admissions to hospital rather that the prevalence or incidence of pneumonia in the community, hospitalisation statistics are a measure of the occurrence of severe pneumonia requiring acute care.

FINDINGS: Hospitalisation for pneumonia is much more common for Aboriginal and Torres Strait Islander peoples than other Australians. In the 6 jurisdictions for which data are of acceptable quality, there were 7,943 hospital episodes for pneumonia for Aboriginal and Torres Strait Islander people in the 2 years between July 2004 and June 2006. These account for 1.7% of all hospitalisations for Aboriginal and Torres Strait Islander people. After adjusting for age, the hospitalisation rate for pneumonia was 5 times higher for Aboriginal and Torres Strait Islander peoples than other Australians. For other Australians, the pneumonia hospitalisation rate is high in early childhood, but very low through the adolescent to middle adult age groups, before rising again from age 55 years. A pattern of high rates in early childhood is also seen in Aboriginal and Torres Strait Islander peoples, but rates increase at a much younger age, from age 25 years. The greatest difference in rates occurs for people aged 35–54 years, where hospitalisations are 9–10 times as high for Aboriginal and Torres Strait Islander peoples.

There is great variation in rates between the 6 jurisdictions for which data are available, ranging from 6 per 1,000 in Victoria to 26 per 1,000 in the Northern Territory. The rate for other Australians is 3 per 1,000 nationally.

The pneumonia hospitalisation rate for Aboriginal and Torres Strait Islander peoples fell by 8% between 1998–99 and 2005–06 compared with 4% for other Australians. The decline in hospitalisation rates occurred only in Aboriginal and Torres Strait Islander men. There was a non-significant decline for Aboriginal and Torres Strait Islander women in this period. Rates for Aboriginal and Torres Strait Islander children aged 0–4 years over the same period declined by 48%, compared with a decline of 13% for other Australian children.

In the period 2004–2006, there were 403 notifications for invasive pneumococcal disease for Aboriginal and Torres Strait Islander peoples living in Western Australian, South Australia and the Northern Territory, equivalent to a rate of 85 notifications per 100,000 persons. This compares with a rate of 7 per 100,000 persons for other Australians. Rates of invasive pneumococcal disease in the general community have fallen significantly since 2001, which appears to reflect the introduction and extension of pneumococcal vaccination (see measure 3.02). For adults aged 65 years and over rates have declined by 30%. For Australian children aged under 2 years rates have declined by 75%, largely since the introduction of universal childhood pneumococcal vaccination in 2004. Rates for Aboriginal and Torres Strait Islander children aged under 2 years have declined since 2001, also reflecting the earlier introduction of pneumococcal vaccination for Indigenous children.

IMPLICATIONS: Hospitalisation rates for pneumonia have fallen for Aboriginal and Torres Strait Islander men and for children suggesting that the impact of pneumonia on Aboriginal and Torres Strait Islander peoples has reduced in recent years. This finding provides encouragement that progress is being achieved and that further improvements are possible. It could be hypothesised that reduced pneumonia hospitalisation rates are associated with a reduction in occurrence of this disease possibly related to the introduction and extension of pneumococcal and influenza vaccination programs for children and adults (see measure 3.02). However, it should also be noted that for Indigenous women the decline over this period was non-significant. The introduction of the childhood vaccines for *Haemophyllis influenzae* (Hib) in the early 1990s and more recently pneumococcal vaccination has also contributed to a reduction in the occurrence of pneumonia for Aboriginal and Torres Strait Islander peoples. A childhood pneumococcal immunisation program for ‘at risk’ children was launched in 2001. This was extended to cover all children up to 2 years of age from January 2005. All children born from 1 January 2003 to 31 December 2004 were also eligible for free vaccine in 2005 for the recommended number of doses according to their catch-up schedule.

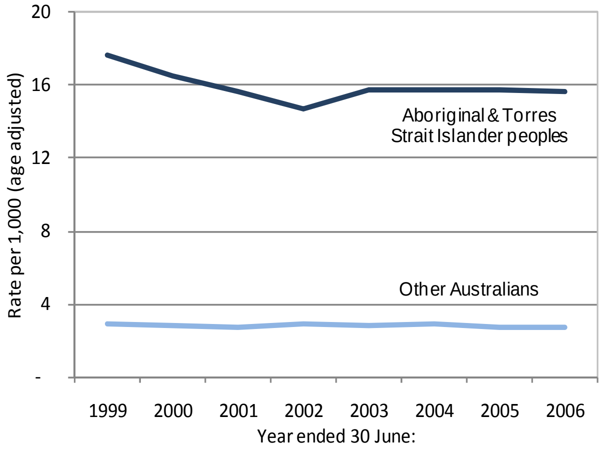
Improved vaccination coverage for the target groups within Aboriginal and Torres Strait Islander communities will be important in further reducing the impact of pneumonia.

However, hospitalisation for pneumonia is 5 times more common for Aboriginal and Torres Strait Islander peoples than other Australians and remains an important public health issue.

Overcrowding, high rates of smoking and high rates of chronic disease are also likely to contribute to higher rates of pneumonia for Aboriginal and Torres Strait Islander peoples.

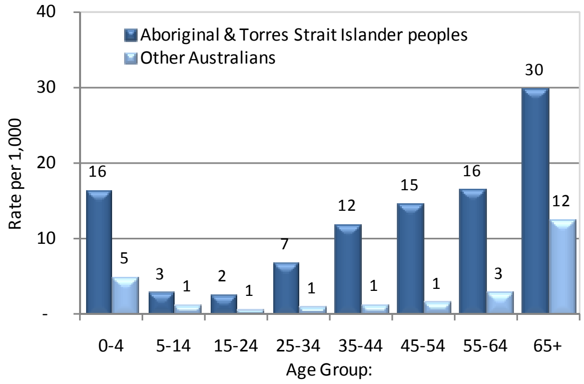
The large variation in hospitalisation rates between jurisdictions indicates that lower rates can be achieved. Higher rates for people living in more remote communities may partly reflect higher rates of respiratory diseases in those areas and also the lack of alternatives to hospitalisation when pneumonia occurs.

Figure 10 – Age-standardised hospitalisation rates for pneumonia by Indigenous status, Qld, WA, SA and NT, 1998–99 to 2005–06



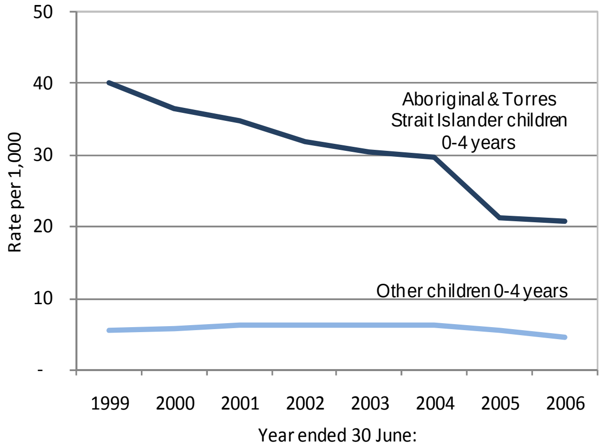
Source: AIHW analysis of National Hospital Morbidity Database

Figure 11 – Age-specific hospitalisation rates for pneumonia by Indigenous Status, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



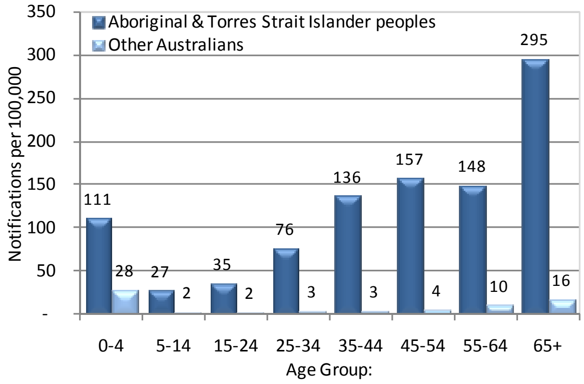
Source: AIHW analysis of National Hospital Morbidity Database

Figure 12 – Hospitalisation rates for pneumonia, Children aged 0–4 years by Indigenous status, Qld, WA, SA and NT, 1998–99 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 13 – Invasive pneumococcal disease notification rates, by age group and Indigenous status, WA, SA and NT, 2004–2006



Source: AIHW analysis of analysis of National Notifiable Disease Surveillance System

Table 7 – Age-standardised hospitalisations for principal diagnosis of pneumonia for Aboriginal and Torres Strait Islander peoples by sex and jurisdiction, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006

	Male			Female			Persons		
	Number	Rate	Ratio	Number	Rate	Ratio	Number	Rate	Ratio
New South Wales	702	7.2	2.2*	627	6.1	2.4*	1,329	6.6	2.3*
Victoria	94	5.6	1.5*	96	5.7	2.1*	190	5.6	1.7*
Queensland	841	11.7	3.9*	805	9.5	4.0*	1,646	10.4	3.9*
Western Australia	923	18.4	6.4*	948	17.4	7.9*	1,871	17.9	7.2*
South Australia	236	14.9	4.2*	220	11.2	4.0*	456	12.8	4.1*
Northern Territory	1,255	25.8	8.0*	1,196	26.0	11.0*	2,451	26.1	9.3*
Australia	**4,573**	**13.9**	**4.2***	**4,406**	**12.6**	**5.0***	**8,979**	**13.2**	**4.6***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of National Hospital Morbidity Database

1.05 Circulatory disease

WHY IS IT IMPORTANT? Circulatory disease is a major causes of morbidity and mortality in older Australians. In recent decades, Australian mortality rates from circulatory disease have fallen considerably, due to factors such as reduced smoking rates, improved treatment of high blood pressure and ischaemic heart disease (IHD). However, recent trends in Australian society, such as increased levels of obesity and diabetes, threaten to slow or reverse these improvements. Circulatory disease occurs much more frequently in Indigenous Australians and at much younger ages. Circulatory disease accounts for 17% of the burden of disease in Indigenous Australians (Vos et al. 2007) and 26% of mortality (see measure 1.22). Smoking levels are very high among Indigenous adults and have not fallen over the past decade (see measure 2.18), while levels of physical inactivity and obesity, diabetes and high blood pressure are much higher than for non-Indigenous Australians. In addition, low socio-economic status is associated both with greater risk of developing circulatory disease and with lower chance of receiving appropriate treatment (Beard et al. 2008).

FINDINGS: In 2004–05, approximately 12% of Aboriginal and Torres Strait Islander Australians reported having a heart or circulatory condition. After adjusting for differences in the age structure of the two populations Indigenous Australian were 1.3 times as likely to have circulatory disease as non-Indigenous Australians (twice as likely for coronary heart disease) (AIHW (Penm) 2008). There was no significant change in self-reported levels of circulatory disease between 2001 and 2004–05. Indigenous Australians living in remote areas reported higher rates of circulatory disease than those living in non-remote areas (14% compared with 11%). Self-reported rates of circulatory disease were also higher for Indigenous females (15%) compared with males (11%). The main conditions reported include hypertension (7%), coronary heart disease (1.2%), heart failure (1%) and rheumatic heart disease (0.7%) (AIHW (Penm) 2008).

In 2004–05, Indigenous Australians were more likely to report having circulatory disease if they were not in the labour force (30%), than if they were employed (23%). Circulatory diseases were also associated with low or sedentary exercise levels and overweight/obesity.

The circulatory disease hospitalisation rate for Indigenous Australians was twice that of other Australians. Hospitalisation rates are higher for Indigenous men (42 per 1,000) compared with Indigenous women (36 per 1,000). The difference in rates between Indigenous and other Australians is greater for women (rate ratio of 2.1) than for men (rate ratio of 1.6). The age groups with the largest difference between Indigenous and other Australians were 35–44 and 45–54 years. Between 1998–99 and 2003–04 the hospitalisation rate increased by 11% for Indigenous Australians but decreased by 14% for other Australians in Queensland, Western Australian, South Australia and the Northern Territory. IHD is the most common type of circulatory disease causing hospitalisation for Aboriginal and Torres Strait Islander peoples, accounting for 43% of all circulatory disease hospitalisations and is twice as common compared with other Australians.

Circulatory conditions were managed in approximately 13% of general practice attendances by Aboriginal and Torres Strait Islander peoples. Compared with other Australians, Indigenous Australians have a similar attendance rate for hypertension and cardiac check-ups but 2 and 3 times the rates for IHD and heart failure respectively.

Circulatory disease mortality rates for Indigenous Australians during the period 2002–2006 were twice the rate for non-Indigenous Australians, and 5–12 times the rate for those aged less than 65 years (ABS & AIHW 2008).

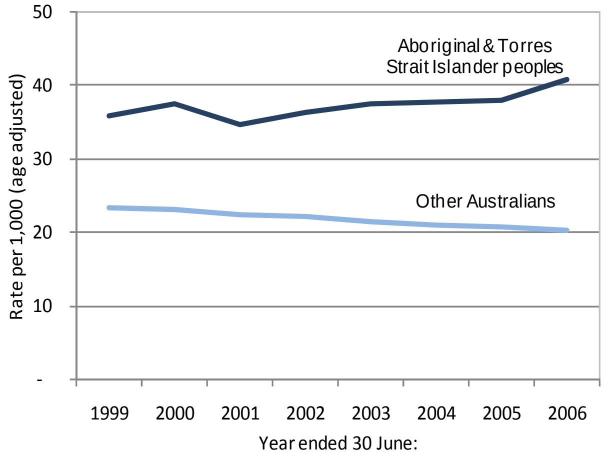
The incidence and death rates for heart, stroke and vascular disease among Indigenous Australians are higher than those in Indigenous populations of Canada, United States and New Zealand (DHAC and AIHW 1999).

IMPLICATIONS: Although the self-reported prevalence of circulatory disease for Aboriginal and Torres Strait Islander peoples is only slightly higher than for other Australians, mortality rates and hospitalisation rates are much higher. Circulatory problems were managed at general practice encounters at similar rates between Indigenous patients and other patients. High rates of hospitalisation and mortality indicate a failure in the areas of early detection, early treatment and chronic disease management. It is not yet clear whether the increased hospitalisations represents a rise in disease incidence and prevalence, improved access or improved identification of Indigenous clients.

Smoking, physical inactivity, poor diet, high alcohol consumption, obesity and diabetes all damage the circulatory system and are common risk factors among Aboriginal and Torres Strait Islander peoples. Half of Indigenous adults smoke and there has been no reduction in smoking levels over the past decade. While the factors that cause circulatory disease remain at high levels, particularly among young people, it is unlikely there will be a decrease in the levels of circulatory disease afflicting Aboriginal and Torres Strait Islander peoples.

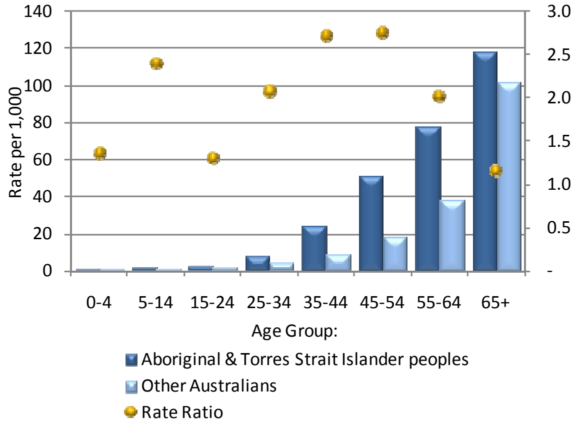
While there have been improvements in Indigenous circulatory disease mortality rates over the last decade, it is still the most common cause of death (26%). A better understanding is required of why GP attendances for hypertension and cardiac check-ups are relatively low. Improved access to and utilisation of both primary and acute care services for Aboriginal and Torres Strait Islander peoples are necessary to achieve earlier diagnosis and better management of circulatory disease (see measures 3.03 and 3.04).

Figure 14 – Age-standardised hospitalisation rates for a principal diagnosis of circulatory disease for Aboriginal and Torres Strait Islander and other peoples in Qld, WA, SA and NT, 1998–99 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 15 – Age-specific hospitalisation rates for a principal diagnosis of circulatory disease, by Indigenous status and sex, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Table 8 – Age-standardised hospitalisations for circulatory disease by principal diagnosis for Aboriginal and Torres Strait Islander peoples by sex, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006

Principal Diagnosis	Males			Females			Persons		
	%	Rate	Ratio	%	Rate	Ratio	%	Rate	Ratio
Ischaemic heart disease	47.0	17.7	1.7*	38.8	12.8	2.7*	43.1	15.1	2.0*
Acute myocardial infarction	*18.3*	*6.8*	*2.1**	*13.4*	*4.7*	*3.4**	*16.0*	*5.7*	*2.5**
Other heart disease	29.3	12.2	1.7*	30.3	11.0	2.1*	29.8	11.6	1.9*
Cerebrovascular disease	7.9	3.7	1.6*	9.0	3.4	2.1*	8.4	3.6	1.9*
Stroke	*7.1*	*3.4*	*1.9**	*7.9*	*3.0*	*2.2**	*7.5*	*3.2*	*2.0**
Rheumatic heart disease	3.0	0.4	4.8*	6.1	0.9	8.6*	4.5	0.7	7.0*
Hypertension disease	2.8	0.9	3.4*	4.9	1.5	4.0*	3.8	1.3	3.8*
Other diseases of the circulatory system	10.0	3.4	0.6*	10.9	3.0	0.6*	10.4	3.2	0.6*
Total	**100.0**	**38.3**	**1.5***	**100.0**	**32.8**	**2.0***	**100.0**	**35.4**	**1.7***
Total number of hospitalisations for circulatory disease:	8,041			7,273			15,314		

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of National Hospital Morbidity Database

Table 9 – Age-standardised hospitalisations with a principal diagnosis of circulatory disease for Aboriginal and Torres Strait Islander peoples by sex and jurisdiction, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006

	Male			Female			Persons		
	Number	Rate	Ratio	Number	Rate	Ratio	Number	Rate	Ratio
New South Wales	2,062	34.6	1.3*	1,746	28.5	1.7*	3,808	31.5	1.5*
Victoria	313	22.9	0.8*	234	15.9	0.9	547	18.9	0.9*
Queensland	2,318	42.9	1.7*	2,299	40.1	2.3*	4,617	41.5	1.9*
Western Australia	1,383	40.5	1.7*	1,337	36.4	2.5*	2,720	38.4	2.0*
South Australia	670	48.3	1.9*	468	33.7	2.0*	1,138	40.6	2.0*
Northern Territory	1,295	40.3	2.0*	1,189	33.0	2.5*	2,484	36.4	2.1*
Australia	**9,242**	**42.2**	**1.6***	**8,285**	**35.8**	**2.1***	**17,527**	**38.9**	**1.8***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of National Hospital Morbidity Database

1.06 Acute rheumatic fever and rheumatic heart disease

WHY IS IT IMPORTANT? Acute Rheumatic Fever (ARF) is a disease caused by an auto-immune reaction to a bacterial infection with group A streptococcus. ARF is a short illness, but can result in permanent damage to the heart, called Rheumatic Heart Disease (RHD). A person who has had ARF once is susceptible to repeated episodes, which can increase the risk of RHD. Following an initial diagnosis of RHD patients require long-term treatment, including long-term antibiotic treatment to avoid infections that may damage the heart (Carapetis et al. 2007).

ARF and RHD are associated with environmental factors such as overcrowding and poor sanitation. These conditions are very common for Aboriginal and Torres Strait Islander peoples living in remote areas of Australia. The incidence of ARF and the prevalence of RHD among Aboriginal and Torres Strait Islander peoples living in some remote areas have been reported as among the highest in the world (AIHW 2004b).

ARF and RHD are now rare in populations with good living conditions and easy access to quality medical care (DHAC and AIHW 1999). Aboriginal and Torres Strait Islander peoples will remain at risk of ARF/RHD while socio-economic disadvantage and barriers to accessing health care persist.

FINDINGS: Data on ARF and RHD are available only for the Northern Territory, from the Northern Territory Rheumatic Health Disease Register and a study conducted in North Queensland. In the period 2003–06, there were 251 new or recurrent episodes of ARF in the Top End of the Northern Territory and Central Australia of which 98% were for Aboriginal and Torres Strait Islander people. The incidence rate for Indigenous Australians was 0.6 per 1,000 in the Top End and 1.1 per 1,000 in Central Australia. ARF is largely restricted to older children and young adults: 54% of cases occurred in children aged 5–14 years, with a further 26% in the 15–24 years age group. Females comprised 59% of all cases of ARF in 2003–06 (145 females, 102 males).

Incidence rates increased from the 1995–1997 up until the 2001–2003 period. In the latest period (2004–2006), rates fell to be around the 1995–1997 level, with a decrease of 35% in the Top End. There was no significant reduction for Central Australia. Since 1995 incident rates have been higher for Central Australia than in the Top End.

The only other information on ARF in Aboriginal and Torres Strait Islander peoples is for the 7 Health Services Areas of north Queensland, where the incidence was 0.6 per 1,000 in Indigenous people in 1999–2004 (Hanna & Heazlewood 2005).

In December 2006, 1,402 people were recorded as having RHD in the Top End of the Northern Territory and Central Australia and of these 1,288 (92%) were Aboriginal and Torres Strait Islanders people. The prevalence of RHD in Indigenous people in the Top End was 23 per 1,000 (959 people) and 21 in Central Australia (329 people). Females comprised 65% of people with RHD (840 females, 448 males). After adjusting for the age differences, the prevalence of RHD was 21 times higher in the Aboriginal and Torres Strait Islander peoples than in other residents of the Northern Territory in the Top End and 18 times higher in Central Australia.

A recent study of patients with RHD living in 5 communities around Katherine in the Northern Territory found that around two-thirds of patients were receiving ongoing secondary preventive treatment in accordance with guidelines: 56% of patients received prophylactic penicillin injections; 63% received echocardiograms and 59% has a specialist review (Stewart et al. 2007).

IMPLICATIONS: Incidence of ARF in the Northern Territory rose from the mid 1990s to the early 2000s. In the latest period (2004–2006) the incidence rate has fallen back to the rate observed in the mid 1990s. This is the only jurisdiction in which there is time-trend information for ARF. The incidence of ARF is apparently lower in north Queensland than in the Northern Territory, but is still far higher than for other Australians. Since there are no trend data on ARF or RHD in Queensland, it is unknown whether rates have been lower there for many years or whether progress has been made in recent years. At this stage, incidence of ARF and prevalence of RHD is not well documented for other parts of Australia.

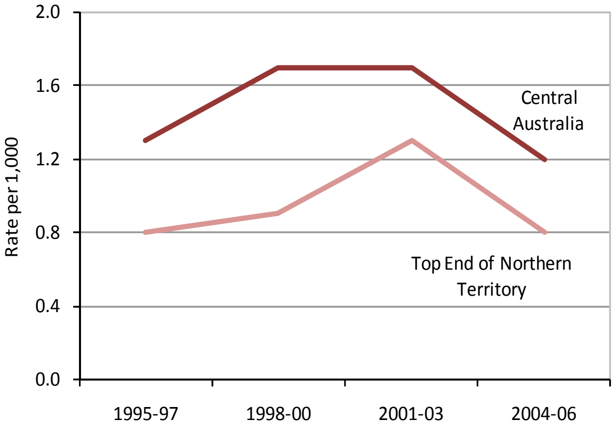
The incidence of ARF (and therefore RHD) in Aboriginal and Torres Strait Islander peoples could be reduced through improved housing and socio-economic circumstances. However, other health care interventions will remain important in preventing and managing these conditions for some time.

Improved access to appropriate treatment for pharyngitis/tonsillitis is likely to reduce the rate of ARF. Although the role of Group A Streptococcal Bacterium (GAS) skin infection in precipitating ARF is contentious, it appears likely this plays a role in the spread of ARF in Australia. Interventions to reduce GAS skin infection through community-based skin health programs may be effective.

There is considerable scope for the secondary prevention of ARF/RHD through the implementation of disease registers, education of patients and their families, penicillin prophylaxis and regular clinical review and access to specialists and hospital care. There is evidence current practice could be improved. (Stewart et al. 2007).

In the Northern Territory, RHD registers are a central element of secondary prevention programs to prevent recurrence of ARF and reduce the occurrence or severity of RHD. Extension of this approach to other jurisdictions has been proposed but not accepted by other states (Carapetis et al. 2007). RHD registers are primarily intended to improve secondary prophylaxis by sending reminders for regular penicillin to people on the register or their usual primary care provider. A key question is: Would this approach be effective in other jurisdictions?

Figure 16 – Acute Rheumatic Fever incidence, NT Indigenous Australians by time period, Top End of Northern Territory and Central Australia



Source: AIHW analysis of Top End and Central Australian Rheumatic Heart Disease Registers

Table 10 – Acute Rheumatic Fever incidence (2003–06) and Rheumatic Heart Disease prevalence (31 December 2006) by age groups for Aboriginal and Torres Strait Islander people in the Northern Territory

ARF incidence - 2003-2006				RHD prevalence - 31 December 2006				
Age group	Number	Per cent	Rate per 1,000 population	Age group	Number	Per cent	Rate per 1,000 population	Ratio
0-4	5	2.0	0.2					
5-14	133	53.8	2.5	0–14	326	25.3	16.0	54.9*
15-24	64	25.9	1.4	15–24	357	27.7	31.3	61.1*
25-34	22	8.9	0.6	25–34	278	21.6	28.0	47.3*
35-44	13	5.3	0.5	35–44	136	10.6	19.3	29.1*
45+	10	4.0	0.3	45–54	113	8.8	26.3	31.3*
				55–64	56	4.3	24.9	11.1*
				65+	22	1.7	13.6	3.9*
Total	**247**	**100.0**	**1.1**	**Total**	**1,288**	**100.0**	**22.3**	**25.5***

* Represents results with statistically significant differences in the Indigenous/Non-Indigenous comparisons at the p<.05 level.

Source: AIHW analysis of Top End and Central Australian Rheumatic Heart Disease Registers

1.07 High blood pressure

WHY IS IT IMPORTANT? High blood pressure (hypertension) is a risk factor for several serious diseases of the circulatory system, including angina and heart attack, stroke, and restricted blood flow to many organs which can lead to deteriorating vision, kidney failure, chronic leg ulcers and gangrene. High blood pressure is much more common among Aboriginal and Torres Strait Islander peoples than non-Indigenous people, and is one of the reasons heart attacks, strokes and other circulatory diseases are much more common, and cause many more early deaths, among Indigenous Australians (AIHW 2002a).

It is estimated that high blood pressure is responsible for 6% of the health gap between Aboriginal and Torres Strait Islander and non-Indigenous Australians (Vos et al. 2007).

Although for some people high blood pressure appears to be inherited, high blood pressure can be prevented or controlled by leading an active and healthy life, remaining fit and avoiding obesity and diabetes and, if necessary, taking regular medication (National Heart Lung and Blood Institute 2003).

For those who have developed high blood pressure, treatment with long-term medication can reduce the risk of developing serious complications. Reducing the prevalence of high blood pressure in Aboriginal and Torres Strait Islander peoples is one of the most important means for reducing serious circulatory diseases.

FINDINGS: There are no national data available for the prevalence of high blood pressure in Australia. Three national data sources provide an indirect indication of the relative prevalence of high blood pressure in Aboriginal and Torres Strait Islander peoples compared with other Australians.

In 2004–05, 7% of Aboriginal and Torres Strait Islander Australians reported having high blood pressure. After adjusting for differences in age structure, Aboriginal and Torres Strait Islander males and females reported having high blood pressure at 1.4 and 1.6 times the rate of non-Indigenous males and females. There was no significant change in self-reported high blood pressure for Aboriginal and Torres Strait Islander peoples between 2001 and 2004–05. Note: self-reported data will under-estimate prevalence as not everyone who has the condition will have been diagnosed.

Some population studies have shown significantly higher rates of high blood pressure for Aboriginal and Torres Strait Islander peoples. One study in selected remote communities found rates that were 3–8 times as high as the general community (Hoy et al. 2007; Kondalsamy-Chennakesavan et al. 2008).

Very few people with high blood pressure require hospitalisation for this condition alone. Most people with high blood pressure are treated by GPs or medical specialists. Therefore hospitalisation rates for high blood pressure significantly underestimate its prevalence in the community. Hospitalisation rates for high blood pressure were 4 times as high for Aboriginal and Torres Strait Islander peoples as for other Australians; the relative excess was greatest in the middle adult years (35–64 age range). This may indicate that the prevalence of severe high blood pressure is more common in Aboriginal and Torres Strait Islander peoples from a younger age. It may also indicate that high blood pressure is not controlled as well in Aboriginal and Torres Strait Islander peoples, so that very severe disease requiring acute care in hospital is more common among this group than among other Australians.

Compared with other Australians, Aboriginal and Torres Strait Islander peoples have similar GP attendance rates for high blood pressure. After adjusting for differences in the age structure of the two populations, high blood pressure was a reason for consultation in 9% of GP consultations for both Aboriginal and Torres Strait Islander Australian and other Australian patients.

IMPLICATIONS: Self-reported prevalence and hospitalisation rates for high blood pressure are both higher for Aboriginal and Torres Strait Islander peoples than other Australians, but high blood pressure accounts for a similar proportion of GP consultations for each population. This may indicate that Aboriginal and Torres Strait Islander people with high blood pressure attend their GPs less regularly than other Australians with the same disease and/or their blood pressure is less well controlled.

Hospitalisation rates indicate that severe high blood pressure problems are more common in Aboriginal and Torres Strait Islander peoples than other Australians. It is not known whether this finding indicates that high blood pressure has a higher prevalence in this population or is poorly controlled and more likely to require acute care. In either case, the importance of primary care and ambulatory specialist services to detect and treat high blood pressure in Aboriginal and Torres Strait Islander peoples is clear, so that severe high blood pressure can be avoided and complications of high blood pressure prevented.

Research into the effectiveness of quality improvement programs in Aboriginal and Torres Strait Islander-specific primary health care services has demonstrated that both high blood pressure management processes and blood pressure control can be improved by a well-coordinated and supported systematic approach to chronic disease management (e.g. McDermott et al. (2004)).

Identification and management of hypertension requires access to comprehensive primary health care with appropriate systems for early detection and chronic illness management (see measures 3.03 and 3.04).

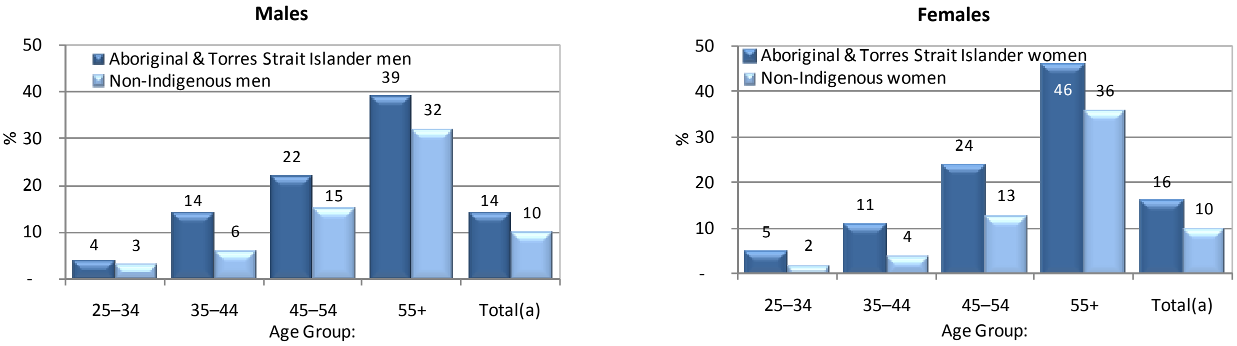
Table 11 – Aboriginal and Torres Strait Islander people reporting high blood pressure or hypertension, by sex and remoteness, 1995, 2001 and 2004–05

	1995(a)	2001	2004-05
Males			
Remote	na	7	10
Non-remote	15	5	6
Total	na	6	7
Females			
Remote	na	10	10
Non-remote	16	7	7
Total	na	8	8

(a) Remote data are not available for NATSIHS 1995 data

Source: ABS & AIHW analysis of 1995 and 2001 National Health Surveys (Indigenous supplements) and 2004-05 National Aboriginal and Torres Strait Islander Health Survey

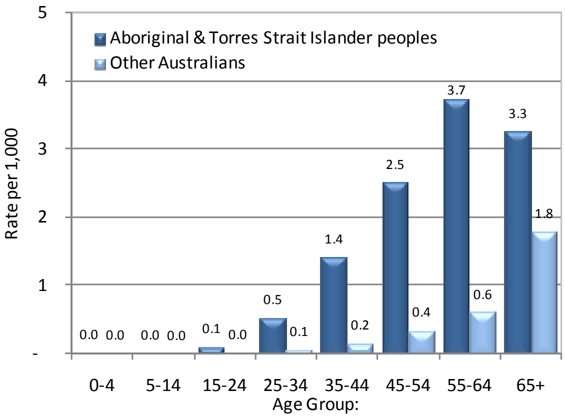
Figure 17 – Persons reporting high blood pressure, by Indigenous status, sex and age, 2004–05



(a) Total is age-standardised.

Source: ABS & AIHW analysis 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 18 – Age-specific hospitalisation rates for a principal diagnosis of hypertensive disease, by Indigenous status and sex, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

1.08 Diabetes

WHY IS IT IMPORTANT? Diabetes is a long-term (chronic) condition in which blood glucose levels become too high because the body produces little or no insulin, or cannot use insulin properly. Over many years, high blood glucose levels can damage various parts of the body, especially the heart and blood vessels, eyes, kidneys and nerves, resulting in permanent disabilities, reduced quality of life and shortened life expectancy. High blood glucose levels can cause complications for both the mother and baby during pregnancy. Diabetes is responsible for 12% of the health gap between Indigenous and non-Indigenous Australians (Vos et al. 2007). Early detection and better management of diabetes will be important in closing the gap in life expectancy.

There are several forms of diabetes. The most common form is Type 2, which accounts for 85–90% of all people with diabetes and is more common in people who have insufficient physical activity, poor diet, and are overweight or obese. Other factors such as smoking and excessive alcohol consumption, low birthweight and intra-uterine factors are also associated with increased risk of developing Type 2 diabetes. Type 2 diabetes is a significant contributor to morbidity and mortality for Aboriginal and Torres Strait Islander peoples. Type 1 diabetes, the most common form of diabetes in children, is generally thought to be rare among Aboriginal and Torres Strait Islander peoples although misclassification problems with Type 2 diabetes make this difficult to ascertain (AIHW 2002b).

FINDINGS: In 2004–05, 6% of Aboriginal and Torres Strait Islander Australians reported diabetes or high sugar levels. After adjusting for differences in age structure, approximately 3 times as many Indigenous Australians reported diabetes or high sugar levels as non-Indigenous Australians. For Indigenous Australians diabetes problems start in younger age groups with higher rates of self-reported diabetes showing up from 25 years onwards. Diabetes or high sugar levels were reported for 32% of Indigenous Australians aged 55 years and over compared with 12% of non-Indigenous Australians. Self-reported diabetes and high sugar levels are higher for Indigenous Australians living in remote areas (9%) compared with those living in non-remote areas (5%). Rates have increased since 1995.

The 2004–05 National Aboriginal and Torres Strait Islander Health Survey confirms the associations between diabetes, socio-economic status and risk behaviours. There was a statistically significant difference in prevalence of diabetes when comparing the proportion of Indigenous Australians who are renters with home owners (ratio of 1.7). The associations for employment and income were not statistically significant. Those who are overweight/obese were twice as likely to have diabetes as those who are not (18% versus 9%). Those who did not eat vegetables daily were also more likely to have diabetes than those who did not (24% versus 15%). Co-morbidities with hypertension, circulatory problems and high cholesterol were also common. Expected relationships with smoking and alcohol were not evident in these data.

Many studies have found higher rates of diabetes in Indigenous Australians. The prevalence of diabetes among Indigenous Australians in selected remote communities was 5 to 10 times as high as the general community (Hoy et al. 2007; Kondalsamy-Chennakesavan et al. 2008). A New South Wales study of young people aged 10–18 years found incident rates for Indigenous children to be 6 times the rates for non-Indigenous children (Craig et al. 2007). An analysis of the Fremantle Diabetes Study found diabetes prevalence for Aboriginal people to be more than double the rate for non-Indigenous Australians, with average age at diagnosis 14 years younger (Davis et al. 2007).

Hospitalisation rates for diabetes are 5 times as high for Indigenous Australians as for other Australians, and are higher in all jurisdictions for which data are available. Around 77% of hospitalisations of Aboriginal and Torres Strait Islander people for diabetes are for Type 2 diabetes, 12% for Type 1 diabetes and 9% for gestational diabetes. Hospitalisation rates for diabetes for Indigenous Australians increased by 28% between 2000–01 and 2005–06. Rates for other Australians increased by 36% over the same period, although from a smaller base.

Diabetes is identified as a problem in around 11% of general practice encounters with Indigenous Australians, compared with 3% for other Australians.

IMPLICATIONS: Diabetes is more common among Aboriginal and Torres Strait Islander peoples than other Australians, as measured by self-reported prevalence, GP consultations and hospitalisations. Hospitalisations for diabetes are increasing, although it is not clear that this is because of an increase in diabetes prevalence, an increase in complications among people with existing diabetes, or better access to health services with consequent increased utilisation of acute care services. Local studies have shown that appropriate management structures and clinical support for people with diabetes in primary health care services can lead to improved glycaemic control and reduction in hospital admissions for preventable diabetes complications (see measure 3.04). Obesity, nutrition, physical inactivity, smoking and risky/high risk alcohol consumption are all major health risk factors contributing to high rates of diabetes for Indigenous Australians and the complications of diabetes. More attention is needed to deal with these underlying problems (see Chapter 5).

In order to improve trends in diabetes, a multifaceted approach is required including preventive strategies to assist Indigenous Australians to live healthier lives and so avoid diabetes and related chronic diseases, primary health care to delay development of complications in those with established diabetes, and acute care to treat serious complications when they arise. Hospitalisation rates can be expected to increase further to treat increasing levels of serious disease until strategies to improve modifiable risk factors and primary health care services to control established disease are oriented and resourced according to need (see measure 3.04). Challenges for decisions makers include maintaining a policy emphasis on primary prevention (nutrition, physical activity, smoking, alcohol) whilst implementing strategies to achieve effective secondary prevention (primary care, blood sugar control). More research is required on levels of undetected diabetes in the broader Aboriginal and Torres Strait Islander population, and the most effective mechanism for achieving early detection and ongoing management of the condition (see measures 3.03 and 3.04).

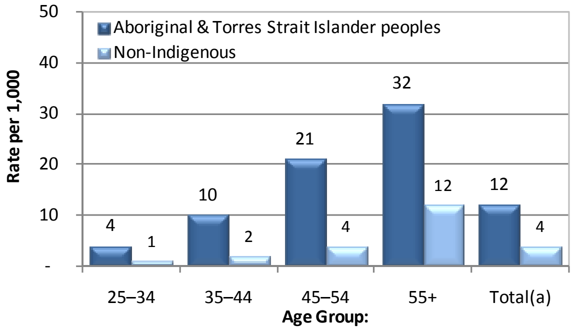
Table 12 – Percentage Aboriginal and Torres Strait Islander peoples reporting diabetes/high sugar levels, by remoteness, 1995, 2001 and 2004–05

	1995 (a)	2001	2004-05
Remote	n.a	7	9
Non-remote	4	4	5
Total	**n.a**	**5**	**6**

(a) Remote data are not available for NATSIHS 1995 data

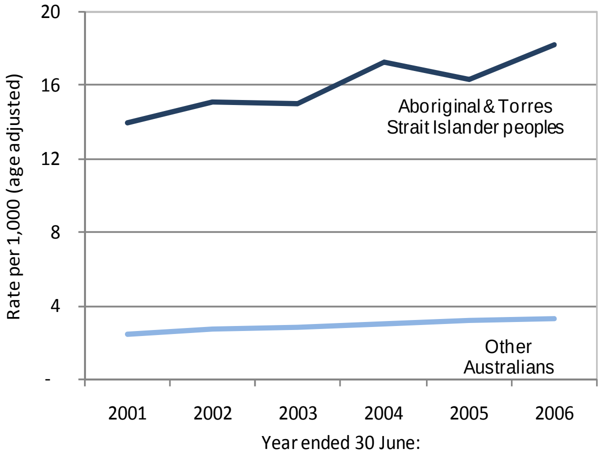
Source: ABS & AIHW analysis of 1995 and 2001 National Health Surveys (Indigenous supplements) and 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 19 – Percentage of persons reporting diabetes/high sugar levels, by Indigenous status and age, 2004–05



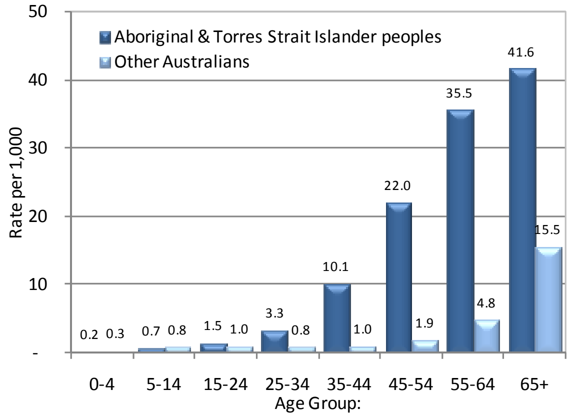
Source: 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey
(a) Total is age-standardised

Figure 20 – Age-standardised hospitalisation rates for a principal diagnosis of diabetes, by Indigenous status Qld, WA, SA and NT, age-standardised, 2000–01 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 21 – Age-specific hospitalisation for a principal diagnosis of diabetes by Indigenous status, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Table 13 – Diabetes problems managed by general practitioners, by Indigenous status of patient, 2002–03 to 2006–07

Problem managed:	Rate per 100 encounters (age adjusted): Aboriginal & Torres Strait Islander	Rate per 100 encounters (age adjusted): Non-Indigenous and not stated	Ratio
Diabetes: non-insulin-dependent	10.1	2.8	3.5*
Diabetes: insulin-dependent	0.7	0.3	2.8*
Total diabetes (excluding gestational)	*10.8*	*3.1*	*3.5**
Gestational diabetes	0.1	—	3.6
All diabetes	**10.9**	**3.1**	**3.5***

* Represents significant differences in the Indigenous/non-Indigenous comparisons.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

1.09 End stage renal disease

WHY IS IT IMPORTANT? The kidneys can be permanently damaged by various acute illnesses (e.g., severe infections) or by progressive damage from chronic conditions such as elevated blood pressure (untreated hypertension) and long-standing high blood sugar levels (untreated diabetes). If the kidneys cease functioning entirely (known as end stage renal disease, or kidney failure) waste products and excess water build up rapidly in the body and cause progressively worse illness. This will cause death within a few days or weeks unless a machine is used to filter the blood several times per week (renal dialysis) or a new kidney is provided from someone else (a kidney transplant) (National Library of Medicine & National Institutes of Health 2007).

Aboriginal and Torres Strait Islander peoples have very high levels of end stage renal disease (ESRD), mostly because so many of them have diabetes or hypertension (AIHW 2005a). In non-Indigenous Australians, ESRD usually occurs in older age, but for many Aboriginal and Torres Strait Islander peoples it occurs in the middle adult years. Few Aboriginal and Torres Strait Islander patients receive kidney transplants, so most must have dialysis 3 times per week for the rest of their lives (AIHW 2005a; McDonald et al. 2006; Devitt et al. 2008).

FINDINGS: The incidence of ESRD for patient commencing ongoing treatment is higher for Aboriginal and Torres Strait Islander peoples than other Australians, and there is considerable variation in incidence rates between jurisdictions and between urban, rural and remote areas. Between 2004 and 2006, there were 615 new Aboriginal and Torres Strait Islander patients registered as commencing ESRD treatment, accounting for 10% of all new registrations. The age-adjusted incidence rate of treated ESRD was 8 times higher for Aboriginal and Torres Strait Islander peoples than non-Indigenous people.

ESRD incidence was higher for Aboriginal and Torres Strait Islander peoples in all adult age groups, with the greatest relative excess in the 45–64 year age groups. Indigenous people commencing ESRD treatment are much younger than other Australians commencing ESRD treatment, with over half aged under 55 years.

ESRD incidence for Aboriginal and Torres Strait Islander peoples is much higher in outer regional and remote areas than urban areas. The relative excess in ESRD incidence is greatest in very remote and remote areas (18 to 20 times as high as for other Australians in the same areas), compared with outer regional (14 times as high) and major cities and inner regional areas (4 to 6 times as high). For other Australians, there is little difference in ESRD incidence between jurisdictions or between urban, rural and remote areas.

Incidence rates are highest in the Northern Territory (2.2 per 1,000) followed by Queensland, Western Australia and South Australia (around 1.0 per 1,000). Incidence rates are lowest in Victoria (0.6 per 1,000) and New South Wales (0.3 per 1,000).

The number of Aboriginal and Torres Strait Islander patients starting ESRD treatment has more than tripled over the last decade. ESRD incidence for other Australians also increased, but not as rapidly. The rapid increase in the incidence of ESRD in the Aboriginal and Torres Strait Islander population may reflect both real growth in the underlying disease, an increase in availability of kidney treatment and/or improved levels of identification of Aboriginal and Torres Strait Islander people in the registry.

ESRD patients require either a kidney transplant or dialysis to maintain the functions normally performed by the kidneys. In December 2006, there were 1,118 Indigenous Australians registered for ESRD treated. Of these 87% were reliant on dialysis and only 13% had received a kidney transplant. In comparison, 55% of other Australians living with ESRD were reliant on dialysis and 45% had received a kidney transplant. Indigenous Australians with ESRD were 10 times as likely to be reliant on dialysis.

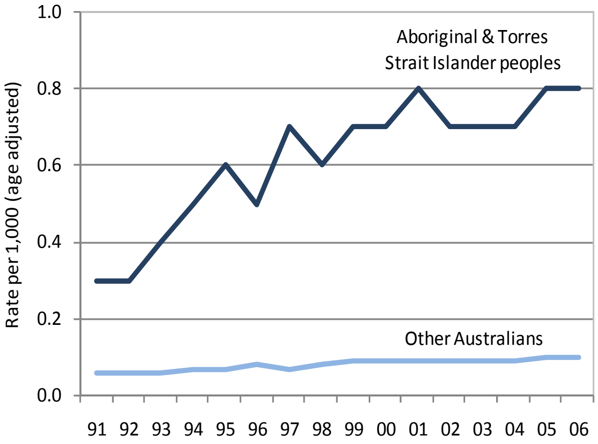
IMPLICATIONS: The very high level of ESRD in Aboriginal and Torres Strait Islander peoples is a consequence of the high levels of diabetes, high blood pressure and related diseases, and possibly of the high levels of bacterial infections and glomerulonephritis in childhood (AIHW 2005a). These in turn are consequences of the barriers to accessing primary health care, poor environmental, housing, and hygiene conditions in which many Indigenous people live (particularly in remote areas) and the relatively poor diet and physical activity levels that are affecting them even more than other Australians.

Considerable attention and resources have rightly been directed to life-saving treatment of those people whose kidneys have ceased to function. Indigenous Australians have had relatively poorer access to kidney transplants and addressing barriers is important for health planners (Cass et al. 2003)

However, ESRD incidence will continue to rise, imposing even greater demands on acute care services, until primary health care services are oriented and resourced to provide chronic disease management for Aboriginal and Torres Strait Islander patients according to need (Hoy et al. 2000).

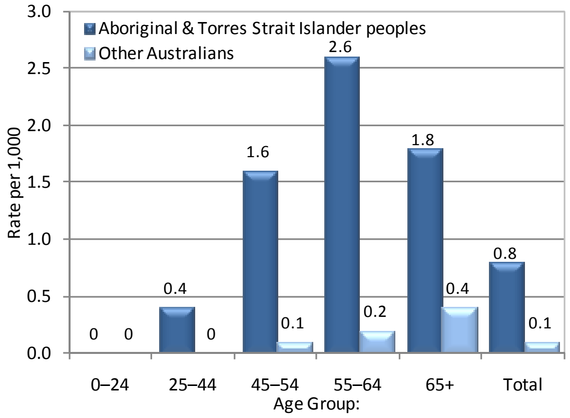
Primary prevention of kidney disease in childhood, by improved environmental conditions and hygiene, and in adulthood by healthier nutrition and greater physical activity, and by early diagnosis and treatment of conditions associated with renal failure is essential before the excess of ESRD in Aboriginal and Torres Strait Islander peoples can be eradicated. There is increasing demand for dialysis and transplantation services. Some jurisdictions and communities are enhancing the provision of home or community-based dialysis services. This is particularly important for those from remote communities, who often need to travel long distances, or permanently relocate, in order to access dialysis. Improving access to kidney transplants is also essential to improve health outcomes for Indigenous Australians. In the foreseeable future, the cost of ESRD, to both the health care system and to Aboriginal and Torres Strait Islander peoples, will continue to rise.

Figure 22 – Age-standardised registration rates for End Stage Renal Disease, by Indigenous status, 1991 to 2006



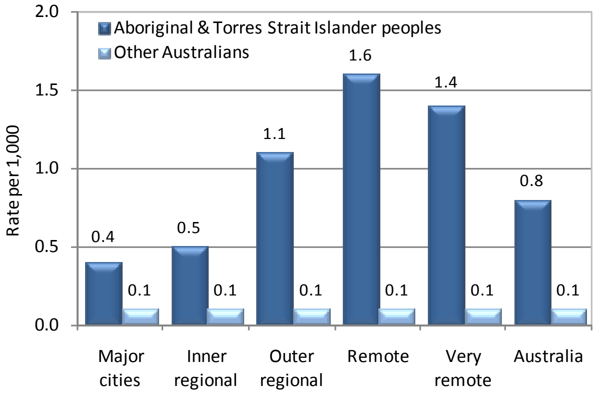
Source: AIHW analysis Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)

Figure 23 – Incidence of End Stage Renal Disease by Indigenous Status and age group, 2004–2006



Source: AIHW analysis of Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)

Figure 24 –Age-standardised incidence of End Stage Renal Disease by Indigenous Status and remoteness, 2004–2006



Source: AIHW analysis of Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)

Table 14 – Total patients with end stage renal disease, by Indigenous status and treatment, as at 31 December 2006

Treatment:	Number		Rate per 1000 (age adjusted)		Ratio
	Indigenous	Other	Indigenous	Other	
Dialysis	971	8,211	3.9	0.4	10.1*
Transplant	147	6,806	0.5	0.3	1.4*
Total	**1,118**	**15,017**	**4.4**	**0.7**	**5.7***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)

Table 15 – Age-standardised incidence of End Stage Renal Disease in Aboriginal and Torres Strait Islander people by jurisdiction, 2004–06

	Male			Female			Persons		
	Number	Rate	Ratio	Number	Rate	Ratio	Number	Rate	Ratio
New South Wales	30	0.3	2.2*	25	0.3	3.4*	55	0.3	2.7*
Victoria	12	0.4	3.5*	13	0.7	9.4*	25	0.6	5.9*
Queensland	68	0.8	6.1*	92	0.9	12.0*	160	0.9	8.5*
Western Australia	53	0.9	7.2*	66	1.1	16.9*	119	1.0	10.8*
South Australia	18	0.9	7.3*	23	0.8	12.5*	41	0.9	9.2*
Northern Territory	93	2.0	17.0*	118	2.3	57.3*	211	2.2	27.6*
Australia	**276**	**0.7**	**5.9***	**339**	**0.9**	**12.1***	**615**	**0.8**	8.4*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

Source: AIHW analysis of Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)

1.10 Decayed, missing, filled teeth

WHY IS IT IMPORTANT? Oral health refers to the health of tissues of the mouth; muscles, bone, teeth and gums. This performance measure focuses on one component of oral health, the teeth, and particularly on the number of decayed, missing and filled infant/deciduous (dmft) and adult/permanent (DMFT) teeth. The number of teeth with dental decay (termed 'caries') reflects untreated dental disease, while the number of missing and filled teeth reflects the history of dental health problems and treatment. The number of teeth with untreated decay is often higher in the younger age groups, while older people are more likely to have missing or filled teeth (AIHW (Davies MJ) 2000).

Decayed teeth can cause illness and pain. The loss of permanent teeth can lead to difficulties in chewing, discomfort while eating and subsequent nutritional problems, embarrassment and social isolation. It is difficult for adults without teeth to eat a healthy diet. Children affected with dental diseases might not perform as well in school as their healthy counterparts. They have difficulty eating which might adversely affect their nutritional levels, and they may have low self-esteem from the appearance of their decayed teeth (AIHW (Davies MJ) 2000; SCRGSP 2003). Poor dental health can also cause impaired speech and language development. Poor oral health may also exacerbate other chronic diseases (Couzos & Murray 2003).

Aboriginal and Torres Strait Islander peoples are more likely than other Australians to have lost all their teeth, have gum disease, and receive less caries treatment. They are less likely to have received preventive dental care and more likely to have untreated dental disease (AIHW (Davies MJ) 2000).

Periodontal disease (affecting the gums) is associated with increased age, poor oral hygiene, infrequent dental visits, smoking, low education and income levels, and certain medical conditions especially diabetes. Current research is also finding an association between periodontal disease and pre-term, low birthweight babies; cardiovascular disease; and rheumatoid arthritis (NATSIHC 2003; Thompson et al. 2004).

FINDINGS: The average number of decayed, missing and filled teeth per child is measured by the dmft score for deciduous (infant) teeth and the DMFT score for permanent teeth. For the 3 states for which reliable data are available (New South Wales 2000, South Australia 2003 and the Northern Territory 2002), the mean number of decayed or missing deciduous teeth and of decayed permanent teeth was much higher for Aboriginal and Torres Strait Islander children than other Australian children. The excess of decayed or missing teeth varied with age, but was more than twice as high in many age groups. By 15 years of age Aboriginal and Torres Strait Islander children have 50% more decayed missing or filled teeth compared with non-Indigenous children. Aboriginal and Torres Strait Islander children have more decayed than filled teeth, indicating poor access to, and a large unmet need for, dental care.

Across a range of measures Aboriginal and Torres Strait Islander children living in rural areas tend to have the poorest level of oral health followed by Aboriginal and Torres Strait Islander children living in metropolitan areas with non-Indigenous in rural and metropolitan areas having the best oral health. In the general population, higher levels of socio-economic disadvantage are associated with poorer oral health in children. There is a similar pattern for Indigenous children, but within each socio-economic grouping, Indigenous children have poorer oral health (Jamieson et al. 2006).

The only data on trends in dental health are for school-age children in the Northern Territory. There was little change in dental health for Aboriginal and Torres Strait Islander children over the 10 years from 1991 to 2001. A study in the Northern Territory found that the prevalence of dental caries amongst non-Indigenous children improved from 1989–2000 while the prevalence amongst Indigenous children increased during the same period (Jamieson et al. 2007). The Northern Territory Emergency Response health checks include an assessment of dental health. Forty per cent of children were reported to have untreated caries.

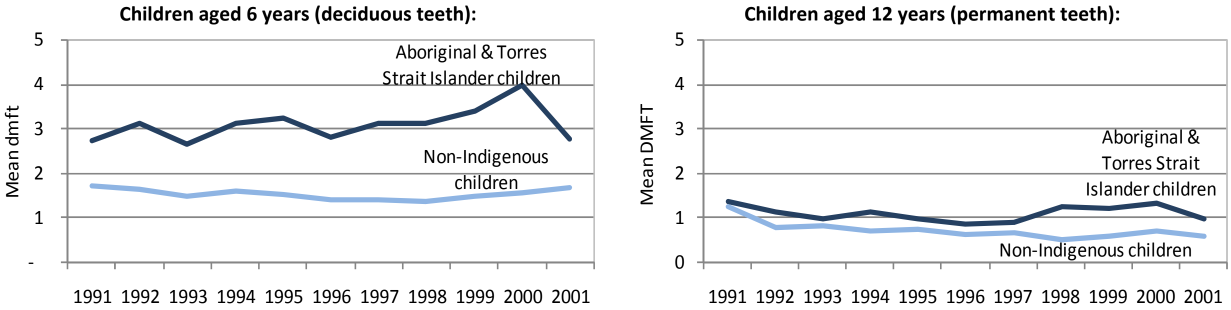
In 2004–06, the mean number of decayed teeth was higher for all Indigenous Australians adults 15 years and over (15 compared with 13). Overall, a higher percentage of Indigenous persons aged 15 years and over had no natural teeth (8%) than non-Indigenous persons aged 15 years and over (6%).

IMPLICATIONS: Dental health is worse for Aboriginal and Torres Strait Islander peoples than other Australians, for both children (based on data from 3 states) and adults (based on public dental care and national survey data). Of the 3 states for which child dental health data are available, the situation is much worse in the Northern Territory than in New South Wales or South Australia. The only trend information (from the Northern Territory) suggests child dental health has not improved there since 1991. Considerable improvement in dental health is still required for Aboriginal and Torres Strait Islander peoples throughout Australia before they will share the same standard of dental health as other Australians. Data are also needed for all jurisdictions.

Lack of fluoridation of water supplies in some communities is part of the reason for the poor dental health of Aboriginal and Torres Strait Islander children, particularly for the high levels of decayed teeth (Queensland Government 2007).

These findings raise significant policy questions about access to dental services and to population health measures for preventing dental disease and supporting oral health. In March 2008, COAG announced that 48,000 additional dental services will be provided to Indigenous Australians under the new Commonwealth Dental Health Program.

Figure 25 – Mean decayed, missing or filled teeth scores children aged 6 years (deciduous teeth) and 12 years (permanent teeth), by Indigenous status, Northern Territory 1991–2001



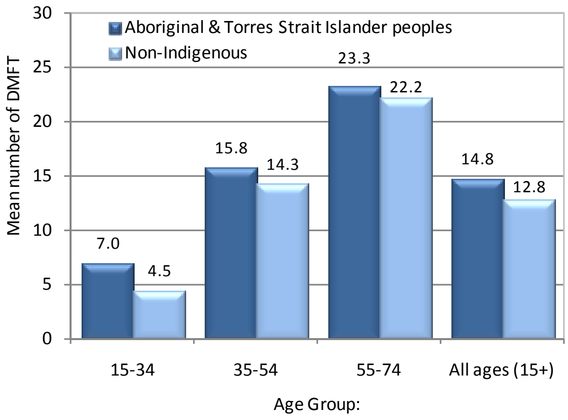
Source: AIHW Dental Statistics and Research Unit

Table 16 – Mean number of decayed, missing and filled deciduous and permanent teeth, by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)

	NSW			SA			NT		
	Indigenous	Non-	Ratio	Indigenous	Non-	Ratio	Indigenous	Non-	Ratio
4-6 year olds, deciduous teeth									
decayed	1.6	0.7	2.3*	2.2	0.9	2.4*	3.3	0.9	3.8*
missing	0.2	0.0	5.0*	0.3	0.1	4.0*	0.1	0.1	2.7*
filled	0.4	0.2	1.9*	1.1	0.6	1.9*	0.4	0.5	0.9*
dmft	2.3	1.0	2.3*	3.7	1.6	2.3*	3.8	1.4	2.8*
8-10 year olds, permanent teeth									
Decayed	0.3	0.1	2.2*	0.5	0.2	2.5*	0.5	0.1	3.6*
Filled	0.1	0.1	1.3	0.3	0.3	1.2	0.1	0.2	0.9
DMFT	0.5	0.3	1.8*	0.8	0.5	1.8*	0.7	0.3	2.2*
12-14 year olds, permanent teeth									
Decayed	0.7	0.3	2.1*	0.9	0.4	2.3*	1.2	0.4	2.8*
Filled	0.4	0.3	1.1	0.9	0.7	1.3	0.4	0.5	0.7
DMFT	1.1	0.7	1.6*	1.8	1.1	1.7*	1.6	1.0	1.6*

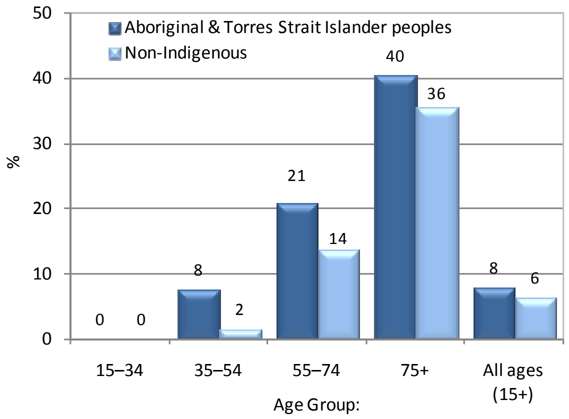
* Represents significant differences in the Indigenous/non-Indigenous comparisons.
Source: AIHW analysis of Dental Statistics and Research Unit data

Figure 26 – Mean number of decayed, missing or filled teeth by Indigenous Status, 2004–2006



Source: (Roberts-Thomson & Do 2007)

Figure 27 – Persons aged 15 years and over with no natural teeth (complete tooth loss), by Indigenous status, 2004–06



Source: (Roberts-Thomson & Do 2007)

1.11 HIV/AIDS, hepatitis C and sexually transmissible infections

WHY IS IT IMPORTANT? Several sexually transmissible infections (STIs) (chlamydia, gonorrhoea, syphilis and donovanosis) are much more common for Aboriginal and Torres Strait Islander peoples than for other Australians. Although each of these infections can be treated and cured once diagnosed, each can have serious long-term consequences, such as chronic abdominal pain or infertility in women after gonorrhoea and chlamydia, genital damage from the eroding ulcers caused by donovanosis, and heart and brain damage caused by syphilis (Bowden et al. 2002; Couzos & Murray 2003). Several of these infections can cause pregnancy loss and permanent damage to new-born babies. Notification rates for hepatitis C are also significantly higher for the Aboriginal and Torres Strait Islander population. The prevalence of HIV among Aboriginal and Torres Strait Islander people is similar to that of the general population, and higher rates of STIs and poorer access to primary health care services make the population more vulnerable to HIV transmission. Unlike the STIs listed above, hepatitis C and HIV/AIDS are viral infections which can both be fatal. HIV/AIDS remains incurable and management of both HIV and hepatitis C requires specialist services for which access may be poorer for Aboriginal and Torres Strait Islander peoples. This is reflected in much higher rates of AIDS among the Aboriginal and Torres Strait Islander population than the non-Indigenous population, despite similar rates of HIV infection. The bacterial STIs and HIV are transmitted through sexual contact while hepatitis C is most commonly transmitted through contact with infected blood (usually injecting drug use). HIV is also transmitted through contact with infected blood. Notification data on sexually transmissible infections reflect diagnosed cases for the condition rather that the extent of the problem in the population. These data exclude information from those people who have the condition but have not been diagnosed. Therefore notification rates reflect a range of issues including access to responsive and effective health care, the accuracy of the tests, whether there is systematic screening for conditions that are common but frequently asymptomatic, people's decisions about seeking health care for sexually transmissible conditions and for Indigenous Australians, the accuracy of Indigenous identification in the data.

FINDINGS: Chlamydia, gonorrhoea and hepatitis C are all more common in Aboriginal and Torres Strait Islander peoples than other Australians. In the western states, syphilis occurs predominantly, and donovanosis almost exclusively, in Aboriginal and Torres Strait Islander peoples. During 2005–06, 73% of cases of syphilis notified in the 3 western states occurred in Aboriginal and Torres Strait Islander people. All these diseases occur more frequently in the young adult age groups, particularly the 15–24 years age group. Notification rates for chlamydia and gonorrhoea have increased across the whole Australian population over the last decade. The incidence rates of gonorrhoea, chlamydia and hepatitis C increased significantly between 1994 and 2006 for Aboriginal and Torres Strait Islander peoples in the 3 western jurisdictions.

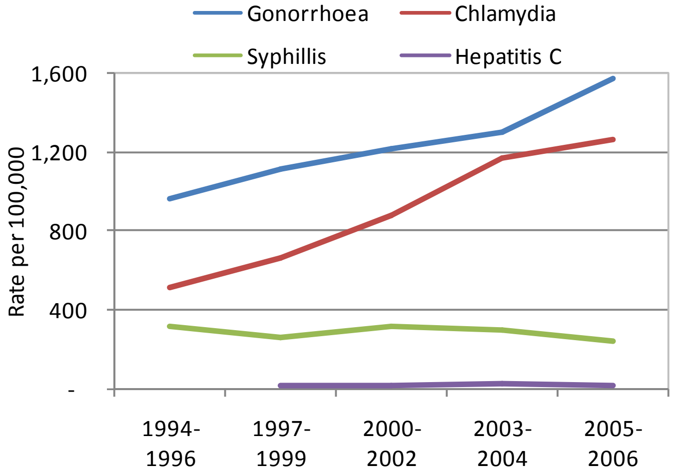
There have been no significant changes in the incidence of HIV infection for Aboriginal and Torres Strait Islander peoples between 1998–2000 and 2005–2006. For the period 2005–2006, the incidence of HIV was 4 per 100,000 for Aboriginal and Torres Strait Islander peoples and 5 per 100,000 for other Australians, and rate of AIDS diagnosis was 1.9 per 100,000 in Aboriginal and Torres Strait Islander peoples and 1.0 per 100,000 for other Australians. The distribution of infection is different in the two populations. Heterosexual contact (25% versus 20%) and injecting drug use (20% versus 3%) account for a greater proportion of risk exposures among Aboriginal and Torres Strait Islander HIV diagnoses.

IMPLICATIONS: Chlamydia and the other bacterial STIs are a major health problem for Aboriginal and Torres Strait Islander peoples. The incidence of these infections in many Aboriginal and Torres Strait Islander communities is so high that they may be regarded as being endemic. For jurisdictions for which data are available (the 3 western jurisdictions for most of these infections), there is no indication that these epidemics are being brought under control. Indeed, incidence rates for gonorrhoea and chlamydia have continued to increase between 1994 and 2006.

In this period, several national strategies to control STIs and blood-borne viruses have been developed and implemented in Australia, some specific to Aboriginal and Torres Strait Islander peoples, others include Aboriginal and Torres Strait Islander peoples as a high priority. It appears that none of these strategies have as yet had any impact (based on communicable disease notifications data). It is possible, however, that these strategies have increased testing and therefore detection and notification of these infections. The poor quality of identification of Aboriginal and Torres Strait Islander people in notification systems means that caution should be used in interpreting trends in these data.

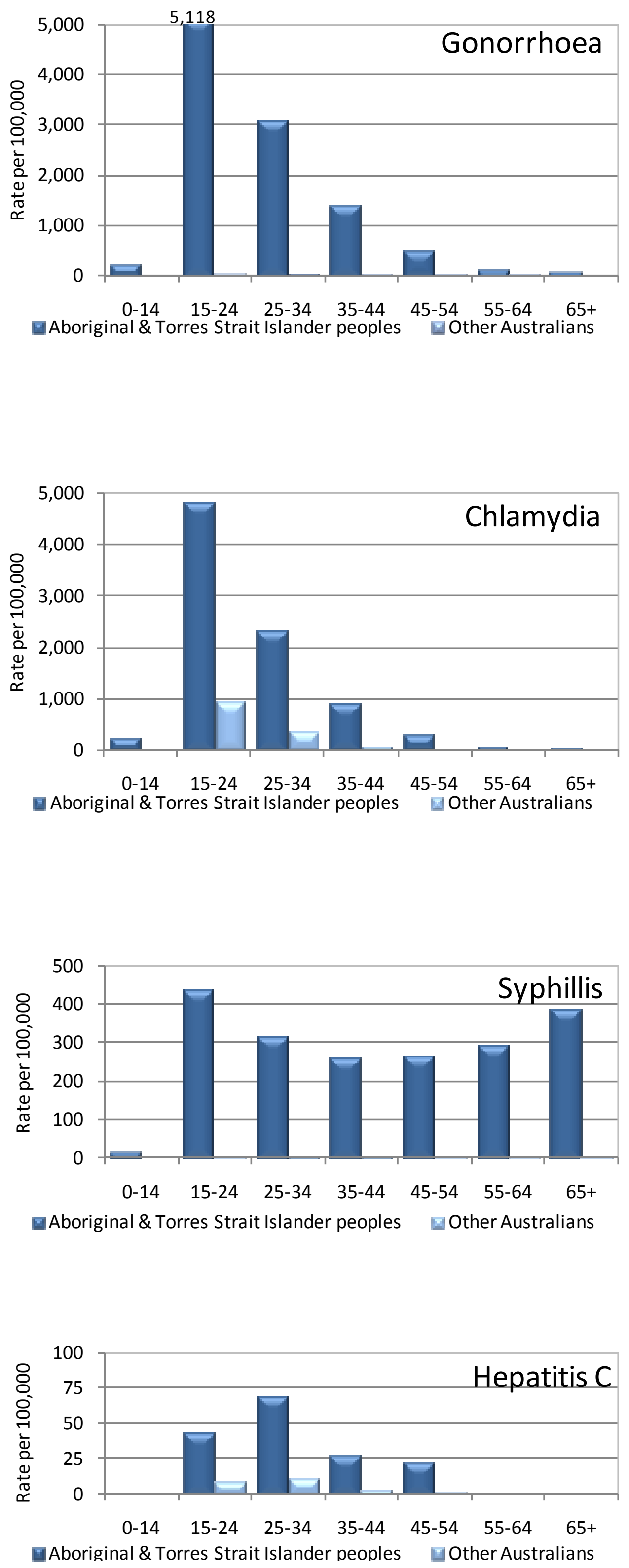
Improving data on STIs and HIV/AIDS for Aboriginal and Torres Strait Islander peoples is a priority to allow monitoring of progress nationally. The presence of high rates of bacterial STI increases a population's vulnerability to HIV infection, if exposed. Thus HIV prevention strategies in Aboriginal and Torres Strait Islander populations should have bacterial STI control as a central objective.

Figure 28 – Notification rate for 4 infectious diseases, Aboriginal and Torres Strait Islander peoples, WA, SA and NT, 1994–1996 to 2005–2006



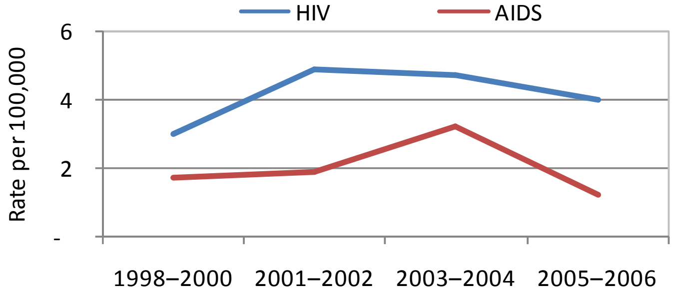
Source: AIHW analysis of National Notifiable Diseases Surveillance System

Figure 29 – Notification rate for 4 infectious diseases by Indigenous status, by age group (2004–2006), WA, SA and NT



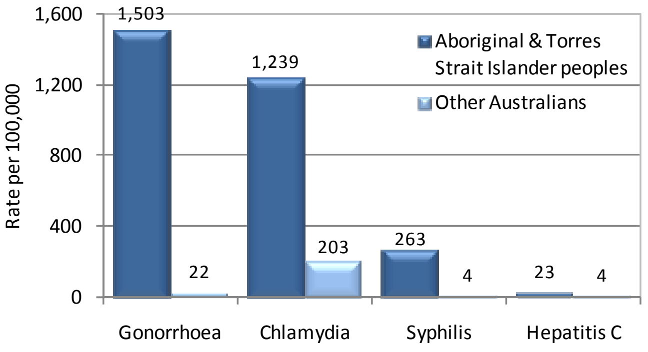
Source: AIHW analysis of National Notifiable Diseases Surveillance System

Figure 30 – Notification rate for HIV and AIDS, Indigenous Australians, all state/territories excluding ACT, 1998–2000 to 2005–2006



Source: AIHW analysis of National Notifiable Diseases Surveillance System

Figure 31 – Notification rate for 4 infectious diseases, by Indigenous status, WA, SA and NT, 2004–2006



Source: AIHW analysis of National Notifiable Diseases Surveillance System

1.12 Children's hearing loss

WHY IS IT IMPORTANT? Hearing loss among Aboriginal and Torres Strait Islander children is widespread and much more common than in the broader Australian population. The most common causes of hearing loss among Aboriginal and Torres Strait Islander peoples are disorders of the middle ear, specifically bacterial and viral infections leading to otitis media.

Otitis media is an inflammation of the middle ear. Otitis media with effusion involves a collection of fluid that occurs within the middle ear space, and chronic suppurative otitis media involves a perforation (hole) in the eardrum and active bacterial infection within the middle ear space for several weeks or more. Tympanoplasty is a reconstructive surgical treatment for a perforated eardrum.

The World Health Organization regards a prevalence of chronic suppurative Otitis media of greater than 4% as a massive public health problem requiring urgent action (WHO 2004). Several studies have found Aboriginal and Torres Strait Islander children living in remote communities experience severe and persistent ear infections which occur earlier in life compared with non-Indigenous children (Morris et al. 2007). In 2001, a survey of 29 remote communities in northern and central Australia found a prevalence of 15% in Aboriginal and Torres Strait Islander children aged 0–14 years (Morris et al. 2005).

Otitis media is thought to be more common and severe among Aboriginal and Torres Strait Islander children because of poverty, crowded housing conditions, inadequate access to water and to functioning sewerage and waste-removal systems (increasing the risk of bacterial and viral infections), passive smoking, nutritional problems and lack of access to primary health care and treatment.

Hearing loss can lead to linguistic, social and learning difficulties and behavioural problems in school, which reduce educational achievements that have life-long consequences for employment, income, and social success (Couzos & Murray 2003).

There is some evidence early access to tympanoplasty for otitis media with effusion does not have a beneficial effect on developmental outcomes (Berman 2007; Paradise et al. 2007), although the implications of this evidence for Indigenous children, who experience early and more severe conditions, is not clear.

FINDINGS: In 2004–05, 10% of Aboriginal and Torres Strait Islander children aged 0–14 years were reported as having ear or hearing problems compared with 3% of other Australian children. Around 5% of Indigenous children were reported to have complete or partial deafness or hearing loss, and 4% were reported to have otitis media.

Ear or hearing problems were more prevalent among older Indigenous children, 12% reported for Indigenous children aged 5–14 years compared with 6% of children aged 0–4 years. Thirteen per cent of Aboriginal and Torres Strait Islander children living in remote areas were reported to have ear or hearing problems compared with 8% of Indigenous children in non-remote areas.

Nationally there has been little change since 2001. However, there is some apparent improvement for Indigenous children living in remote areas (18% in 2001 compared with 12–13% in 2004–05).

The National Aboriginal and Torres Strait Islander Health Survey confirms the associations between the presence of ear or hearing problems and social conditions. For example, ear/hearing problems were more common for children living in overcrowded households (15% versus 8%), those living in the most socio-economically disadvantaged areas (15% versus 11% for the least disadvantaged areas) and those living in households with regular smokers (10% versus 8%).

The hospitalisation rate for all ear disease combined for Aboriginal and Torres Strait Islander children is estimated to be around 10% higher than for other Australian children. For children aged 0–4 years rates for Indigenous children were lower than for other Australian children. However, for children aged 5–14 years hospitalisation rates for ear diseases were higher for Indigenous children compared with other Australian children. There has been a statistically significant decline in hospitalisations rates for Indigenous and other Australian children between 1998–99 and 2005–06.

In the 2-year period July 2004 to June 2006, Aboriginal and Torres Strait Islander children aged 0–14 years were hospitalised for tympanoplasty procedures due to middle ear infection at 4 times the rate of other children.

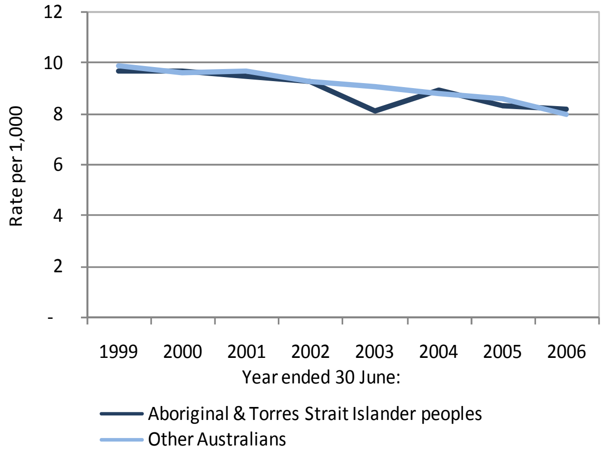
General practice attendances for acute otitis media or myringitis are only slightly more common for Aboriginal and Torres Strait Islander than other Australian children; around 11 per 100 encounters for Aboriginal and Torres Strait Islander children compared with 9 per 100 encounters for other Australian children in the 0–14 year age group in 2002–03 to 2006–07. A more detailed analysis of the general practice data found that Indigenous children were 5 times more likely to be diagnosed with severe otitis media than non-Indigenous children, but the reported management is not substantially different. For example, Indigenous children were less likely to receive oral antibiotics (72% versus 76%) and only slightly more likely to be referred to an audiologist (2% versus 1%) (Gunasekera et al. 2007).

Between July 2007 and May 2008 approximately 10,900 Child Health Checks were undertaken in the prescribed areas of the Northern Territory Emergency Response. Around 29% of children were found to have ear disease. Ear disease was more prevalent in younger children, 31% of children aged 0–5 years and 29% of children aged 6–11 years compared with 23% of children aged 12–15 years. Eight per cent of children were given a referral to an ear, nose and throat specialist.

IMPLICATIONS: Chronic ear disease causing serious hearing damage is common in Aboriginal and Torres Strait Islander children. Chronic suppurative otitis media occurs in Aboriginal and Torres Strait Islander communities at levels described by the World Health Organization as a massive public health problem requiring urgent action (WHO 2004). The Work Plan for Future Actions in Ear and Hearing Health (DoHA 2003) outlines policy principles and key activities to address ear and hearing health needs of Aboriginal and Torres Strait Islander peoples. The key ones are: address ear health in a comprehensive, population-based approach to family, maternal and child health; promote skills development in the primary health care workforce in the clinical management of otitis media; facilitate earlier and increased access to medical specialists and audiologists; increase the capacity of the Commonwealth Hearing Services Program to respond to the tertiary hearing needs of Aboriginal and Torres Strait Islander peoples; enhance and harness the role Aboriginal Health Workers play in ear health services and health promotion; and improve the use of technological systems and training in school ear health and hearing policies and programs. Several jurisdictions have implemented strategies specifically targeted at addressing otitis media within Indigenous communities.

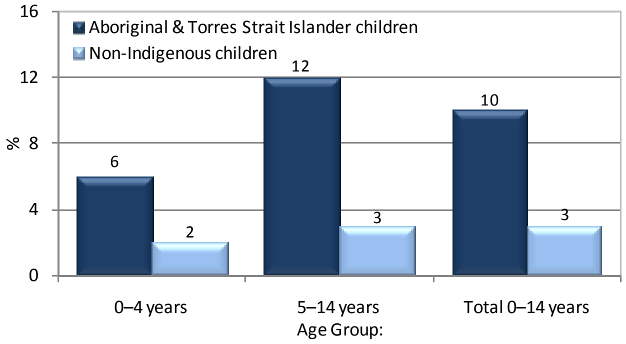
There are several policy questions for which data are not yet available. The prevalence of ear disease is 3 times higher for Aboriginal and Torres Strait Islander children than other children in self-reported survey data, yet levels of treatment by GPs and levels of hospitalisation are similar to those of other Australian children. Only tympanoplasty procedures in hospitals are higher. Is the health system failing to address the serious hearing problems of Aboriginal and Torres Strait Islander children? A comprehensive approach that combines early treatment, management and referral, linkages with school screening programs, preventative social and economic strategies, particularly to reduce overcrowded housing and improve hygiene and nutrition, is required to reduce the extremely high levels of chronic otitis media in Aboriginal and Torres Strait Islander communities.

Figure 32 – Hospitalisation rates for Aboriginal and Torres Strait Islander and other children aged 0–14 years from diseases of the ear and mastoid, Qld, WA, SA and NT, 1998–99 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 33 – Proportion of children aged 0–14 years reporting ear and hearing problems, by Indigenous status and age group, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Table 17 – Diseases of the ear and mastoid reported for Aboriginal and Torres Strait Islander children aged 0–14 years, by remoteness and sex, 1995, 2001 and 2004–05

	1995[(a)]		2001		2004-05	
	Males	Females	Males	Females	Males	Females
	%	%	%	%	%	%
Remote	n.a	n.a	18	18	12	13
Non-remote	7	4	6	11	9	8
Total	**n.a**	**n.a**	**10**	**13**	**10**	**9**

(a) Data for the National Aboriginal and Torres Strait Islander Health Survey 1995 are available for non-remote areas only

Source: ABS & AIHW analysis of 1995 and 2001 National Health Survey (Indigenous supplements) and 2004–05 National Aboriginal and Torres Strait Islander Health Survey

1.13 Disability

WHY IS IT IMPORTANT? A disability may be an impairment of body structure or function, a limitation in activities, and/or a restriction in participation. A person's functioning or disability is conceived as an interaction between health conditions and environmental and personal factors. Aboriginal and Torres Strait Islander peoples are at greater risk of disabilities because they are more frequently subject to many factors that predispose them to disability, including low birthweight, higher rates of chronic disease, infectious diseases (e.g., otitis media, especially among young children), accidents and violence, mental health problems and substance abuse, combined with limited access to early treatment and rehabilitation services. These factors tend to be more prevalent in communities where there are higher rates of unemployment, lower levels of income, poorer diet and living conditions, and poorer access to adequate health care—often due to geographical remoteness.

FINDINGS: In 2002, an estimated 102,900 (36%) of Aboriginal and Torres Strait Islander people aged 15 years or over had a disability or a long-term health condition (excluding psychological disability). Of these, 21,800 or 8% of the population aged 15 years or over had a profound or severe core activity limitation, meaning that they always or sometimes needed assistance with at least one activity of everyday living (self-care, mobility or communication). The proportion of people with a disability or long-term health condition was similar in males (37%) and females (36%). The rate of disability or long-term health condition increased with age. Approximately 70% of those aged 55 years or over had a disability or long-term health condition.

In 2002, Aboriginal and Torres Strait Islander peoples were twice as likely to have a profound or severe core activity limitation as non-Indigenous Australians. The prevalence of profound and severe core activity limitation was higher in all age groups, with the greatest difference in the 45–54 year age group (around 4 times higher).

In 2002, 24% of Aboriginal and Torres Strait Islander people aged 15 years and over had a physical disability or long-term health condition, 14% had a sensory/speech disability and 7% had an intellectual disability. One in 6 Indigenous people (16%) had an unspecified long-term health condition (requiring treatment) that could not be coded to a disability type. In the 55 years and over age group, 30% of Indigenous people reported a sensory/speech disability, 50% reported a physical disability, and 9% reported an intellectual disability.

The 2006 Census collected data on one element of disability, i.e., those reporting the need for assistance with core activities. In the 2006 Census, around 20,000 Aboriginal and Torres Strait Islander people, 4% of the total Indigenous population, were identified as needing assistance with a core activity (self-care, mobility or communication) some or all of the time. Rates are similar for males (4.5%) and females (4.1%). Slightly more Aboriginal and Torres Strait Islander people living in non-remote areas needed assistance with a core activity compared with remote areas (4.6 versus 3.3%). Rates ranged from 3% of Indigenous Australians in the Northern Territory to 5% in New South Wales and Victoria. (See Technical Appendix for Census data quality issues.)

Ten per cent of Indigenous Australians who needed assistance with a core activity were living in a hospital, a residential care facility, hostel for the disabled or another non-private dwelling, compared with 19% of non-Indigenous Australians (ABS & AIHW 2008).

Eighty per cent of Aboriginal and Torres Strait Islander people aged 15–64 years reporting core activity restrictions were not in the labourforce, compared with 38% of those not reporting core activity restrictions (ABS & AIHW 2008). Among Aboriginal and Torres Strait Islander peoples in the 25–54 years age groups the median income for those who needed assistance with a core activity was around 60% of that for Indigenous Australians who did not need assistance (ABS & AIHW 2008).

In 2006, the Census collected, for the first time, information on the number of carers aged 15 years or over in Australia. The median age of Indigenous carers was 37 years; 12 years less than the median age of non-Indigenous carers (49 years). After adjusting for differences in the age structures of the Indigenous and non-Indigenous populations, Indigenous Australians were 1.6 times as likely as non-Indigenous Australians to be caring for another person with a disability, long-term illness or problems related to old age.

In 2006, 2% of Aboriginal and Torres Strait Islander children aged 0–18 years had a core activity restriction, approximately 1.3 times higher than for non-Indigenous children.

IMPLICATIONS: The high levels of disability among Aboriginal and Torres Strait Islander peoples are consistent with the levels of disease and injury, and the inadequate utilisation of health services relative to need. Factors during pregnancy have also been shown to raise the likelihood of intellectual disability in children (Leonard et al. 2008). Core activity restrictions occur earlier in life for Aboriginal and Torres Strait Islander people. Core activity restrictions are associated with a range of other social disadvantages including lower levels of educational attainment, lower levels of participation in the workforce and lower income.

In the longer term, high levels of disability will persist until excessive levels of disease and injury have been eliminated.

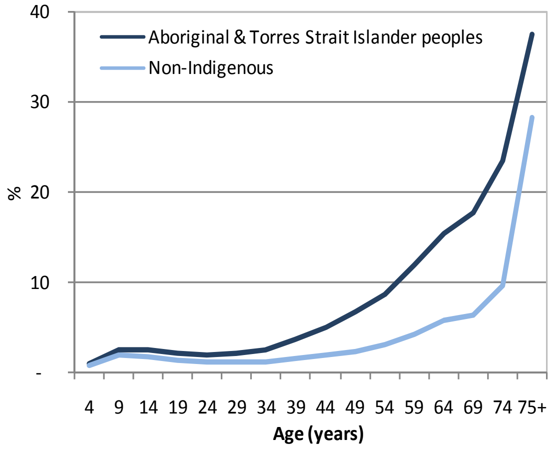
Table 18 – Aboriginal and Torres Strait Islander Persons aged 15 years and over: Disability type by age group, Australia 2002

Disability type	15 to 24	25 to 34	35 to 44	45 to 54	55 or over	Total
	%	%	%	%	%	%
Sight, hearing, speech	7.6	10.5	13.3	19.3	30.0	13.7
Physical	13.5	16.6	24.0	35.8	50.2	23.6
Intellectual	7.4	6.3	6.7	5.5	9.0	6.9
Total with a disability or long term health condition(a)	22.7	29.0	38.2	49.6	69.6	36.5
Total with no disability or long-term health condition	77.3	71.0	61.8	50.4	30.3	63.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes disability type not specified.

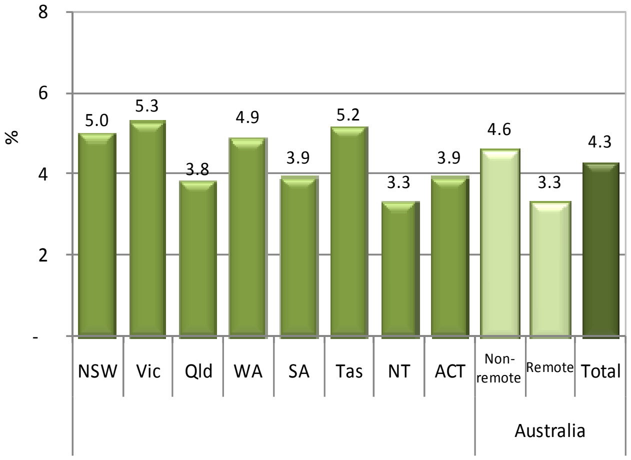
Source: AIHW analysis of the ABS National Aboriginal and Torres Strait Islander Social Survey 2002

Figure 34 – Proportion of persons with core activity need for assistance, by Indigenous status and age group, 2006



Source: ABS & AIHW 2008

Figure 35 – Proportion of Aboriginal and Torres Strait Islander people with core activity need for assistance, by jurisdiction and remoteness, 2006



Source: ABS & AIHW 2008

1.14 Community Functioning

WHY IS IT IMPORTANT? This measure seeks to describe both in aggregate and as single measures the level of Aboriginal and Torres Strait Islander people's achievement against a number of key functionings they have described as important to the quality and equality of Aboriginal and Torres Strait Islander peoples' life in Australia.

A functioning is a state of *being* or *doing* that people have reason to value. Measuring functionings is an important supplement to the more traditional approach to the measurement of health and wellbeing. Life is multidimensional and it cannot easily or accurately be measured by reference to just one facet. Measures of functionings will add value to health analyses by helping to frame more traditional, single issue measures in a quality of life construct defined by Aboriginal and Torres Strait Islander peoples. Health providers, planners and health and social policy interests need to know more than the level of sickness in a community if they are to work with communities and families to achieve a healthy quality life.

For example, Aboriginal and Torres Strait Islander peoples have long sought health outcomes targeting the physical, social, cultural and emotional elements of life. The cultural elements relate to Aboriginal and Torres Strait Islander peoples' ability to live proudly and freely as Aboriginal and Torres Strait Islander peoples, to achieve a state of *being* that is commensurate with their view of a culturally fulfilling life. Similarly Aboriginal and Torres Strait Islander peoples have sought a quality of life where racism ceases to be a barrier to their ability to *do* some things. Racism can stop Aboriginal and Torres Strait Islander people from having adequate shelter, from being able to go out in public without shame or fear and from accessing or deriving an equal benefit from a health service.

To develop a picture of functioning, a picture of the quality of life from an Aboriginal and Torres Strait Islander people's perspective, a workshop drawing participants from across Australia together was held. That workshop was able to identify a number of functionings and was also able to weight those functionings according to their relative value. There were 9 functionings identified by Aboriginal and Torres Strait Islander participants and these have been used to construct this measure. Each of these functionings is important to the ability of Aboriginal and Torres Strait Islander families and communities to achieve greater levels of family and individual development. If these functionings were improved then the potential for Aboriginal and Torres Strait Islander people and families to achieve better health and wellbeing would be improved. They would have greater capacity and freedom to be well.

It is important to understand the evaluative space this measure seeks to address. Single-issue measures are effective and appropriate if we are measuring single issues. But if we are looking for more complete analyses of life single-issue measures may not be sufficient. Measures of morbidity alone for example can tell us about the level and perhaps type of disease in a population but it does not describe the very real and substantial difficulties that Aboriginal and Torres Strait Islander families and communities experience in trying to deal with their disease, it does not describe the context or ability of Aboriginal and Torres Strait Islander peoples to change the circumstances that have contributed to their ill health. An Indigenous person might seek and obtain health care from a GP but if their power to control choices and options in respect of household income is low or if there is no appropriate storage for medications then treatment may be only a temporary fix. We need to present more complete measures that are based on the factors that impact on the lives of Aboriginal and Torres Strait Islander peoples.

Similarly life expectancy estimates the length of life at birth—it is a prospective measure of longevity. However, life expectancy does not describe the quality of that life, it does not describe how relatively hard or easy that life was. Was the individual free or able to choose a career, be educated or adequately housed or participate freely in cultural events? Was the individual free or able to achieve the things in life that they believed were demonstrative of a fulfilling life? Measurement of functionings assists us to understand the quality of Aboriginal and Torres Strait Islander life. Aboriginal and Torres Strait Islander participants at the national workshop described the various achievements and objectives that they believed were necessary if Aboriginal and Torres Strait Islander peoples' lives were to be fulfilling—they described measures of the quality of life.

Aboriginal and Torres Strait Islander participants at the workshop indicated that the functionings used in this measure are important to the quality of Aboriginal and Torres Strait Islander family and community life. Participants were drawn from a number of jurisdictions and settings so the themes they identified appear to reflect widely held views among Aboriginal and Torres Strait Islander peoples. There is of course scope to further validate this set of functionings through research—to expand the level of confidence able to be claimed in this list of functionings.

Independently of the workshop a review of relevant research has supported the association between the functionings identified by the workshop and the achievement of health and wellbeing.

FINDINGS: The 2002 NATSISS contains a number of questions of relevance to community functioning. In terms of the theme 'power to control choices and options', the survey found that 82% of Aboriginal and Torres Strait Islander Australians reported no stressors related to discrimination or racism, 46% of Indigenous Australians were able to visit their homelands, 26% reported involvement with an Aboriginal and Torres Strait Islander organisation and 90% had support in a time of crisis.

In terms of 'connectedness to family land and history', 70% of Aboriginal and Torres Strait Islander Australians reported recognition of their homeland, 87% reported they were not removed from their natural family and 44% reported that their relatives were not removed from their natural family. In terms of 'health', 44% of Indigenous Australians reported excellent or very good health, 84% had not drunk alcohol at risky/high risk levels in the last 12 months and 71% had not used substances in the last 12 months. For the theme of 'culture', 68% of Aboriginal and Torres Strait Islander Australians had participated in at least one cultural event in the last 12 months and 21% reported they spoke an Aboriginal or Torres Strait Islander language. For the theme of 'identity' the survey found that 54% of Indigenous Australians reported identifying with a tribal group or clan.

In the 'continuing employment' theme, 12% of Indigenous Australians were employed in CDEP and a further 34% were employed (not in CDEP). In terms of 'education', 18% had completed Year 12 and 32% of Indigenous persons aged 25–64 years had a non-school qualification. 'Having a role' included 28% undertaking volunteer work and 41% expecting to have the same employment in 12 months. In the 'infrastructure of community' theme, 60% of Indigenous Australians were living in a dwelling that had no major structural problems, 74% of Indigenous Australians did not experience overcrowded housing and 55% reported having access to a motor vehicle. The survey found that in terms of 'coping within the internal world and external world', 25% of Indigenous Australians reported no community problems, 18% did not experience stressors and 76% were not a victim of physical or threatened violence.

In terms of 'structure and routine', 69% of Indigenous Australians reported living in only one dwelling in the last 12 months and 46% did not have a cash flow problem. In terms of 'income', 25% of Aboriginal and Torres Strait Islander Australians were in the third quintile or above of equivalised household income and 41% could raise $2,000 within a week.

In 2002, based on the weightings agreed to by the community functioning workshop, 12% of Indigenous Australians had community functioning scores below 33, 82% had scores between 33 and 67 and 6% had scores above 67 out of 100. The average score for Indigenous Australians was 50. Average scores varied across age groups, with people aged 35–54 years having slightly higher scores and people aged 55 years and over have slightly lower scores. Indigenous Australians living in remote regions had higher scores on average (54) compared with those living in non-remote regions (49). Connectedness to family land and history, culture and identity factors were the main contributors to higher scores for people living in remote regions.

The *2006 Community Housing and Infrastructure Needs Survey* (CHINS) found that many discrete Indigenous communities lack access to basic infrastructure such as access to health services, schools, public transport, sporting facilities etc. Infrastructure has been identified as an element affecting community functioning. Among the reported usual population of discrete Indigenous communities, 24% lived in communities where the drinking water had failed testing in the last 12 months, 17% had experienced sewerage overflows longer than 48 hours, 29% had at least one electricity interruption greater than 24 hours in last 12 months, 29% were in communities located 100km or more from the nearest Aboriginal primary health care service, 56% were located 100km or more from a hospital, 25% had no access to medical emergency air services, 5% were located 50km or more from a primary school, 49% were located 50km or more from a secondary school up to Year 12, 16% had no access to a public phone, 42% had no access to the internet, 33% had public transport, 17% lived in communities where the road was cut 5 or more times in the last 12 months, 24% did not have an airstrip open all year round, 20% had no community accommodation facilities and 12% had no sporting facilities.

IMPLICATIONS: Community functioning for Aboriginal and Torres Strait Islander peoples should be assessed within a framework that reflects the values of Indigenous Australians themselves. The community functioning scores presented here are the result of a recent attempt to better reflect those values. Data on those aspects of the community functioning measure for which there are comparable indicators for non-Indigenous Australians, show significant disadvantage faced by Indigenous Australians. However, such comparisons tend to emphasise the issues judged to be important for non-Indigenous Australians. Policy makers need to listen carefully to the voices of Aboriginal and Torres Strait Islander peoples themselves when assessing community functioning and the approaches that will enhance functioning.

It is important that not all Indigenous communities are stereotyped as dysfunctional, as there are good examples of examples of highly functioning Indigenous communities, with good health outcomes (Rowley et al. 2008).

Table 19 – Selected variables contributing to community functioning, Indigenous persons aged 15 years and over, Australia 2002

Themes and community infrastructure	Number	%
Power to control choices and options		
No stressors reported for discrimination/racism	232,201	82.0
Can visit homelands	130,287	46.2
Has support in a time of crisis	255,065	90.4
Involvement with Aboriginal/Torres Strait Islander organisation	73,605	26.1
Connectedness to family land and history		
Recognition of homelands	196,326	69.6
Respondent not removed from natural family	245,997	87.2
Relatives not removed from natural family	125,243	44.4
Health, chronic disease and substance use		
Self assessed health status excellent or very good	124,360	44.1
Has not drunk alcohol in last 12 months at risky/high risk levels	237,320	84.1
Has not used substances illicitly in last 12 months	199,639	71.0
Culture		
Main language spoken at home is Aboriginal language/ Torres Strait Islander Language	34,003	12.0
Speaks an Aboriginal/Torres Strait Islander language	59,470	21.1
Attended a cultural event in last 12 months	192,126	68.1
Identity		
Identification with tribal group or language group/clan	152,806	54.1
Continuing employment		
Employed in CDEP	34,230	12.1
Employed not in CDEP	96,165	34.1
Education		
Year 12 highest year of school completed(a)	47,006	17.9
Has a non school qualification(b)	59,869	32.1
Having a role		
Has done volunteer work for an organisation in the last 12 months	77,939	27.6
Expected to have the same employment in 12 months	114,625	40.6
Infrastructure of community		
Living in a dwelling that has no major structural problems	170,547	60.0
Living in a dwelling that is not overcrowded (Canadian Occupancy standard)	209,651	74.0
Access to motor vehicles	154,160	55.0
Coping within the internal world and external world/ role models		
No community problems reported	19,243	25.3
Community problems reported, but less than three types	81,172	28.8
No stressors reported in last 12 months	50,004	17.7
Not a victim of physical or threatened violence in the last 12 months	213,514	75.7
Structure and routine		
In the last 12 months has lived in only one dwelling	195,105	69.0
Did not have a cash flow problem	129,627	45.9
Income		
Could raise $2000 within a week	114,578	41.0
Equivalised gross household income is within the 3rd quintile or above	69,310	25.0
Total persons aged 15 years and over	**282,205**	**100.0**

Persons 15 years and over not at school

Persons aged 25–64 years

Source: AIHW and ABS analysis of 2002 NATSISS.

Table 20 – Number and proportion[(a)] of discrete Indigenous communities by selected characteristics contributing to community functioning, 2006

	Dwellings/Communities		Reported usual population	
	No.	%	No.	%
Housing	*Dwellings:*			
Condition of permanent dwellings managed by Indigenous Housing Organisations				
needing major repairs	5,111	23.4	n.a.	n.a.
needing replacement	1,563	7.2	n.a.	n.a.
	Communities:			
Access to clean water				
No organised water supply	39	3.6	761	0.8
Drinking water failed testing in last 12 months[(b)]	48	29.3	12,059	24.1
Access to sewerage				
No organised sewerage system	176	16.2	2,701	2.9
Experienced overflows or leakage[(c)]	142	39.3	30,140	36.5
Over a 12 month period 10 or more overflows[(c)]	31	8.6	5,341	6.5
Overflows or leakages longer than 48 hours [(c)]	81	22.4	14,376	17.4
Access to electricity				
No organised electricity supply	32	3.0	284	0.3
20 or more interruptions in the last 12 months[(c)]	41	11.2	13,342	16.1
At least one interruption greater than 24 hours in last 12 months[(c)]	96	26.2	23,952	29.0
Access to rubbish disposal				
Community does not have organised rubbish disposal[(c)]	29	7.9	2,550	3.1
Health and medical services				
Aboriginal primary health care centre located 100km or more away	417	39.6	25,486	28.9
Hospital located 100km or more away	755	70.0	51,992	56.4
Other community health centre located 100km or more away	372	35.4	23,308	28.0
Access to medical emergency air services	316	32.3	52,936	75.2
Educational services				
Primary school located 50km or more away	306	28.2	4,372	4.7
Secondary school up to year 10 located 50km or more	581	55.9	24,535	34.5
Secondary school up to year 12 located 50km or more	744	69.0	45,118	48.9
Communication services				
Community has no access to a public telephone	454	41.9	14,847	16.0
Community has no access to internet	230	62.8	34,882	42.2
Transport				
Road access cut 5 or more times a year	42	13.9	12,074	16.8
Inaccessible by road	35	11.5	16,572	23.1
Airstrip not open all year round	38	25.9	11,953	24.1
Public transport services available to/from community	54	17.8	23,407	32.6
Community transport services available to/from community	72	23.8	18,011	25.1
Community services [(c)]				
No accommodation facilities	178	48.6	16,882	20.4
No sporting facilities	141	38.5	10,050	12.1
Total no. of communities	**1,187**	**100.0**	**92,960**	**100.0**

All proportions were calculated excluding not stated from denominator.

Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency, excluding communities where water not sent away for testing and communities connected to town supply.

Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

Source: AIHW analysis of ABS Community Housing and Infrastructure Needs Survey 2006.

1.15 Perceived health status

WHY IS IT IMPORTANT? Self-assessed health status provides a measure of the overall level of a population's health based on individuals' personal perceptions of their own health. Health is recognised as having physical, mental, social and spiritual components. Therefore, the measurement of health must go beyond only objective measures such as morbidity and mortality. Part of this broader approach to measuring health is to ask people to assess the state of their own health.

Self-assessed health status is dependent on an individual's awareness and expectations regarding their health. Self-assessed health status is influenced by various factors including access to health services and health information and the extent to which health conditions have been diagnosed. Social constructs of health also influence this assessment, such as the broader framework of health and wellbeing held by Aboriginal and Torres Strait Islander peoples, existing level of health within the community and judgements concerning the person's own health compared with others in the community.

Self-assessed health status correlates with objective health measures, such as number of reported long-term conditions, recent health-related actions and the presence of a disability. However, there are some inconsistencies in how Aboriginal and Torres Strait Islander people report their health status, particularly for those who speak a main language other than English, compared with other objective measures. Aboriginal and Torres Strait Islander peoples have consistently rated their health as good or excellent despite significant health problems. Self-assessed health status is a useful measure of overall health status, but needs to be interpreted with some caution until further research into the use of such data clarifies these inconsistencies.

FINDINGS: In the 2004–05 NATSIHS, 43% of Aboriginal and Torres Strait Islander people aged 15 years and over reported their health as being very good or excellent, 35% reported their health as being good, and 22% reported their health as being poor or fair. There was a significant decline in those reporting their health as fair or poor from 2001 (down from 26% to 22%). Older people were less likely than younger people to report very good or excellent health: 59% in the 15–24 years age group compared with 19% in the 55-plus years age group. Aboriginal and Torres Strait Islander people were less likely than non-Indigenous Australians to report very good or excellent health and the difference between the two populations was greatest in the older age groups.

After adjusting for differences in age structure, Aboriginal and Torres Strait Islander people were almost twice as likely as non-Indigenous Australians to report their health as fair or poor. Indigenous females were more likely to report their health as fair or poor than Indigenous males (24% compared with 19%).

The proportion of Aboriginal and Torres Strait Islander people reporting fair or poor health was similar in all jurisdictions (22–23%) except in the Australian Capital Territory and the Northern Territory (17% and 16% respectively).

A lower proportion of Aboriginal and Torres Strait Islander people in very remote areas reported poor or fair health (16%) than in other areas (21–25%), but the proportion reporting very good or excellent health in very remote areas (43%) was similar to that in other areas (38–45%).

Aboriginal and Torres Strait Islander people reporting the presence of long-term health conditions are more likely to report their health as fair or poor. The proportion of Indigenous Australians reporting fair or poor health increases with the number of health conditions reported. A similar pattern can be observed for non-Indigenous Australians.

Poorer perceived health status is associated with a range of determinants of health. (See discussion in chapter 2). For example, 35% of Indigenous Australians in the lowest household income quartile reported fair or poor health status, compared with 17% of people in the two highest household income quartiles. A lower proportion of non-Indigenous Australians reported fair/poor health in each of these income quintiles (29% and 8% respectively) compared with Indigenous Australians. Twenty-four percent of Indigenous people who had completed year 12 at secondary school reported fair or poor health status, compared with 34% of Indigenous people who had completed year 9 or below. Eighteen percent of Aboriginal and Torres Strait Islander who were employed reported fair or poor health status, compared with 38% of people not in the labour force.

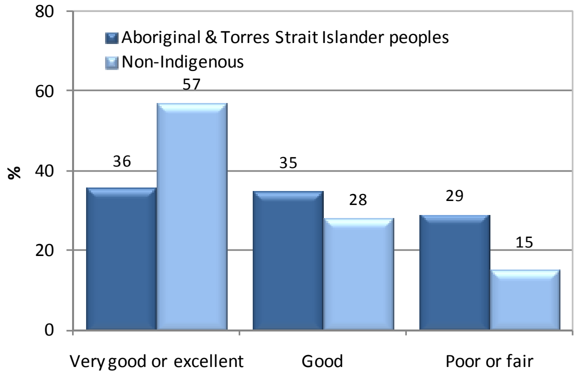
IMPLICATIONS: Aboriginal and Torres Strait Islander people rate their own general health as lower than that of other Australians across all adult age groups, although the disparity is least in younger age groups. The differences between the two populations are large, which is consistent with other measures of overall health status.

While there was variation in how Aboriginal and Torres Strait Islander people rated their own overall health status between jurisdictions and between urban/rural/remote areas, there was no obvious pattern of Aboriginal and Torres Strait Islander peoples in particular parts of the country, such as remote areas, rating their overall health status as better or worse than those in other areas.

Self-assessed health is one of very few measures of overall health status that are currently available for Aboriginal and Torres Strait Islander peoples throughout the country. The relative consistency of self-assessed health across all jurisdictions and across urban, rural and remote areas suggests that there may not be large variations in overall health status for Indigenous Australians across the country. This would be consistent with some other measures for which national data are available, such as low birthweight (see measure 1.01) for which there is also minimal variation between jurisdictions. However, other measures such as the prevalence of end stage kidney failure indicate that there are very large differences in disease incidence between jurisdictions (much higher in the north-west than the south-east) (see measure 1.09). Mortality statistics would provide a very useful measure of overall health status, but reliable data are not available for the south-eastern states.

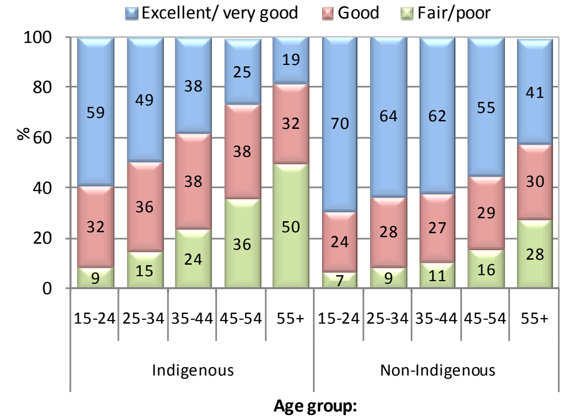
How an individual Aboriginal or Torres Strait Islander person assesses their own health status may also be to some extent influenced by how they perceive their health relative to other people, including other Aboriginal and Torres Strait Islander people, around them. This is a similar challenge to develop valid measures for comparing international variations in perceptions of health and health-related experiences, an issue that has received some attention in recent years (Murray et al. 2003; Salomon et al. 2003). Further research would be valuable to identify the specific issues impacting on perceived health for Aboriginal and Torres Strait Islander peoples and better ways for achieving relevant but more comparable measures.

Figure 36 – Self-assessed health status (age-standardised percentage) by Indigenous status, persons aged 15 years and over, Australia 2004–05



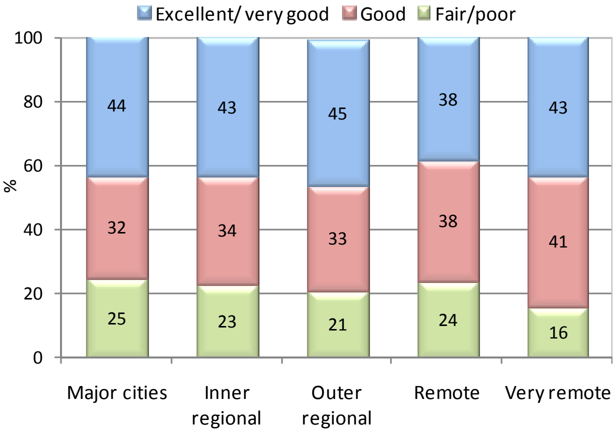
Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 37 – Self-assessed health status by Indigenous status and age group, persons aged 15 years and over, Australia 2004–05



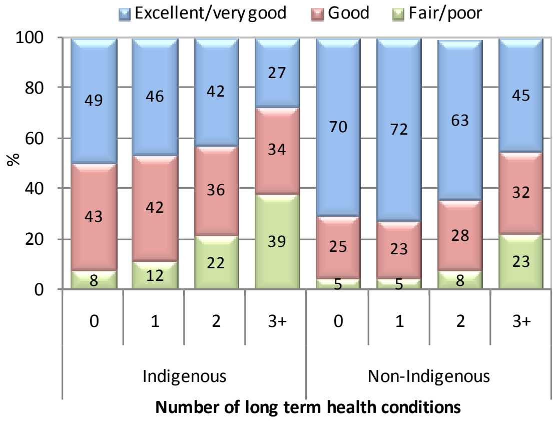
Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 38 – Self-assessed health status, Indigenous Australians aged 15 years and over, by remoteness, Australia 2004–05



Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 39 – Self-assessed health status by Indigenous status and number of long-term health conditions, age-standardised, Australia 2004–05



Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

1.16 Social and emotional wellbeing

WHY IS IT IMPORTANT? Social and emotional wellbeing is a holistic concept related to individual, family and community experience. For Aboriginal and Torres Strait Islander peoples health is 'not just the physical wellbeing of the individual but the social, emotional and cultural wellbeing of the whole community' (Social Health Reference Group 2004). The impact of colonisation includes 'the affect of past policies and practices. This includes: loss of land, which was the economic and spiritual base for Aboriginal and Torres Strait Islander communities; loss of large numbers of people through wars, massacres, and epidemics; immense damage to traditional social and political structures, traditional languages, and belief systems; the ongoing impact of the relocation of peoples to missions and reserves; removal of children from their families; continued racism and exclusion; and immense socio-economic deprivation' (NPHP 2006). Social, historical and economic disadvantage is interconnected with grief, loss and trauma, high rates of physical and mental health problems, high adult mortality, high suicide rates, child removals, incarceration rates and intergenerational trauma. Experience of discrimination and racism also leads to psychological distress and has a negative impact on health (Paradies & Cunningham 2008).

Aboriginal and Torres Strait Islander peoples have higher levels of acute morbidity and mortality from mental illness, assault, self-harm and suicide than other Australians, higher levels of alcohol and other drug use, and more frequent contact with the criminal justice system. Levels of child abuse and neglect are higher for Indigenous than for non-Indigenous Australian children. Education, employment and income are lower for Indigenous Australians. These and many other measures indicate there is a significant gap between the overall level of social and emotional wellbeing for Aboriginal and Torres Strait Islander peoples and other Australians.

FINDINGS: The 2002 NATSISS and the 2004–05 NATSIHS collected information on a range of social issues relevant to social and emotional wellbeing.

Aboriginal and Torres Strait Islander peoples retain strong links to their traditional culture. In 2002, 54% of Aboriginal and Torres Strait Islander adults reported they identified with a clan or tribal group, 22% currently lived in traditional lands, and 68% had attended cultural events in the last 12 months. Family and community attachments are important factors in the lives of Aboriginal and Torres Strait Islander peoples. Ninety per cent reported that, in a time of crisis, they could get support from outside the household. Approximately 90% reported that they had been involved in social activities in the last 3 months (such as religious activities, sporting activities, going out to a café, restaurant or bar, etc.) and 28% had undertaken voluntary work in the last 12 months.

In 2004–05, approximately 44% of Indigenous people aged 18 years and over reported that they or a relative had been removed from their natural family.

Psychological Distress

After adjusting for age, an estimated 27% of Aboriginal and Torres Strait Islander adults reported high levels of psychological distress in 2004–05, compared with 13% of non-Indigenous adults. Rates are higher for Aboriginal and Torres Strait Islander adults across all age groups. Indigenous females were significantly more likely than Indigenous males to report high levels of psychological distress. Psychological distress did not differ significantly by age group or remoteness.

Among Indigenous Australians who indicated some level of psychological distress, 21% were unable to work or carry out their normal activities, because of their distress, for at least one day during the previous 4 weeks, while 12% had seen a doctor or other health professional at least once for this reason over the same time period.

Physical health problems were the main cause of those feelings all or most of the time for 15% of those who indicated some level of psychological distress. Physical health problems were more common as a cause of psychological distress with increasing age. Forty-six per cent of Indigenous adults who reported their health was fair or poor also reported high/very high levels of psychological distress, compared with 18% of people reporting their health was excellent or good.

Psychological distress was associated with lower income (32% in the lowest income quintile reported distress compared with 13% in the highest), housing tenure (31% for renters compared with 18% for home owners), educational attainment (33% for year 9 or below education compared with 20% for year 12 education) and employment status (21% for employed people, 37% for unemployed compared with 35% for those not in the labour force.)

Life Stressors

In 2004–05, Aboriginal and Torres Strait Islander peoples reported high levels of stressors in their lives, with 77% of people aged 18 years and over reporting that they had experienced at least one stressor in the last 12 months. The most common stressors reported were the death of a family member or close friend (42%), serious illness or disability (28%) alcohol-related problems (20%), a family member was sent to, or currently in, jail (19%).

Aboriginal and Torres Strait Islander people living in inner regional areas reported on average 2.2 stressors in the previous 12 months, whereas those living in remote or very remote areas reported an average of 3. Indigenous adults who lived in remote or very remote areas were more likely than other Indigenous adults to say that they, their family or friends had witnessed violence; experienced overcrowding at home; had a member of family sent to jail/currently in jail; and had a gambling problem.

Social and emotional wellbeing of children

The *Western Australia Aboriginal Child Health Survey* (WAACHS) collected information on the social and emotional wellbeing of Aboriginal children during 2001 and 2002 (only a small number of Torres Strait Islander children participated in the survey). This survey found that a variety of health conditions, social circumstances and behaviours experienced by individuals, their carers and families can have an impact on the social and emotional wellbeing of Indigenous children (Zubrick et al. 2005). Using a well established method to measure emotional and behavioural difficulties in children (the Strengths and Difficulties Questionnaire), 24% of Aboriginal children aged 4 to 17 years surveyed were assessed as being at high risk of clinically significant emotional or behavioural difficulties compared with 15% of all children. Male Aboriginal children were twice as likely as female Aboriginal children to be at high risk of clinically significant emotional or behavioural difficulties. Those children living in areas of extreme isolation were less at risk than those living in urban areas.

Factors associated with high risk of clinically significant emotional or behavioural difficulties in Aboriginal children included the number of stress events experienced by the family in the 12 months before the survey (such as illness, hospitalisation, death of a close family member, family break-up, arrests, job loss, financial difficulties), quality of parenting, family functioning and family care arrangements. Residential mobility, the physical health of the child (speech, hearing and vision problems), the physical health of the carer, and carer's use of mental health services were also associated with an increased risk of clinically significant emotional or behavioural difficulties in children.

Approximately one fifth of children were living in families that functioned poorly (families with poor communication and decision making, poor emotional support, limited time spent together, and poor family cooperation). These children were over twice as likely to be at high risk of emotional and behavioural difficulties as children living in families with very good quality of parenting or very good family functioning. Those who had been subject to racism in the past 6 months were more than twice as likely to be at high risk of emotional and behavioural difficulties than those who had not experienced racism.

Suicidal behaviour of teenagers

An additional survey was administered to young people aged 12–17 years in Western Australia to measure rates of suicidal thoughts and suicide attempts. Suicidal thoughts were reported by around 1 in 6 (16%) of these young people in the 12 months prior to the survey. A higher proportion of Aboriginal females reported they had seriously thought about ending their own life than Aboriginal males (20% compared with 12%). Of those who had suicidal thoughts in the 12 months prior to the survey, 39% reported they had attempted suicide in the same period. The proportion of Aboriginal children who reported suicidal thoughts was significantly higher among those who smoked regularly, used cannabis, drank to excess in the 6 months prior to survey, were exposed to some form of family violence, and who had a friend who had attempted suicide.

Hospitalisation for mental health issues

In the period July 2004 to June 2006, mental health-related conditions were the principal reason for 4.4% of hospital admissions for Aboriginal and Torres Strait Islander people. Indigenous males were hospitalised for mental health-related conditions at rates that were 2.4 times the rate of other Australian men, and Indigenous females at rates that were 1.6 times the rate for other Australian women.

There was a significant increase in the gap (in both relative and absolute terms) between hospitalisation rates for Indigenous and other Australian people for these conditions during the period 1998–99 to 2005–06.

The most common reasons for these hospitalisations were mental and behavioural disorders due to psychoactive substance use (36% of episodes); schizophrenia (25%); mood disorders (15%); and neurotic, stress-related disorders (13%). There was considerable variation between jurisdictions in the mental health-related hospitalisation rate for Aboriginal and Torres Strait Islander peoples The highest rates were for South Australia (43 per 1,000). In the Northern Territory, hospitalisation rates were very low for both Aboriginal and Torres Strait Islander peoples and other Australians (12 and 6 respectively).

Other Services

During the period 2002–03 to 2006–07, 10% of encounters with general practitioners for Indigenous people involved mental health-related problems, similar to the rate for other patients. Depression was the most frequently reported mental health-related problem managed by general practitioners for Aboriginal and Torres Strait Islander people, followed by drug misuse (licit or illicit), anxiety and sleep disturbance.

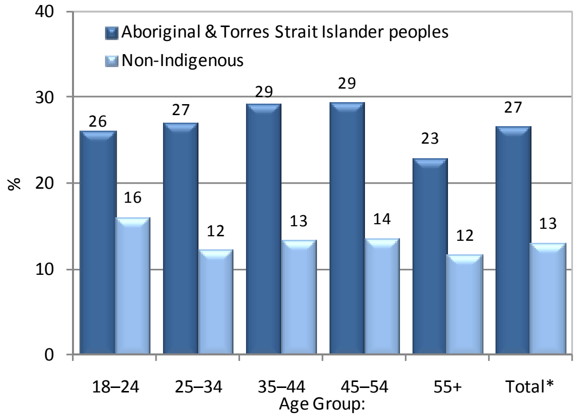
Mortality for mental health issues

Mental health-related conditions were responsible for 2.5% of the all deaths of Aboriginal and Torres Strait Islander people between 2002 and 2006 in Queensland, Western Australia, South Australia and the Northern Territory. After adjusting for age-differences, Indigenous Australians in these jurisdictions died from these conditions at nearly twice the rate for non-Indigenous Australians. The highest rate ratios were in the 25–54 age groups (10–15 times as high). Deaths due to substance use alone accounted for 53% of mental health-related deaths in this period. Deaths due to self-harm (suicide) accounted for 4.7% of Indigenous deaths between 2002 and 2006. After adjusting for age-differences, this was twice the rate for non-Indigenous Australians.

IMPLICATIONS: The NSFATSIH identifies social and emotional wellbeing as a key action area in the framework and targets mental health, suicide, alcohol, substance use and family violence issues. The *National Mental Health Plan 2003–2008* and the *National Strategic Framework for Aboriginal and Torres Strait Islander Peoples' Mental Health and Social and Emotional Wellbeing 2004–2009* articulate specific action areas to improve the quality, responsiveness and continuity of care in this area for Aboriginal and Torres Strait Islander Australians. Data on this issue are incomplete, including for children, and it would be very useful to collect additional relevant data nationally. The policy response to social and emotional wellbeing problems needs to be multi-dimensional, and focus not only on mental health services. It needs to involve a wide range of stakeholders including Aboriginal and Torres Strait Islander communities, the health sector, housing, education, employment and economic development, family services, crime prevention and justice. It needs to support culturally valid understandings of health, build on the strengths, resilience and endurance within Aboriginal and Torres Strait Islander communities and recognise the important historical and cultural diversity within communities (Social Health Reference Group 2004).

Mental health reforms in Australia were agreed by COAG in 2006. Improving the capacity of workers in Aboriginal and Torres Strait Islander communities to identify mental illness and make referrals for treatment where appropriate is a key priority of these reforms.

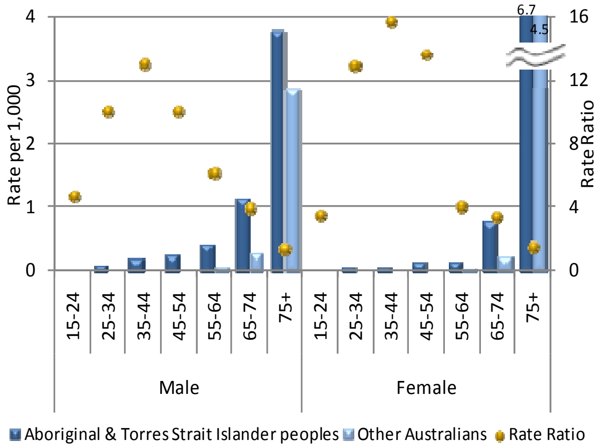
Figure 40 – Proportion of people who reported high or very high levels of psychological distress, by Indigenous status and age, persons aged 18 years and over, 2004–05



* Age-standardised

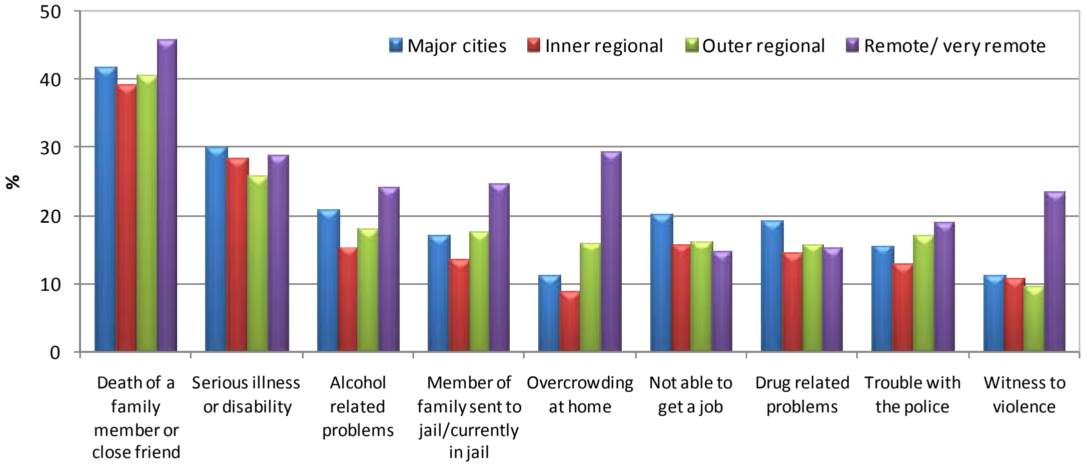
Source: AIHW analysis of the 2004–05 NATSIHS and 2004 NHS.

Figure 41 – Mental health-related mortality rates and rate ratios, by Indigenous status, by age group and sex, Qld, WA, SA and NT, 2004–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 42 – Proportion of people reporting a stressor, by remoteness, by type of stressor, Indigenous persons aged 18, 2004–05



Source: AIHW analysis of the 2004–05 NATSIHS

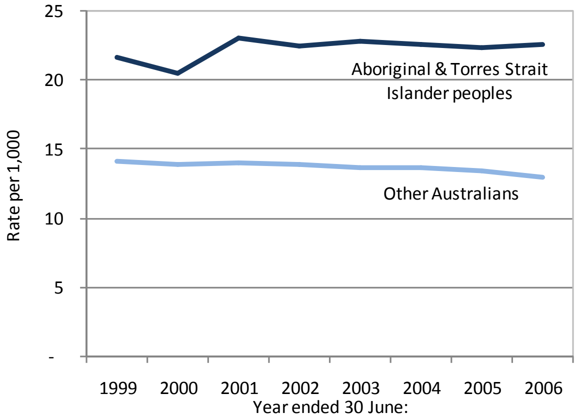
Table 21 – Proportion of people who reported psychological distress, by level of psychological distress, by selected population characteristics, Indigenous persons aged 18 years and over, 2004–05 (per cent)

	Level of psychological distress: Low/ moderate	Level of psychological distress: High/ very high
	%	%
Total population:	72.4	27.6
Self-assessed health status		
Excellent/very good	82.2	17.8
Good	73.6	26.4
Fair/poor	54.1	45.9
Highest year of school completed:		
Year 9 or below	66.9	33.1
Year 10	71.8	28.2
Year 12	80.1	19.9

	Level of psychological distress: Low/ moderate	Level of psychological distress: High/ very high
	%	%
Household income:		
1st quintile (lowest)	67.7	32.3
5th quintile (highest)	86.9	13.1
Housing:		
Owner	82.4	17.6
Renter	69.1	30.9
Employment status:		
Employed	79.3	20.7
Unemployed	62.6	37.4
Not in labour force	65.1	34.9

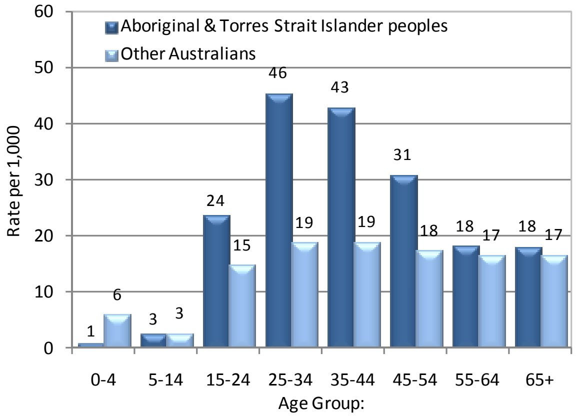
Source: AIHW analysis of 2004–05 NATSIHS

Figure 43 – Hospitalisation rates from mental health-related conditions by Indigenous status, Qld, WA, SA and NT, age-standardised, 1998–99 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 44 – Age-specific hospitalisation rates for a principal diagnosis of mental health-related conditions, by Indigenous status, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Table 22 – Age-standardised hospitalisations of Indigenous persons for principal diagnosis of mental health-related conditions, by type of condition and sex, NSW, Vic., Qld, WA, SA and NT, July 2004–June 2006

	Males		Females		Total	
	Rate per 1,000	Ratio	Rate per 1,000	Ratio	Rate per 1,000	Ratio
Mental & behavioural disorders due to psychoactive substance use	12.8	4.6*	6.2	3.3*	9.3	4.0*
Schizophrenia, schizotypal and delusional disorders	6.7	2.5*	4.8	2.3*	5.7	2.4*
Mood disorders	3.0	0.8*	5.3	0.8*	4.2	0.8*
Neurotic, stress-related disorders	3.0	1.5*	3.8	1.4*	3.4	1.5*
Total mental health related conditions [1]	**28.0**	**2.1***	**23.2**	**1.4***	**25.5**	**1.7***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

[1] Includes mental health related conditions in addition to those listed above. See Technical appendix.

Source: AIHW analysis of National Hospital Morbidity Database

1.17 Life expectancy at birth

WHY IS IT IMPORTANT? Life expectancy at birth is an estimate of how long a baby born today would live, on average, if current mortality rates in every age group remained constant throughout the baby's life. It is a way to summarise current mortality rates in an easily understood measure to which most people can directly relate.

Life expectancy is widely viewed as a key measure of the health of populations. Closing the life expectancy gap between Aboriginal and Torres Strait Islander peoples and other Australians has been adopted as a high level target by COAG. COAG aims to close the life expectancy gap within a generation (COAG 2008).

Life expectancy is affected by many factors such as: socio-economic status, including employment, income, education and economic wellbeing; the quality of the health system and the ability of people to access it; health behaviours such as tobacco and excessive alcohol consumption, poor nutrition and lack of exercise; social factors; genetic factors; and environmental factors including overcrowded housing, lack of clean drinking water and adequate sanitation.

In 2003, the Indigenous Australian population made up 2.4% of the total Australian population but, despite its much younger structure, carried 3.6% of the total population disease burden. The rate of burden increased at much younger ages for Indigenous Australians and was also considerably higher at each age group compared with the total Australian population (Vos et al. 2007).

FINDINGS: The life expectancy estimates should be treated with caution due to problems in the quality of the underlying mortality and population data for Aboriginal and Torres Strait Islander peoples. These estimates are based on a new 'direct' method and are not comparable with previous life expectancy estimates.

In 2005–2007, Aboriginal and Torres Strait Islander life expectancy was estimated to be 11.5 years lower for Indigenous males (67.2 compared with 78.7 years) and 9.7 years lower for Indigenous females (72.9 compared with 82.6 years). The estimates of the gap vary considerably across states and territories with the Northern Territory (14 years for males; 12 years for females) being the highest, and New South Wales (9 years for males; 8 years for females) the lowest (ABS 2009).

No national data are available on life expectancy trends for Aboriginal and Torres Strait Islander peoples. However, a recent study of mortality trends in the Northern Territory found that the life expectancy at birth of Indigenous Australians has risen considerably, increasing from 52 years for males and 54 years for females in the late 1960s to around 60 years for males and 68 years for females in recent years (Wilson et al. 2007). The gap between life expectancy for Northern Territory Indigenous women and total Australian women narrowed between 1967 and 2004, while the gap between Northern Territory Indigenous men and total Australian men remained the same. Declines in infant mortality accounted for a large proportion of the increase in life expectancy for the Northern Territory Indigenous population between the late 1960s and mid 1980s, especially for males. From the mid 1980s to the early 2000s, declines in mortality at ages 45 years and over were responsible for the majority of life expectancy gains for both Indigenous males and females in the Northern Territory.

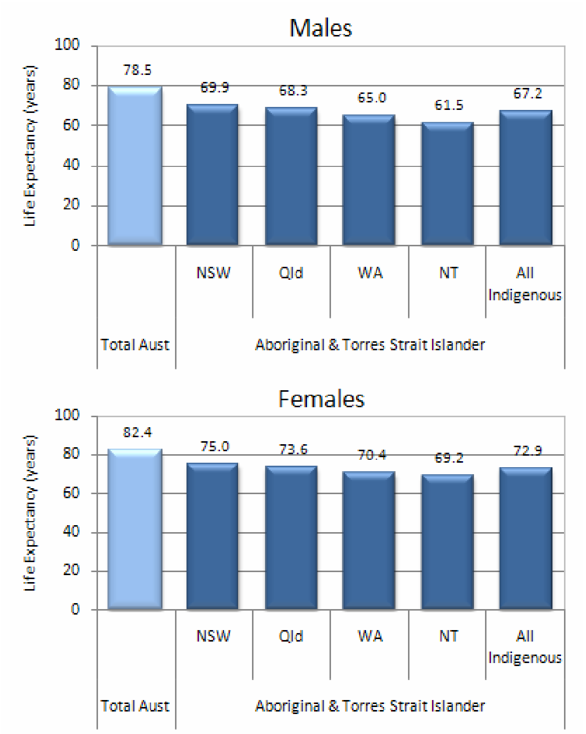
The gap in life expectancy between Indigenous Australians and the rest of the population in Australia appears to be larger than in other countries where Indigenous peoples share a similar history of relatively recent European colonisation, such as Canada, New Zealand and the United States. Caution must be used in comparing data with other countries due to variations in data quality and scope.

IMPLICATIONS: The limited trend data available for the Northern Territory indicates that life expectancy is increasing for Aboriginal and Torres Strait Islander peoples, but slowly. Available data from other jurisdictions are insufficient to determine whether life expectancy for Indigenous Australians is improving elsewhere. The question is whether the improvements for Indigenous Australians are keeping pace with the improving health of most other Australians.

There remain significant deficiencies in the data on which life expectancy is based. This limits the extent to which differences in life expectancy can be calculated for Aboriginal and Torres Strait Islander peoples living in different jurisdictions and different remoteness areas. More accurate identification of Aboriginal and Torres Strait Islander status in deaths data and robust population estimates are urgently needed before such basic measures of overall population health status, which have important policy implications, can be reliably calculated.

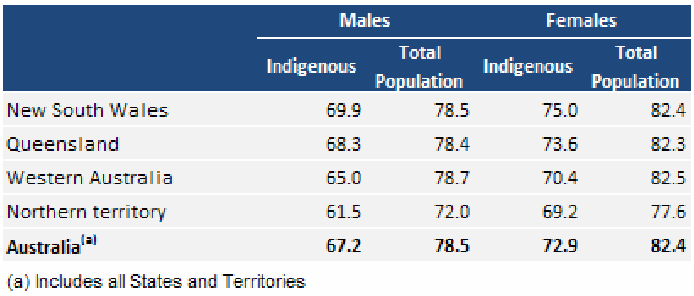
Non-communicable diseases are the main contributors to the gap in life expectancy between Aboriginal and Torres Strait Islander peoples and other Australians. The prevention and management of chronic diseases is even more important for Aboriginal and Torres Strait Islander peoples than for other Australians.

Figure 45 – Life expectancy at birth by Indigenous status, NSW, Qld, WA, NT and total Australia 2005-2007



Source: ABS 2009

Table 23 – Life expectancy at birth by Indigenous status, NSW, Qld, WA, NT and total Australia 2005-2007



	Males		Females	
	Indigenous	Total Population	Indigenous	Total Population
New South Wales	69.9	78.5	75.0	82.4
Queensland	68.3	78.4	73.6	82.3
Western Australia	65.0	78.7	70.4	82.5
Northern territory	61.5	72.0	69.2	77.6
Australia[a]	**67.2**	**78.5**	**72.9**	**82.4**

(a) Includes all States and Territories

Notes: Due to the small numbers of Indigenous deaths in Victoria, South Australia, Tasmania and the Australian Capital Territory, the ABS did not construct life tables for these jurisdictions.
Source: ABS 2009

1.18 Median age at death

WHY IS IT IMPORTANT? The median age at death represents that age at which exactly half the deaths registered (or occurring) in a given time period were deaths of people above that age group and half were deaths below that age. Median age at death is a general measure of the health status of a population. It is affected by the same factors determining life expectancy and general mortality rates. These include socio-economic status (such as employment, income, education and economic wellbeing), risk factor behaviour (such as tobacco use, excessive alcohol consumption, poor nutrition, lack of exercise), environmental factors (such as overcrowding in housing, lack of clean drinking water and adequate sanitation), genetic factors, the quality of the health system and the ability of people to access it.

A possible advantage of median age measures is that it may be less impacted by under-identification of Indigenous people in mortality statistics if the deaths that are identified have similar age characteristics to those that are not. For other measures, such as death rates, the under-identification makes it difficult to calculate accurate population rates. Therefore median age at death has been suggested as an additional measure to complement mortality rates and life expectancy measures. However, there are several significant limitations of median age at death (Coory & Baade 2003). Median age at death is affected by the age structure of the population. In a population with a high fertility rate, and a high proportion of younger people, a higher proportion of deaths will occur at a young age than in a population with low fertility and a low proportion of young people. Comparisons of Indigenous and non-Indigenous median age at death is severely impacted by the very different age distributions of these two populations.

Median age at death is also a very insensitive measure of changes in mortality levels over time. For example, modeling has shown that for Indigenous Australians, a 2-year increase in the median age at death over 5 years would require a 30% decrease in the mortality rates, but the same increase in the median age at death for non-Indigenous Australians would mean only a 15% decrease in mortality (Coory & Baade 2003).

FINDINGS: Reliable deaths data for Aboriginal and Torres Strait Islander peoples are only available for Queensland, Western Australia, South Australia and the Northern Territory. During the period 2002–2006 median age at death for these jurisdictions was 49 years for Indigenous males and 76 years for non-Indigenous males, a gap of 27 years. The median age at death was 56 years for Indigenous females and 82 years for non-Indigenous females, a gap of 26 years. As noted above, these measures are significantly impacted by the differences in age structure of the Aboriginal and Torres Strait Islander population and the non-Indigenous population.

Median age at death varies between the 4 jurisdictions. In the period 2002–2006, the median age at death for Indigenous males was 45 in the Northern Territory, 47 in South Australia, 50 in Western Australia and 52 in Queensland. For Indigenous females the median age at death was 52 in the Northern Territory and South Australia, 57 in Western Australia and 59 in Queensland.

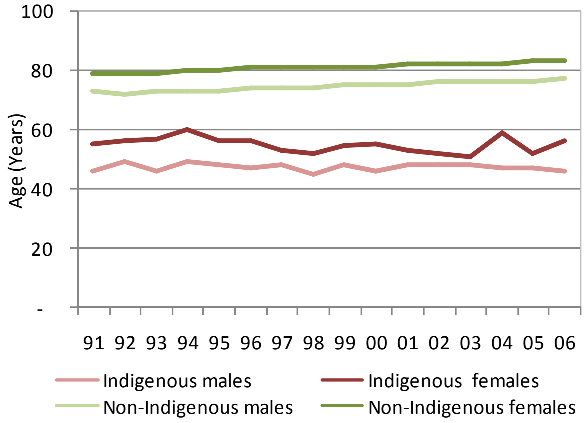
For the 3 western jurisdictions (Western Australia, South Australia and Northern Territory) combined, between 1991 and 2006 median age at death for males has fluctuated year to year, with an overall decline of 1.1% over the 15 year period. Median age at death for females has also fluctuated year to year with an overall decline of 5.2% over the period. These decreases are difficult to interpret due to changes in the population structure over this period. The median age at death statistics contrast with the estimates for all-cause mortality, which are adjusted for age structure, and show that for the same jurisdictions mortality rates decreased for males at by 9% and decreased for females by 15% (see measure 1.22).

The first quartile of age at death is the age below which 25% of deaths occur. Trends in the first quartile of age at death are an indication of change in the deaths of young people, children and young adults. The first quartile of age at death increased between 1991 and 2006 for Aboriginal and Torres Strait Islander peoples in the 3 western states. The increase was significant for males in all 3 jurisdictions and only significant for females in South Australia. The third quartile of age at death is the age below which 75% of deaths occur. There was no significant change in the third quartile of age at death for Aboriginal and Torres Strait Islander peoples in the 3 western states over this time period, except for an increase for females in South Australia.

IMPLICATIONS: Median age at death declined slightly for Indigenous men between 1991 and 2006, and more significantly for Indigenous women. A decline in median age at death suggests that a higher proportion of deaths are occurring at a younger age. This could be due to a range of possible changes. However, the increase in the first quartile of age at death for Aboriginal and Torres Strait Islander peoples suggests that there was a relative reduction in the proportion of deaths occurring in children and young adults. The increase in the first quartile of age at death combined with the decrease in the median age at death suggest that an increased proportion of deaths occurred in the 35–50 years age range.

Over the same time period, the overall death rate for the same 4 jurisdictions decreased (see measure 1.22). This suggests that the decrease in the median age at death was most likely because of a greater relative decrease in deaths for the very young and older age groups than in the 35–50 years age group.

Figure 46 – Median age at death, by Indigenous status and sex, WA, SA and NT, 1991–2006



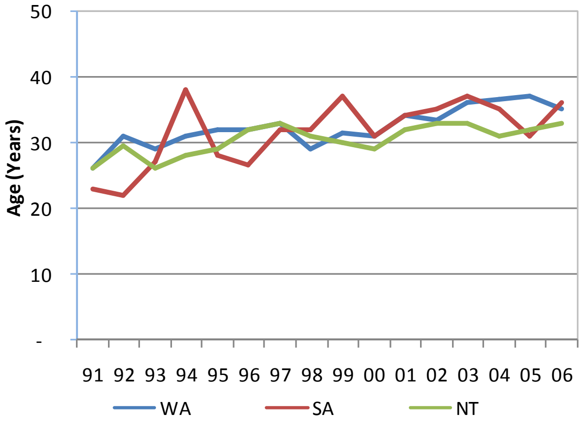
Source: AIHW analysis of National Mortality Database

Table 24 – Median age at death, by Indigenous status and sex, Qld, WA, SA and NT, 2002 to 2006

	Indigenous		Non-Indigenous	
	Male	Female	Male	Female
QLD	52	59	76	82
WA	50	57	76	82
SA	47	52	77	83
NT	45	52	63	71
QLD, WA, SA & NT	49	56	76	82

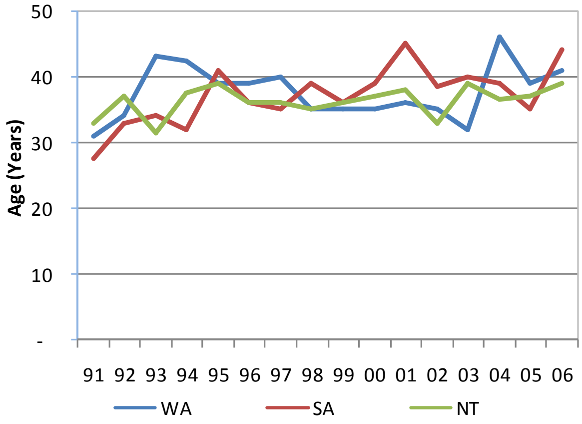
Source: AIHW analysis of National Mortality Database

Figure 47 – First quartile of age at death, Indigenous males, WA, SA and NT, 1991–2006



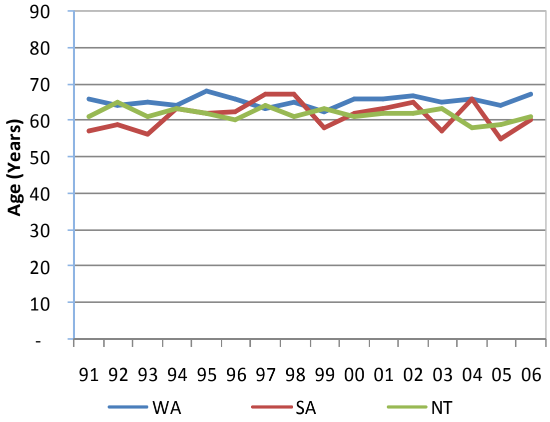
Source: AIHW analysis of National Mortality Database

Figure 48 – First quartile of age at death, Indigenous females, WA, SA and NT, 1991–2006



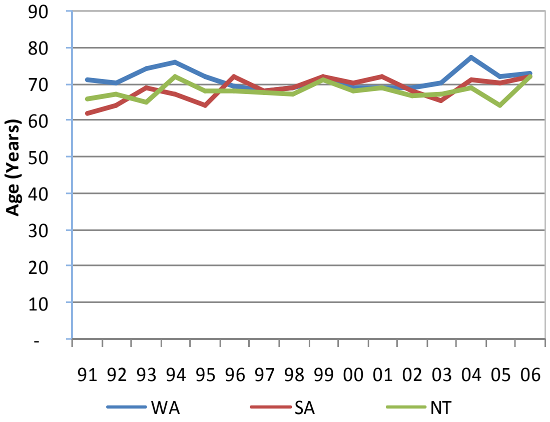
Source: AIHW analysis of National Mortality Database

Figure 49 – Third quartile of age at death, Indigenous males, WA, SA and NT, 1991–2006



Source: AIHW analysis of National Mortality Database

Figure 50 – Third quartile of age at death, Indigenous females, WA, SA and NT, 1991–2006



Source: AIHW analysis of National Mortality Database

1.19 Infant mortality

WHY IS IT IMPORTANT? Infant mortality is a long established measure of child health as well as the overall health of the population and its physical and social environment. It reflects the health status and health care of the population, the effectiveness of preventive care and the attention paid to child and maternal health, as well as broader social factors such as socio-economic deprivation, maternal education, smoking and other behavioural risk factors. Improvements in Australia's infant mortality in the last 100 years were largely due to improved social and public health conditions such as sanitation and health education in the first half of the twentieth century, followed by the development of immunisation, and in more recent years by better treatment in neonatal intensive care and interventions for SIDS.

In the Aboriginal and Torres Strait Islander population, dramatic reductions in post-neonatal infant mortality, such as in the Northern Territory in the 20 years up to the late 1980s, reflected improved access to primary health care (including antibiotics for acute infection) and earlier evacuation to hospital for severe illness. However, infant mortality remains high for Aboriginal and Torres Strait Islander peoples because many have not benefited from the improved physical and social environment that most other Australians achieved more than fifty years ago.

FINDINGS: Infant mortality is the death of infants in the first year of life. Reliable data on infant mortality for Aboriginal and Torres Strait Islander peoples are only available for Western Australia, South Australia, the Northern Territory and Queensland (only since 1999–2000). For these 4 jurisdictions combined, infant mortality for Aboriginal and Torres Strait Islander infants in the 2002–2006 period was 12.3 per 1,000 live births, compared with 4.2 for non-Indigenous infants. Rates were higher for Indigenous male infants (14.4 per 1,000 live births) compared with Indigenous female infants (10.1).

Over this period in these jurisdictions there were 551 deaths of Indigenous children aged 0–4 years, around 3 times the rate for non-Indigenous children in this age group.

In the 2005–2006 period, infant mortality rates varied across jurisdictions from 7 per 1,000 in South Australia, 11 in Queensland, 12 in Western Australia to 16 in the Northern Territory. Data on longer-term time-trends are available for Western Australia, South Australia and the Northern Territory. For these 3 jurisdictions, the Aboriginal and Torres Strait Islander infant mortality rate declined between 1991 and 2006 by 47%, compared with a reduction of 34% for non-Indigenous infants. Over this period there has been a significant closing of the gap between Indigenous and non-Indigenous infants. In 1991, the Aboriginal and Torres Strait Islander infant mortality rate was 4 times as high as that of non-Indigenous infants. By 2006 the rate was 3 times as high.

The most common cause of death for Aboriginal and Torres Strait Islander infants in the 2002–2006 period were conditions originating in the perinatal period (46%) such as birth trauma, fetal growth, complications of pregnancy and respiratory and cardiovascular disorders specific to the perinatal period. The second leading cause of death was signs, symptoms and ill-defined symptoms, including SIDS (22%), followed by congenital malformations (12%).

Compared with non-Indigenous infants, deaths caused by diseases of the respiratory system were 9 times as likely for Indigenous infants, deaths from SIDS were 5 times as likely, and deaths from infectious and parasitic diseases, and injury and poisoning, were 4 times as likely. These 4 causes of death accounted for around 23% of Indigenous infant deaths.

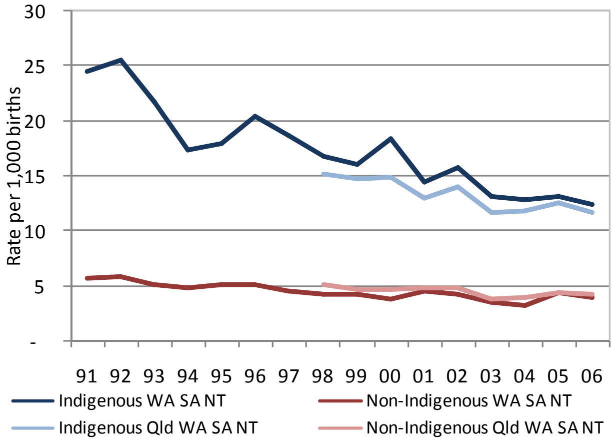
International statistics show that indigenous infants in the US, Canada and New Zealand have higher mortality rates than infants in the general population, but the gap is not as great as for Aboriginal and Torres Strait Islander infants.

IMPLICATIONS: The infant mortality rate for Aboriginal and Torres Strait Islander infants is declining. While infant mortality for other Australian infants is also declining the gap in infant mortality between Indigenous and other Australians infants is reducing in both absolute and, to a lesser extent, relative terms. However, improvements have largely occurred in the jurisdictions with the highest rates (Northern Territory and Western Australia).

The improvement in Aboriginal and Torres Strait Islander infant mortality is partly due to reduced perinatal mortality (i.e., deaths in the first 28 days after birth; see measure 1.20) and reduced mortality of infants after the perinatal period. Deaths during the perinatal period are due predominantly to problems during pregnancy and birth, while in the post-neonatal period (1–11 months of age), nutritional and environmental problems predominate.

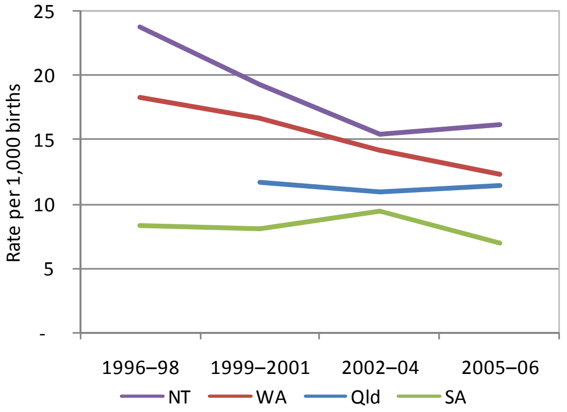
However, the birthweight of Aboriginal and Torres Strait Islander babies does not appear to be improving (see measure 1.01), indicating that there have not been major improvements in maternal health during pregnancy and consequently in the growth and development of the baby in-utero. It may be that the improvements in infant mortality are predominantly due to improvements in acute care for seriously ill new-born babies rather than reduced problems during pregnancy, and in post-natal factors such as nutrition and growth, environment and infectious diseases, and access to primary health and acute care. This suggests that some improvements in post-natal factors have been realised in recent years (and need to continue) but that the overall burden of disease within the child bearing population and pregnancy needs more attention. In December 2007, COAG committed to closing the gap in Indigenous disadvantage and in particular to halve the gap in mortality rates for Indigenous children under 5 years by 2018. In July 2008, COAG agreed in principle to a National Partnership with joint funding of $564 million over 6 years to address the needs of Indigenous children in their early years.

Figure 51 – Infant mortality rates Aboriginal and Torres Strait Islander infants and other Australians, WA, SA and NT, 1991–2006, Qld, WA, SA and NT, 1998–2006



Source: AIHW analysis of National Mortality Database

Figure 52 – Infant mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 1996–1998, 1999–2001, 2002–2004 and 2005–2006



Source: AIHW analysis of National Mortality Database

Table 25 – Causes of infant death by Indigenous status, Qld, WA, SA and NT, 2002–2006

Cause of death:	Number of deaths		Rate per 1,000 births		Ratio
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	
Certain conditions originating in the perinatal period	209	937	5.7	2.1	2.7*
Signs, symptoms & ill-defined conditions	101	214	2.7	0.5	5.7*
SIDS (subcategory of Signs, symptoms etc)	*39*	*88*	*1.1*	*0.2*	*5.4**
Congenital malformations	54	447	1.5	1.0	1.5*
Diseases of the respiratory system	35	49	0.9	0.1	8.6*
Injury & poisoning	19	60	0.5	0.1	3.8*
Infectious and parasitic diseases	11	32	0.3	0.1	4.2*
Diseases of the circulatory system	7	27	0.2	0.1	3.1*
Other conditions	19	125	0.5	0.3	1.8*
Total	**455**	**1,891**	**12.3**	**4.2**	**2.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

Source: AIHW analysis of National Mortality Database

1.20 Perinatal mortality

WHY IS IT IMPORTANT? The perinatal mortality rate includes fetal deaths (stillbirths) and deaths of live-born babies within the first 28 days after birth. Almost all of these deaths are due to factors during pregnancy and childbirth. Perinatal mortality reflects the health status and health care of the general population, access to and quality of preconception, reproductive, antenatal and obstetric services for women, and health care in the neonatal period. Broader social factors such as maternal education, nutrition, smoking, alcohol use in pregnancy and other risk factors and socio-economic deprivation are also significant.

Perinatal mortality rates are higher for Aboriginal and Torres Strait Islander peoples than for other Australians, indicating that the health status of and/or health care available to Aboriginal and Torres Strait Islander mothers is lower than that for other Australian women.

FINDINGS: Reliable data on fetal and infant deaths for Aboriginal and Torres Strait Islander peoples are only available for Queensland, Western Australia, South Australia and Northern Territory. Over the period 2001–2005 the perinatal mortality rate for Aboriginal and Torres Strait Islander babies was around 14 per 1,000 births compared with 8 per 1,000 births for other Australian babies. Fetal deaths (stillbirths) account for around 54% of perinatal deaths for Indigenous babies and 67% of perinatal deaths for other Australian babies.

The perinatal mortality rate for Aboriginal and Torres Strait Islander peoples decreased by around 51% between 1991 and 2005 (an average yearly decline of 0.8 deaths per 1,000 births). The perinatal mortality rate for other Australians also decreased, but by a smaller amount, so that the gap between Aboriginal and Torres Strait Islander peoples and other Australians decreased significantly in both absolute and relative terms over this period. Rates have declined at a faster rate for Western Australia.

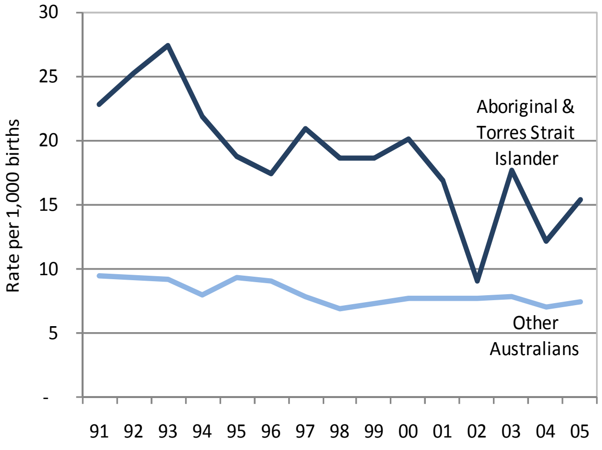
The most common specific causes of perinatal mortality were premature birth and inadequate fetal growth, which was a contributing factor in 23% of perinatal deaths in Aboriginal and Torres Strait Islander peoples (compared with 14% of other perinatal deaths), as well as conditions of the placenta, cord and membranes, which was a contributing factor in 30% compared with 27% of other perinatal deaths.

IMPLICATIONS: There has been a large improvement in perinatal mortality for Aboriginal and Torres Strait Islander peoples since 1991. This contrasts with the failure to achieve an improvement in birthweight for Aboriginal and Torres Strait Islander babies (see measure 1.01). It may be that the improvement in the perinatal mortality rate for Aboriginal and Torres Strait Islander babies is predominantly due to improved acute care, which has reduced deaths during late pregnancy and following birth, rather than improvements in the health of mothers during pregnancy and improvements in the growth and development of babies in-utero.

There are insufficient data available to assess whether the decrease in perinatal mortality has occurred because of decreases in particular causes of death.

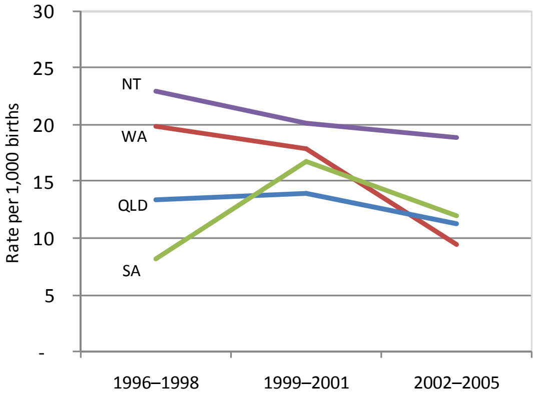
In July 2008, the Council of Australian Governments agreed in principle to a National Partnership with joint funding of $564 million over 6 years to address the needs of Indigenous children in their early years. Enhanced primary care services and continued improvement in antenatal care for Aboriginal and Torres Strait Islander women is very important to achieve further reductions in perinatal mortality rates. However, health services alone will not be able to reduce the perinatal mortality rate of Aboriginal and Torres Strait Islander peoples to that of other Australians. Improvements in socio-economic, environmental and behavioural factors are also necessary before similar pregnancy outcomes, including perinatal mortality rates, can be achieved for Aboriginal and Torres Strait Islander and other Australian women and their babies.

Figure 53 – Perinatal mortality rate by Indigenous status, WA, SA and NT, 1991 to 2005



Source: AIHW analysis of ABS Deaths Registration Database

Figure 54 – Perinatal mortality rate for Aboriginal and Torres Strait Islander children by jurisdiction, Qld, WA, SA and NT 1996–1998, 1999–2001, 2002–2005



Source: AIHW analysis of ABS Deaths Registration Database

Table 26 – Proportion of deaths for perinatal babies by underlying cause of death and Indigenous status, Qld, WA, SA and NT, 2001–05

Cause of death:	Foetal deaths		Neonatal deaths		Perinatal deaths	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Main condition in the fetus/infant:						
Disorders related to length of gestation and fetal growth	17	10	31	21	23	14
Respiratory and cardiovascular disorders	9	13	18	20	13	15
Infections	3	2	9	7	6	4
Other conditions originating in the perinatal period	62	58	15	19	41	45
Congenital malformations, deformations and chromosomal abnormalities	9	16	17	27	13	20
Other conditions	—	1	11	5	5	2
Total deaths (%)	**100**	**100**	**100**	**100**	**100**	**100**
Main condition in the mother:						
Complications of placenta, cord and membranes	38	31	20	18	30	27
Maternal complications of pregnancy	8	9	31	34	18	18
Maternal conditions that may be unrelated to present pregnancy	18	17	10	6	14	13
Complications of labour and delivery and noxious influences transmitted via placenta or breast milk	4	6	3	3	4	5
Total deaths (Number)	273	2,333	222	1,191	495	3,524

Source: AIHW analysis of ABS Deaths Registration Database

1.21 Sudden infant death syndrome

WHY IS IT IMPORTANT? Sudden Infant Death Syndrome (SIDS) is the sudden and unexplained death of an apparently healthy infant, for which no cause can be found. A SIDS death usually occurs in healthy infants under 1 year of age, with the highest incidence between 1 and 4 months. A SIDS death occurs quickly, usually during sleep. There are several potentially modifiable factors associated with SIDS: prone sleeping position, sleeping on a soft surface, maternal smoking during pregnancy, environmental tobacco smoke, overheating, late or no prenatal care, young maternal age, prematurity and/or low birthweight, and male sex. In Australia, the rate of SIDS declined by 84% between 1983 and 2003, with a sustained fall following the introduction in 1991 of the public health campaign encouraging parents to avoid the risk factors for SIDS deaths.

FINDINGS: There have been significant declines in the deaths from SIDS since 1991 for both Aboriginal and Torres Strait Islander infants and other Australian infants in the 3 jurisdictions for which there is long-term data: Western Australia, South Australia and the Northern Territory. Over this period there has been a significant reduction in the gap between Indigenous and other infants in deaths from SIDS. A similar level of decline is evident when statistics from Queensland from 1998–99 are included. Analysis of infant mortality data in Western Australia has found a shift away in recent years from a classification of 'SIDS' towards a classification of 'unascertainable', particularly for Aboriginal infants. This has implications for the analysis of trends in SIDS over time (Freemantle et al. 2005).

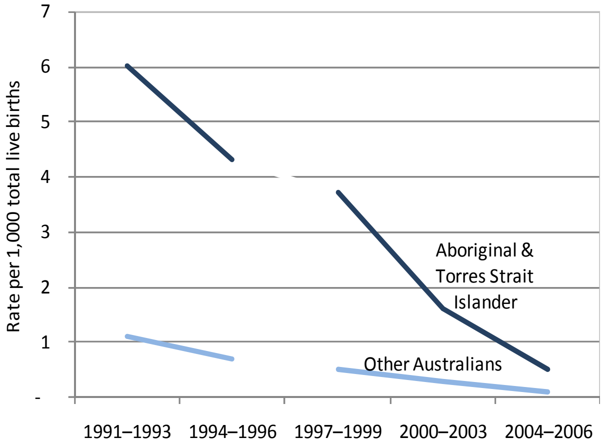
However, deaths from SIDS remains 5 times as high for Aboriginal and Torres Strait Islander infants as for other Australian infants. In the 2002–06 period, there were 133 deaths from SIDS in Queensland, Western Australia, South Australia and the Northern Territory, 39 (29%) of which were deaths of Aboriginal and Torres Strait Islander infants, and 5% of deaths for which Indigenous status was not stated. In the period 2002–2006, SIDS rates ranged from 0.3 per 1,000 in South Australia to 1.8 in the Northern Territory.

A small Queensland study of 30 Indigenous Australian women and 30 non-Indigenous Australian women (Panaretto et al. 2002) found that 37% of Indigenous infants were slept prone compared with 17% non-Indigenous. The Indigenous households had significantly more members. Fifty-three per cent of the Indigenous women smoked during pregnancy compared with 23% non-Indigenous and 60% were smokers at the time of the interview. Smoking occurred in 40% of Indigenous houses compared with 20% of non-Indigenous houses. This survey suggests SIDS risk factors may be higher in the Indigenous Australian population and new approaches to promoting SIDS awareness may be needed. A study in Western Australia of infant deaths 1980–2001 (Freemantle et al. 2006) found the proportion of deaths attributable to SIDS increased amongst Indigenous infants and decreased significantly in the non-Indigenous population. In 1998–2001, the SIDS death rate for Aboriginal and Torres Strait Islander infants was over 8 times as high as for other infants and (in contrast to all other causes of infant death) higher for those living in metropolitan locations, although, the Indigenous infants mortality rate was highest for infants born in rural locations. SIDS was the most common cause of death for Aboriginal and Torres Strait Islander infants in Western Australia (Freemantle, Stanley et al. 2004). A recent total population study in Western Australia, reported that between 1998 and 2002, 51% of Aboriginal and 20% of non-Aboriginal mothers smoked during the pregnancy. However, 73% of Aboriginal and 60% of non-Aboriginal mothers whose infants died of SIDS, smoked during their pregnancy (Freemantle, de Klerk et al. 2004). In a Perth study of Aboriginal mothers (Eades & Read 1999), 11% of their infants slept prone, 96% shared a room and 68% shared a bed. Sixty-five per cent of these mothers smoked during pregnancy and 80% of infants were regularly exposed to tobacco smoke. Eighty-nine per cent of the mothers initiated breastfeeding and 70% were breastfeeding at the time of the interview. The authors conclude that the prevalence of non-prone sleeping and breastfeeding are similar for Indigenous infants and other infants, but tobacco smoke exposure is significantly higher.

SIDS deaths are also more common among Indigenous people in New Zealand and the United States. The Maori SIDS death rate was 1.9 per 1,000 live births compared with 0.3 among non-Indigenous New Zealanders and the Native Americans and Alaska Natives rate was 1.2 per 1,000 compared with 0.5 among non-Indigenous people in the United States.

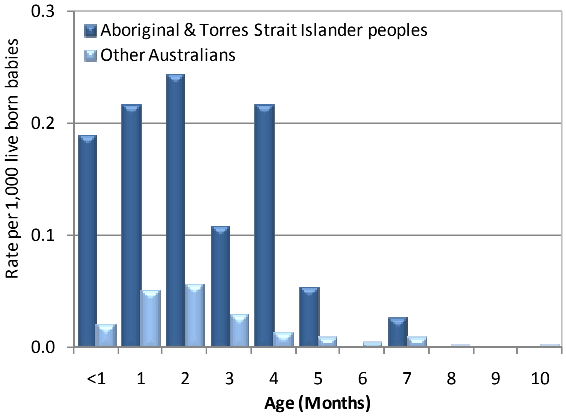
IMPLICATIONS: SIDS is more common for Aboriginal and Torres Strait Islander infants than other Australian infants. However, the SIDS rate decreased dramatically between 1991–93 and 2004–06 for both Aboriginal and Torres Strait Islander and other Australian infants. Aboriginal and Torres Strait Islander infants are sharing the benefits of research and public awareness campaigns that have reduced SIDS deaths for all Australians. The fall in SIDS deaths for Aboriginal and Torres Strait Islander infants demonstrates that behavioural changes can occur in a relatively short time period and produce dramatic results for Aboriginal and Torres Strait Islander peoples as for all Australians. Additional Australian research on the prevalence of risk factors and their link to the higher rate of SIDS in Aboriginal and Torres Strait Islander babies would be very useful. An outstanding question is whether anything more needs to be done specifically targeted to Aboriginal and Torres Strait Islander peoples or are the general measures that have worked well for the general population sufficient?

Figure 55 – SIDS mortality rates per 1,000 live births, Aboriginal and Torres Strait Islander and other Australian infants, WA, SA and NT, 1991–1993 to 2004–2006



Source: AIHW analysis of National Mortality Database

Figure 56 – SIDS mortality rates per 1,000 live births, by age (months) and Indigenous status, Qld, WA, SA and NT, 2002–2006



Source AIHW National Mortality Database

Table 27 – SIDS mortality rates per 1,000 live births and rate ratios, by Indigenous status, Qld, WA, SA and NT, 2002–06

	Indigenous		Non-Indigenous		Rate ratio
	Deaths	Rate	Deaths	Rate	
Queensland	20	1.2	62	0.3	4.3*
Western Australian	n.p.	0.5	n.p.	0.1	6.2*
South Australia	n.p.	0.3	14	0.2	1.8
Northern Territory	14	1.8	n.p.	0.3	6.5*
Qld, WA, SA & NT	**39**	**1.1**	**88**	**0.2**	**5.4***

*Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

Source: AIHW analysis of National Mortality Database

1.22 All-causes age-standardised death rate

WHY IS IT IMPORTANT? The mortality rate of a population provides a summary measure of the overall health status of that population. However, it has some well-known limitations. There may be delays for many years before improvements in health status lead to reductions in mortality, and mortality statistics do not reflect the burden of illness in a population for diseases that do not necessarily result in death, such as arthritis and depression.

Despite these limitations, mortality rates are a useful measure with which to compare the overall health status of different populations and to monitor changes in overall health status of populations over time.

The all-causes mortality rate for Aboriginal and Torres Strait Islander peoples is several times higher than that for other Australians, indicating that the overall health status of Aboriginal and Torres Strait Islander peoples is worse than that of other Australians.

FINDINGS: Reliable mortality data for Aboriginal and Torres Strait Islander peoples are only available for 4 jurisdictions (Queensland, Western Australia, South Australia and Northern Territory) for the years 2002–06, and for earlier years only available for the 3 western jurisdictions (Western Australia, South Australia and Northern Territory).

During the period 2002 to 2006, 7,692 deaths were identified as those of Aboriginal and Torres Strait Islander people in Queensland, Western Australia, South Australia and the Northern Territory. After adjusting for age differences between the two populations, the all-cause mortality rate was 2.1 times higher for Aboriginal and Torres Strait Islander peoples than for non-Indigenous Australians (13 compared with 6 deaths per 1,000 population). The all-causes mortality rate for Aboriginal and Torres Strait Islander peoples decreased by approximately 13% between 1991 and 2006 in Western Australia, South Australia and the Northern Territory; the decrease was greater for females (15%) than males (9%). Although all-cause mortality decreased for Aboriginal and Torres Strait Islander peoples, mortality decreased by a relatively greater amount (27%) for other Australians.

Mortality rates for Aboriginal and Torres Strait Islander peoples are higher in the infant and middle-age age groups, in comparison to the non-Indigenous population where the majority of deaths occur in the older age groups. Approximately 70% of Indigenous deaths occur before the age of 65, compared with 21% among non-Indigenous Australians. The greatest relative disadvantage in mortality rates is in the 25–64 years age range, where the mortality rates for Aboriginal and Torres Strait Islander peoples were between 4 and 6 times higher than for other Australians, for both males and females.

It is not certain how much variation there is, if any, between jurisdictions in mortality rates for Aboriginal and Torres Strait Islander peoples due to variations in data quality.

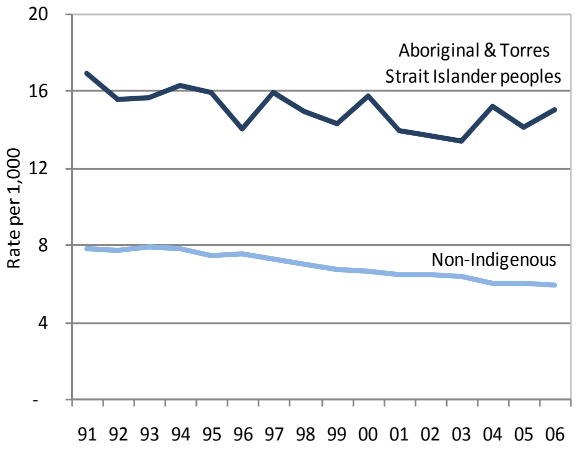
The gap between death rates for Aboriginal and Torres Strait Islander peoples and the rest of the population in Australia appear to be larger than in other countries where Indigenous peoples share a similar history of relatively recent European colonisation, such as New Zealand and the United States. However, caution must be used in comparing data with other countries due to variations in data quality and methods applied for addressing data quality issues and definitions of indigenous peoples.

IMPLICATIONS: The very high mortality rates for Aboriginal and Torres Strait Islander peoples, particularly in early childhood and the middle adult years, are an indication of the poor overall health status of Aboriginal and Torres Strait Islander peoples and the high rate of chronic disease and injury.

There has been improvement in mortality rates for Aboriginal and Torres Strait Islander peoples in the past 16 years, in the 3 western jurisdictions at least, although this has slowed in the last few years. Although the reduction in mortality for Aboriginal and Torres Strait Islander peoples has not kept pace with that for other Australians, the fact that considerable improvements have occurred demonstrates that the severe health problems of Aboriginal and Torres Strait Islander peoples have been reduced to some extent in recent years and can be reduced further, and faster, with sustained and increased effort.

In December 2007, COAG committed to closing the gap on Indigenous disadvantage including to close the life expectancy gap within a generation. COAG has established 7 working groups to advance reforms in various policy spheres that have explicit terms of reference relating to outcomes for Aboriginal and Torres Strait Islander peoples. New Specific Purpose agreements and National Partnership agreements are being developed which will include provision for improved outcomes for Indigenous Australians.

Figure 57 – Age-standardised mortality rates by Indigenous status, WA, SA and NT, 1991–2006



Source: AIHW analysis of National Mortality Database

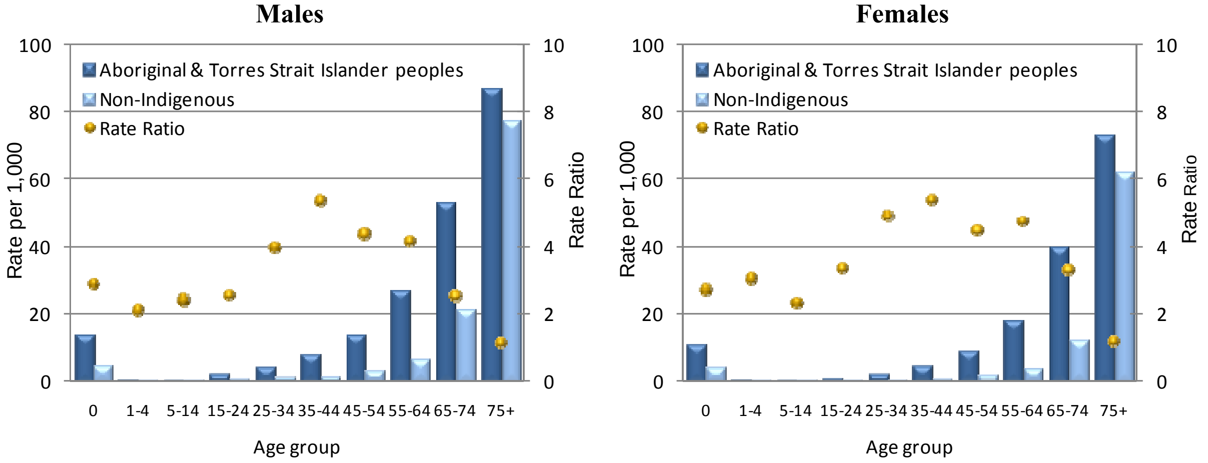
Table 28 – All-causes mortality, by Indigenous status, Qld, WA, SA and NT, 2002–2006

				Rate per 1,000		
	Indig-enous	Non-Indig-enous	Not stated	Indig-enous	Non-Indig-enous	Ratio
Qld	2,841	115,542	1,656	11.8	6.2	1.9*
WA	1,958	54,173	630	13.6	5.9	2.3*
SA	641	58,077	988	10.9	6.3	1.7*
NT	2,252	2,305	39	16.6	6.6	2.5*
4 state total	**7,692**	**230,097**	**3,313**	**13.2**	**6.2**	**2.1***

* Represents results with statistically significant differences in the Indigenous/ non-Indigenous comparisons at the p<.05 level.

Source: AIHW analysis of National Mortality Database

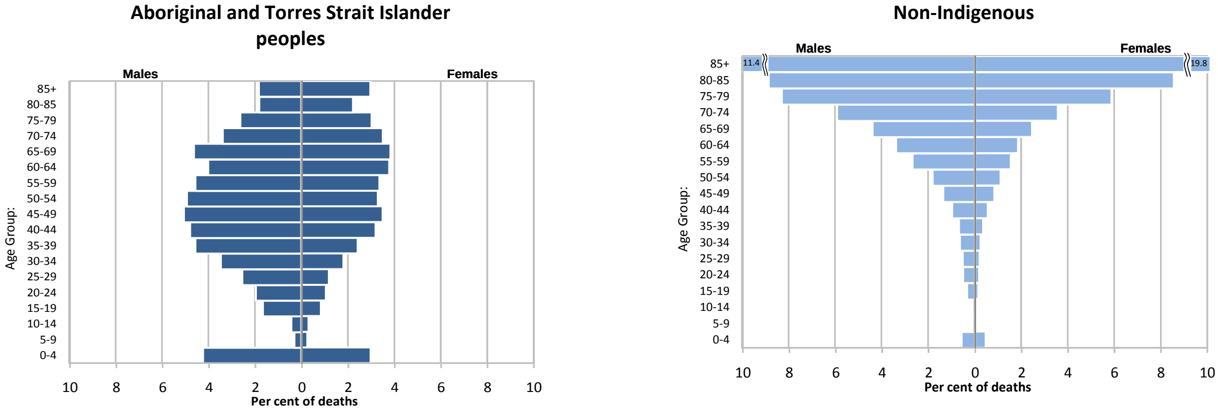
Figure 58 – Mortality rates by age group and sex by Indigenous status, Qld, WA, SA and NT, 2002–2006


Males

Females

Source: AIHW analysis of National Mortality Database

Figure 59 – Mortality rates by age group and sex by Indigenous status, Qld, WA, SA and NT, 2002–2006


Aboriginal and Torres Strait Islander peoples

Non-Indigenous

Source: AIHW analysis of National Mortality Database

1.23 Leading causes of mortality

WHY IS IT IMPORTANT? Mortality rates are a useful measure of the overall health status of a population, particularly to compare one population with another or to measure improvements over time. The ratio of particular causes of death between the Aboriginal and Torres Strait Islander population and the rest of the Australian population provides an indication of the excessive effect of particular diseases on Aboriginal and Torres Strait Islander peoples, relative to the rest of the population. This is a useful indication of the diseases that have a greater impact on Aboriginal and Torres Strait Islander peoples. However, some significant health problems will not be reflected in mortality statistics; many conditions that cause serious health problems may not be fatal (such as depression, arthritis and intellectual disability) and so do not appear as common causes of death. Mortality rates for many diseases and types of injury are higher for Aboriginal and Torres Strait Islander peoples than other Australians, indicating that these problems are more common and have a greater effect on Aboriginal and Torres Strait Islander peoples. As health status and health services improve for Aboriginal and Torres Strait Islander peoples, the excess mortality from these problems should reduce over time. The mortality rate ratio indicates the excess mortality from particular conditions, measured as the ratio of the mortality rate for Aboriginal and Torres Strait Islander peoples to that for other Australians. When the mortality rates of the two groups are the same, the mortality ratio will be 1.0.

FINDINGS: Reliable mortality data for Aboriginal and Torres Strait Islander peoples are available only for Queensland, Western Australia, South Australia and the Northern Territory. In 2002–06, the most common cause of death among Indigenous Australians was circulatory diseases (26% of all deaths), followed by injury and poisoning (16%) and cancer (15%). Circulatory diseases were the most common causes of death for other Australians followed by cancer. After adjusting for age, mortality rates were more likely for Aboriginal and Torres Strait Islander peoples than other Australians for all-causes of death, ranging from 0.2–0.3 times more likely for cancer and diseases of the nervous system to 7 times more likely for endocrine, metabolic and nutritional disorders (which includes diabetes).

Circulatory diseases accounted for 26% of excess deaths of both Aboriginal and Torres Strait Islander males and females, with external causes including injury accounting for a further 19% and 13% of excess deaths of Indigenous males and females. Other chronic diseases including endocrine, metabolic and nutritional disorders (which includes diabetes), cancer and respiratory diseases accounted for 27% of excess deaths for Indigenous males and 34% of excess deaths for Indigenous females.

Circulatory disease mortality rates have declined for both Aboriginal and Torres Strait Islander peoples and other Australians since 1991. Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory combined, there were non-significant declines (around 11%) in mortality rates from circulatory diseases among Indigenous Australians and significant declines in mortality rates from circulatory diseases among other Australians (around 13%). These declines continued in the 1997–2006 period with a 31% reduction in the mortality rate for Indigenous people and a 33% reduction on the rate for other Australians. There was no significant change in mortality rate ratios but there was significant decline in the difference in mortality rates between Indigenous and other Australians from circulatory diseases.

Over the period 1997–2006 the gap in mortality rates between Indigenous and other Australians appears to have widened for injury and poisoning and cancers mainly reflecting that mortality rates for other Australians have fallen, while rates for Indigenous Australian have remain the same or increased slightly. Trends for other conditions suggest there have been only small changes in the gap between Indigenous and other Australians.

IMPLICATIONS: Four groups of chronic conditions that share several common causes account for almost two-thirds for excess deaths among Aboriginal and Torres Strait Islander peoples: circulatory disease, diabetes and other endocrine/metabolic/nutritional disorders, cancer, and respiratory diseases. External causes such as injury also significantly contribute to excess deaths (16%). The greatest reductions in mortality rates and excess deaths for Aboriginal and Torres Strait Islander peoples will come from a combination of preventive strategies and medical services. Improved chronic disease management for diseases can prevent development of life-threatening complications, but cannot cure these diseases. In the long-term, the more important factors will be reduced smoking and improvements in living conditions and life-styles, including nutrition and levels of physical activity. While improved chronic disease management is very important to reduce the onset of complications and delay death, these only reduce the impact of damage already done. Until more Aboriginal and Torres Strait Islander peoples are living healthy lives that prevent the development of these diseases, too many will continue to develop these conditions, live with them, and die prematurely because of them.

The leading causes of death through injury are intentional self-harm (suicide) (29%) and accidents, particularly transport accidents (29%), and assault (10%). Younger people have higher proportions of death through injury and some of these deaths are associated with alcohol misuse (see measures 1.03 and 2.20) (Vos et al. 2007). Acute care services can save the lives of seriously injured people, and there is scope for improvements in timely access to life-saving emergency care for Indigenous Australians. However, medical treatment after the event can have only a limited impact on injury mortality.

Decision makers should consider whether the leading causes of mortality and the major risk factors contributing to these conditions have received appropriate priority in policy making and program implementation.

Table 29 – Causes of mortality, by Indigenous status, Qld, WA, SA and NT, 2002–2006

Underlying cause of death:	Per cent		Age standardised rate per 100 000 persons		Ratio
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	
Circulatory diseases	26.1	35.9	411.7	221.4	1.9*
Injury and poisoning	15.9	6.2	105.8	38.3	2.8*
Cancer	15.4	29.9	240.0	183.2	1.3*
Lung cancer	*3.6*	*5.8*	*57.7*	*35.2*	*1.6**
Cervical cancer	*0.5*	*0.2*	*6.2*	*1.1*	*5.7**
Endocrine, metabolic & nutritional disorders	9.0	3.6	151.1	22.0	6.9*
Diabetes	*7.9*	*2.5*	*133.6*	*15.3*	*8.8**
Respiratory diseases	8.5	8.6	136.4	53.4	2.6*
Digestive diseases	5.9	3.3	67.4	20.5	3.3*
Conditions originating in perinatal period	2.8	0.4	7.7	2.8	2.8*
Nervous system diseases	2.5	3.4	26.8	21.2	1.3*
Kidney diseases	2.3	1.5	40.2	9.6	4.2*
Infectious and parasitic diseases	2.2	1.2	22.9	7.3	3.1*
Other causes	9.4	5.8	108.1	36.1	3.0*
All causes	**100.0**	**100.0**	**1,318.0**	**615.7**	**2.1***
Number of deaths	7,692	230,097			

- Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

Source: AIHW analysis of National Mortality Database

Table 30 – Main causes of excess Indigenous deaths, by sex, Qld, WA, SA and NT, 2002–2006

Underlying cause of death	Males			Females		
	Total	Excess [a]	% excess	Total	Excess [a]	% excess
	no.	no.	%	no.	no.	%
Circulatory diseases	1,128	779	26.4	880	569	25.8
Injury and poisoning	845	563	19.1	379	276	12.5
Endocrine, metabolic & nutritional disorders	328	287	9.7	366	328	14.9
Diabetes	291	265	9.0	318	295	13.4
Respiratory diseases	378	292	9.9	275	199	9.0
Cancer	614	208	7.0	570	217	9.8
Lung cancer	162	78	2.6	114	62	2.8
Cervical cancer	. .	. .	. .	35	28	1.3
Digestive diseases	260	216	7.3	190	154	7.0
Kidney diseases	80	67	2.3	99	85	3.9
Conditions originating in perinatal period	127	87	2.9	86	51	2.3
Infectious and parasitic diseases	94	74	2.5	74	60	2.7
Nervous system diseases	129	87	3.0	64	19	0.9
Other causes	386	292	9.9	340	245	11.1
All causes	**4,369**	**2,952**	**100.0**	**3,323**	**2,204**	**100.0**

(a) Total deaths minus the number of deaths that would have been expected if Aboriginal and Torres Strait Islander peoples had the same mortality rates as non-Indigenous Australians.

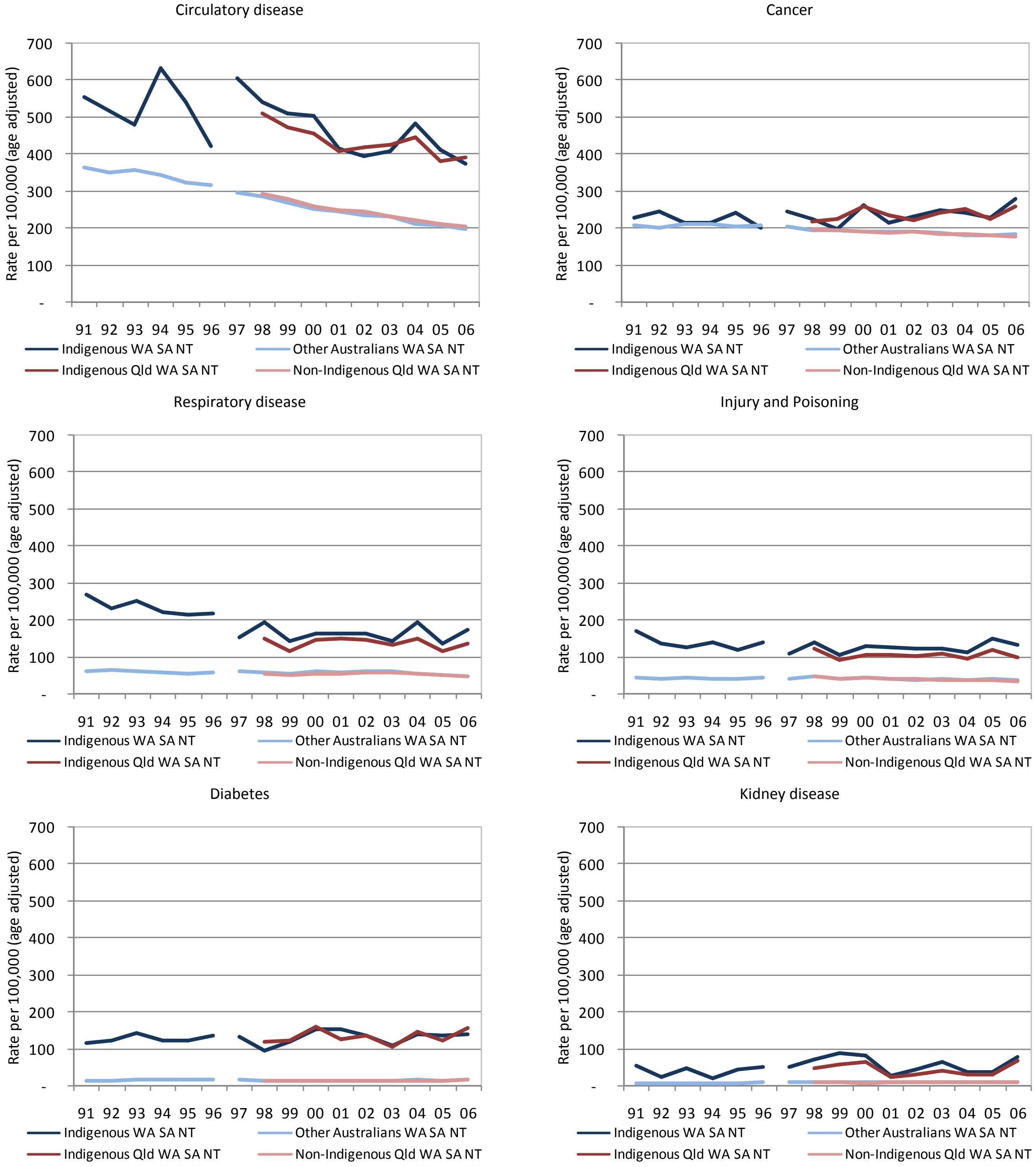
Source: AIHW analysis of National Mortality Database

Table 31 – Detailed causes of death for circulatory disease, external causes, cancers and respiratory disease, Aboriginal and Torres Strait Islander peoples, Qld, WA, SA and NT, 2002–2006

Underlying cause of death	Males		Females		Total	
	Deaths	%	Deaths	%	Deaths	%
Circulatory Disease						
Ischaemic heart disease	714	16.3	427	12.8	1,141	14.8
Acute myocardial infarction	*349*	*8.0*	*192*	*5.8*	*541*	*7.0*
Cerebrovascular disease	157	3.6	173	5.2	330	4.3
Stroke	*126*	*2.9*	*146*	*4.4*	*272*	*3.5*
Other heart disease	160	3.7	127	3.8	287	3.7
Rheumatic heart disease	30	0.7	67	2.0	97	1.3
Other	67	1.5	86	2.6	153	2.0
Total circulatory diseases	**1,128**	**25.8**	**880**	**26.5**	**2,008**	**26.1**
Injury and Poisoning						
Intentional self-harm	294	6.7	65	2.0	359	4.7
Accidents:						
Transport accidents	239	5.5	116	3.5	355	4.6
Accidental drowning or accidental threats to breathing	81	1.9	33	1.0	114	1.5
Accidental poisoning by and exposure to noxious substances	35	0.8	21	0.6	56	0.7
Other external causes of accidental injury	107	2.4	68	2.0	175	2.3
Assault	66	1.5	52	1.6	118	1.5
Other	23	0.5	24	0.7	47	0.6
Total external causes	**845**	**19.3**	**379**	**11.4**	**1,224**	**15.9**
Cancers (site of neoplasm)						
Digestive organs	189	4.3	118	3.6	307	4.0
Respiratory and inthrathoracic organs	179	4.1	120	3.6	299	3.9
Lip, oral cavity and pharynx	54	1.2	25	0.8	79	1.0
Lymphoid, haematopoietic and related tissue	48	1.1	43	1.3	91	1.2
Breast	-	-	73	2.2	73	0.9
Female genital organs	-	-	86	2.6	86	1.1
Cervix	-	-	*35*	*1.1*	*35*	*0.5*
Male genital organs	29	0.7	-	-	29	0.4
Other	115	2.6	70	2.1	185	2.4
Total cancers	**614**	**14.1**	**570**	**17.2**	**1,184**	**15.4**
Respiratory diseases						
Chronic lower respiratory diseases	209	4.8	155	4.7	364	4.7
Pneumonia and influenza	110	2.5	85	2.6	195	2.5
Other	59	1.4	35	1.1	94	1.2
Total respiratory diseases	**378**	**8.7**	**275**	**8.3**	**653**	**8.5**
Other causes of death	1,404	32.1	1,219	36.7	2,623	34.1
All deaths	**4,369**	**100.0**	**3,323**	**100.0**	**7,692**	**100.0**

Source: AIHW analysis of National Mortality Database

Figure 60 – Age-standardised mortality rates for selected causes of death, by Indigenous status(a), WA, SA, NT, 1991–2006(b); Qld, WA, SA, NT, 1998–2006



Circulatory disease

Cancer

Respiratory disease

Injury and Poisoning

Diabetes

Kidney disease

(a) Prior to 1998, 'not stated' was included as non-Indigenous deaths. Rates for the longer term trends (from 1991 to 2006) for WA, SA and NT, have therefore been calculated for 'Other Australians', which included deaths where Indigenous status is 'not stated'.

(b) Causes of death were classified and coded in ICD–9 up until 1996 and ICD–10 from 1997 onwards. The change in classification/coding scheme affects the comparability of rates calculated for 1996 and prior years with rates calculated for 1997 onwards.

Source: AIHW analysis of National Mortality Database

1.24 Maternal mortality

WHY IS IT IMPORTANT? Serious, sometimes life-threatening, complications occasionally occur during pregnancy and childbirth. The death of a woman as a result of pregnancy or childbirth is now a rare event in Australia, but in the not too distant past women faced a considerable risk of serious damage or death with each pregnancy. Improvements in the general health and fitness of Australian women and advances in medical care during the twentieth century reduced the frequency and consequences of complications during pregnancy and childbirth for both mothers and babies.

The risk of death from complications of pregnancy and childbirth has also been reduced for Aboriginal and Torres Strait Islander women, but not to the same level as for other Australian women. The maternal mortality rate for Aboriginal and Torres Strait Islander women remains higher than for other Australian women; although deaths as a result of pregnancy or childbirth are also rare for Aboriginal and Torres Strait Islander women, they are not as rare as they should be.

FINDINGS: The maternal mortality rate is the total of direct, indirect and incidental maternal deaths. A direct maternal death is one caused by complications of the pregnancy itself. An indirect maternal death is the death of a woman during or shortly after pregnancy as the result of a disease that did not arise because of the pregnancy (e.g. heart disease, diabetes, renal disease) but was made worse by the physiological effects of pregnancy. An incidental death is the death of a woman as the result of a condition that occurred during pregnancy, where the pregnancy is unlikely to have contributed significantly to the death, such as cancer or a motor vehicle accident.

In the period 2003–05, there were 6 maternal deaths of Aboriginal and Torres Strait Islander women, 2 direct maternal deaths and 4 indirect maternal deaths. These deaths accounted for 10% of the 60 maternal deaths where Indigenous status was known.

The maternal mortality rate for Aboriginal and Torres Strait Islander women was 23 per 100,000 confinements in 1991–93, 17 in 1994–96, 24 in 1997–99, 46 in 2000–02 and 22 in 2003–05. The maternal mortality rates for Indigenous women were between 2 and 5 times the maternal mortality rate for non-Indigenous women in these periods

The small number of deaths and problems in under-identification of Aboriginal and Torres Strait Islander mothers in the numerator (maternal deaths) and denominator (number of confinements) makes it difficult to interpret trends. The rate leveled out in the last triennium, but this could be due to random variation.

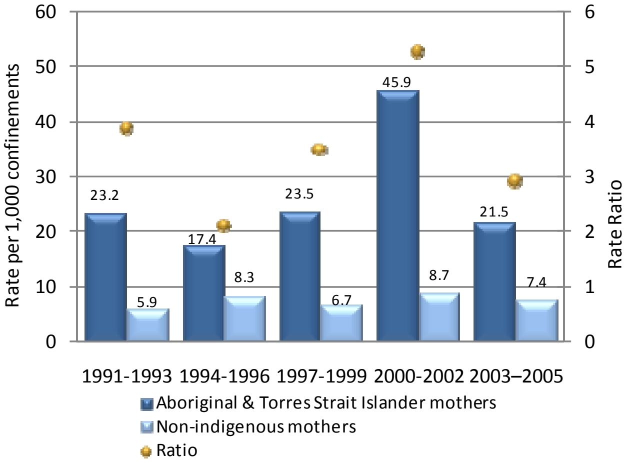
IMPLICATIONS: If Aboriginal and Torres Strait Islander women had the same maternal mortality rate as other Australian women, there would have been 9 maternal deaths of Aboriginal and Torres Strait Islander women between 1991 and 2005 rather than the 33 that actually occurred. In this 15-year period, there were 24 excess maternal deaths of Aboriginal and Torres Strait Islander women, an average of 1or 2 excess deaths per year. The excessive maternal mortality of Aboriginal and Torres Strait Islander women is a clear indicator that their health and wellbeing during pregnancy is not what it should be.

Timely access to safe and effective medical interventions is essential to achieving the best possible outcomes for Aboriginal and Torres Strait Islander women during pregnancy and childbirth. However, obstetric medical services to treat serious illness when it arises during pregnancy and childbirth can have only a limited effect on reducing maternal mortality rates, and should not be the principle response to excess maternal mortality. If acute care services were able to entirely eliminate excess maternal mortality (which they cannot), 1 or 2 deaths would be avoided each year, but the overall health problems of Aboriginal and Torres Strait Islander mothers and their children would be little improved. It would be far more effective to reduce the causes of excessive health problems that afflict Aboriginal and Torres Strait Islander women during pregnancy. A focus on improved antenatal care is also relevant here (see measure 3.01).

The excess maternal mortality of Aboriginal and Torres Strait Islander women cannot be eliminated by focusing on pregnancy and childbirth alone. Strategies that improve the overall health of Aboriginal and Torres Strait Islander women before, during and after pregnancy will all have an impact on improving their pregnancy outcomes and the health and future prospects of their babies.

Detecting changes in maternal mortality is difficult when the average number of maternal deaths amongst Aboriginal and Torres Strait Islander women each year is fewer than 3.

Figure 61 – Maternal mortality rates and rate ratios by Indigenous status, 1991–93 to 2003–2005



Note: Includes direct and indirect deaths only.

Source: National Maternal Deaths Data Collection

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Table 32 – Number of maternal deaths and maternal mortality rates, by Indigenous status, 1991–93 to 2003–05

Triennium:	Aboriginal & Torres Strait Islander :			Non-Indigenous maternal mortality rate per 100,000 confinements	Rate ratio
	Direct & indirect deaths	Total confinements	Maternal mortality rate per 100,000 confinements		
1991–1993	5	21,539	23.2	5.9	3.9
1994–1996	4	22,996	17.4	8.3	2.1
1997–1999	6	25,530	23.5	6.7	3.5
2000–2002	12	26,128	45.9	8.7	5.3*
2003–2005	6	27,901	21.5	7.9	2.7

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

Note: Includes direct and indirect deaths only.

Sources: Slaytor et al. 2004; Sullivan et al. 2008; Sullivan & King 2006

1.25 Avoidable and preventable deaths

WHY IS IT IMPORTANT? Avoidable and preventable mortality refers to deaths from conditions that are considered avoidable given timely and effective health care (including disease prevention and population health initiatives) (Page et al. 2006). Avoidable deaths have been used in various studies to measure the quality, effectiveness and/or accessibility of the health system, although deaths from most conditions are influenced by a range of factors in addition to health system performance, including the underlying prevalence of conditions in the community, environmental and socio-economic factors and lifestyle choices. Avoidable mortality includes conditions that are significantly attributable to factors outside the health system such as socio-economic factors, environmental factors, lifestyle factors and legal issues.

Causes of avoidable mortality can be sub-divided into ‘preventable’ conditions for which there are effective means to prevent the condition occurring (e.g. conditions caused by smoking) and ‘amenable’ conditions for which death may be averted even after the condition has developed through early detection and effective treatment (e.g. cervical cancer).

There have been large reductions in avoidable mortality in Australia over the past 4 decades, but the decline for Aboriginal and Torres Strait Islander peoples has not been as great as for the total Australian population, and started at a higher level.

FINDINGS: In the period 2002–2006, there were 4,769 deaths of Aboriginal and Torres Strait Islander people aged 0–74 years from avoidable causes in Queensland, Western Australia, South Australia and the Northern Territory. This represented 73% of deaths of Indigenous Australians aged 0–74 years in these 4 jurisdictions and 62% of deaths in all age groups. In contrast, deaths from avoidable causes for non-Indigenous people represented 68% of deaths of other Australians aged 0–74 years in these 4 jurisdictions and 25% of all deaths for other Australians.

Amenable mortality accounted for 1,916 Indigenous deaths in the 4 jurisdictions, or 29% of deaths of Indigenous Australians aged 0–74 years. For other Australians aged 0–74 years amenable mortality accounted for 27% of deaths.

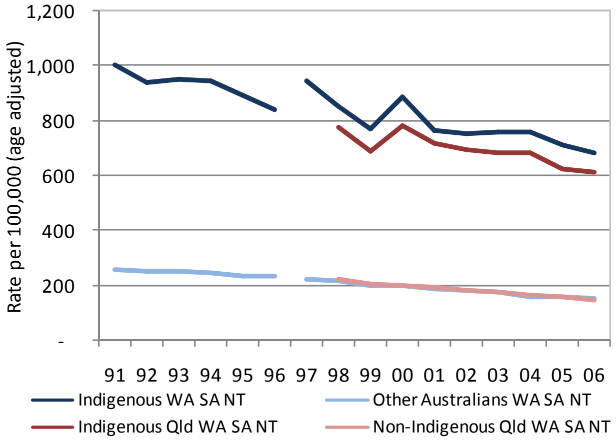
After adjusting for differences in age structure, Aboriginal and Torres Strait Islander peoples died from all avoidable causes at 4 times the rate of other Australians. The avoidable mortality rate of Aboriginal and Torres Strait Islander peoples was higher than that of other Australians in all age groups, and particularly high (4–7 times that of other Australians) in the middle adult age groups (35–64 years).

The most common conditions causing avoidable mortality were ischaemic heart disease (20%), cancer (14%) (in particular lung cancer), diabetes (11%) and suicide (8%). Mortality rates for Indigenous Australians aged 0–74 years for these avoidable conditions were significantly higher than other Australians: 5 times higher for ischaemic heart disease, 2 times higher for cancer, 18 times higher for diabetes and 2 times higher for suicide. Although not causing such a high proportion of avoidable deaths, several other conditions caused a high relative excess of avoidable deaths for Aboriginal and Torres Strait Islander peoples compared with other Australians including: selected invasive bacterial and protozoal infections (avoidable mortality rate 8 times higher than the rate for other Australians); alcohol-related disease (9 times higher); violence (10 times higher); nephritis and nephrosis (16 times higher) and rheumatic and other valvular heart disease (23 times).

Reliable data on time-trends in avoidable mortality is available since 1991 for Western Australia, South Australia and the Northern Territory, and from Queensland since 1998. There has been a significant decline in the avoidable mortality rate for Aboriginal and Torres Strait Islander peoples aged 0–74 years over that time. In the period 1991 to 1996, rates declined by 13% for Indigenous Australians and 10% for non-Indigenous Australians. In the period 1998 to 2006 (including Queensland), rates declined by 19% for Indigenous Australians and 32% for non-Indigenous Australians.

IMPLICATIONS: Avoidable mortality presents a similar picture to that seen in other mortality measures: death rates for Aboriginal and Torres Strait Islander peoples are declining, but too slowly to close the gap with other Australians. Chronic diseases and injury are the conditions causing the greatest proportion of excess deaths for Aboriginal and Torres Strait Islander peoples, and these conditions are amenable to both prevention and treatment. While all conditions causing excess deaths among Aboriginal and Torres Strait Islander peoples are important and need to be reduced, chronic conditions and injury are the conditions for which the greatest reductions in excess mortality could be achieved.

Figure 62 – Age-standardised mortality rates for avoidable causes of death, Indigenous and other Australians aged 0–74 years, WA, SA, NT, 1991–2006; Qld, WA, SA, NT, 1998–2006



Source: AIHW analysis of National Mortality Database

Table 33 – Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2002–2006

Cause of death	Per cent		Age standardised rate per 100,000		Rate ratio
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	
Ischaemic heart disease	20.0	19.9	149.7	32.7	4.6*
Cancer	13.8	37.5	115.2	60.8	1.9*
Lung cancer	5.1	13.1	47.0	21.3	2.2*
Diabetes	10.6	3.2	94.5	5.3	17.7*
Suicide	7.8	6.7	26.3	11.1	2.4*
Road traffic injuries	7.0	4.9	26.3	8.2	3.2*
Alcohol-related disease	6.5	2.6	37.1	4.1	9.0*
Selected invasive bacterial and protozoal infections	4.8	2.1	27.2	3.6	7.6*
Cerebrovascular disease	4.5	5.9	36.5	9.8	3.7*
Chronic obstructive pulmonary disease	3.8	4.8	39.2	8.0	4.9*
Nephritis and nephrosis	3.4	1.0	27.0	1.6	16.4*
Violence	2.5	0.5	9.0	0.9	10.0*
Birth defects	2.3	1.6	5.9	2.7	2.2*
Complications of perinatal period	2.3	0.8	4.2	1.4	3.1*
Rheumatic and other valvular heart disease	2.0	0.3	10.7	0.5	22.7*
Other(j)	8.8	8.2	47.6	13.6	3.5*
Total avoidable	**100.0**	**100.0**	**656.3**	**164.5**	**4.0***
Total number of avoidable deaths	**4,769**	**57,980**			
Total number of deaths people aged 0-74 years	**6,547**	**85,790**			
Total number of deaths	**7,692**	**230,097**			

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

Source: AIHW analysis of National Mortality Database

Chapter 5 Determinants of Health (Tier 2)

Tier 2 consists of measures of the determinants of health status—factors outside the health system that impact on the health of Aboriginal and Torres Strait Islander peoples. The 5 domains identified for this Tier are: environmental factors, socio-economic factors, community capacity, health behaviours and person-related factors. Strategies to address these issues require coordinated actions across government portfolios and active engagement of Aboriginal and Torres Strait Islander communities. Portfolio areas with specific leadership responsibilities for particular measures include:

Health

- tobacco use (2.18)
- tobacco smoking during pregnancy (2.19)
- environmental tobacco smoke (2.03)
- risky and high risk alcohol consumption (2.20)
- drug and other substance use including inhalants (2.21)
- physical activity (2.22)
- dietary behaviours (2.23)
- breastfeeding practices (2.24)
- prevalence of overweight and obesity (2.26)
- unsafe sexual practices (2.25)

Housing and Infrastructure

- access to functional housing with utilities (2.01)
- overcrowding in housing (2.02)
- housing tenure type (2.09)

Education

- years 3, 5 and 7 literacy and numeracy (2.04)
- years 10 and 12 retention and attainment (2.05)
- educational participation and attainment of Aboriginal and Torres Strait Islander adults (2.06)

Economic and social security portfolios

- employment status including CDEP participation (2.07)
- income (2.08)
- index of disadvantage (2.10)

Justice

- community safety (2.13)
- contact with the criminal justice system (2.14)

Other

- child protection (2.15)
- transport (2.16)
- access to traditional lands (2.17)

Many of the implications and policy questions raised by Tier 2 measures relate to the ability of governments, Aboriginal and Torres Strait Islander peoples and all Australians to improve the circumstances in which Aboriginal and Torres Strait Islander peoples live.

2.01 Access to functional housing with utilities

WHY IS IT IMPORTANT? Research on housing and health shows a relationship between inadequate housing and related infrastructure, and poor health outcomes (Atkinson et al. 2007). For Aboriginal and Torres Strait Islander peoples, lack of access to water, sanitation and electricity services is associated with higher rates of infectious diseases (ABS & AIHW 2008).

The human right to water 'entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. An adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements' (Committee on Economic Social and Cultural Rights 2002). Internationally, poor water supply, sanitation and personal and domestic hygiene were estimated to account for 7 per cent of the total burden of disease measured in the *Global Burden of Disease Study* (Vos et al. 2007). These determinants of health outcomes were second only to malnutrition as a major risk factor category. An adequate and reliable supply of water is required for washing people, food, kitchen utensils, and clothes.

A functional sewerage system prevents sewerage from contaminating drinking water, and reduces the risks of infectious diseases. Waste water in the living environment can be a source of infection for diseases such as diarrhoea and hepatitis (FaCSIA 2003).

A power supply such as electricity/gas contributes to health through improved nutrition by ensuring food is safely stored through refrigeration, prepared and cooked appropriately. Providing access to internet, radio and televisions can enable easier access to health promotion messages. Avoiding less safe forms of fuel for cooking and heating may improve indoor air quality and decrease the risk of harm from fire.

There is evidence that Aboriginal and Torres Strait Islander populations suffer a disproportionate impact from both increased exposures to environmental hazards and decreased access to environmental health services. Aboriginal and Torres Strait Islander peoples are more likely to live in conditions considered to be unacceptable by general Australian standards. This includes overcrowding, poorly maintained buildings, high housing costs relative to income and a lack of basic environmental health infrastructure, such as adequate sanitation, water supplies and appropriate housing.

FINDINGS: In the *2006 Community Housing and Infrastructure Needs Survey* (CHINS), 1,187 discrete Aboriginal and Torres Strait Islander communities were surveyed (ABS 2007c). These communities had a population of 92,960 people. Just over half of these people (52%) relied on bore water as their main source of water supply. This proportion was down from 65% in 2001. Over the same period there was an increase in the proportion of the discrete communities' population whose main source of drinking water was a connection to a town water supply, from 17% in 2001 to 30% in 2006. Very few communities (9 with a population of 20 people) reported they had no organised water supply.

More detailed analysis is available for 366 communities that were larger or were independently administered. Sixty-nine communities (19%), with a combined population of 21,291 usual residents, experienced 5 or more interruptions to water supply in the 12 months prior to survey. For 22% of the 366 communities surveyed, the duration of the longest water supply interruption was 2 days or more.

Of the 164 communities that were not connected to a town water supply and had their drinking water tested for levels of microbiological agents, drinking water failed water quality tests for 48 communities (24% of the reported usual population). Test results were not known for 16 communities (10%) that had their water tested. The proportion of communities whose water failed testing was lower than in 1999 (34%) and 2001 (33%).

There were 4,796 people in 45 discrete Indigenous communities, not connected to a town water supply, where drinking water was not sent away for testing in the 12 months prior to the 2006 survey.

Community generators supplied electricity for 377 Indigenous communities (32%). There was an increase since 2001 (from 21% to 23%) in the proportion of communities whose main source of electricity was the state grid or other transmitted supply. In 2006, 212 communities (18%) relied on solar or solar hybrid sources but this proportion was higher (24%) in smaller communities of fewer than 50 people. Thirty-two communities, all but 1 having a population of fewer than 50 persons, reported no organised electricity supply compared with 80 communities in 2001.

In 2006, interruptions to the electricity supply in the 12 months prior to the CHINS survey occurred in 246 communities (76% of the discrete Indigenous communities with a reported population of 50 or more). This was slightly lower than in 2001 and 1999 when interruptions were reported for 82% and 81%

respectively. Approximately one-third (32%) of the larger communities experienced fewer than 5 electricity interruptions, while 12% had experienced 20 or more interruptions in the previous 12 months. In 2006, approximately 26% of communities experienced interruptions to electricity supply lasting longer than 24 hours. This was higher than that reported in 2001 (13%) and 1999 (14%).

The number of discrete Indigenous communities connected to a town sewerage system increased from 89 in 2001 to 121 in 2006 (10% of communities). Septic tanks remained the most commonly used sewerage disposal system (694 or 58% of all communities). Approximately 1,969 people were living in discrete Indigenous communities in 2006 that did not have an organised sewerage system. A further 3,703 people relied on pit toilets for their sewerage. The proportion of discrete Indigenous communities in very remote areas without an organised sewerage system dropped from 8% (86 communities) in 2001 to 2% (20 communities) in 2006.

In 2006, 142 discrete Indigenous communities (38%) reported sewerage system overflows or leakages in the previous 12 months. Of these 82 (22%) reported up to 4 overflows/leakages and 14 (4%) reported 20 or more overflows/leakages. These were most common in discrete Indigenous communities with septic tanks with leach drains as the main sewerage system. In 22% of communities the leakages or outflows had continued for longer than 48 hours.

In 2002, approximately 99% of Indigenous households reported that they had working facilities for washing people, 98% reported working facilities for washing clothes/bedding, 95% reported working facilities for storing/preparing food and 99% reported working sewerage systems.

This varied considerably by remoteness with almost one-quarter of Aboriginal and Torres Strait Islander people in very remote communities reporting a lack of working facilities for the storage and preparation of food.

IMPLICATIONS: The NSFATSIH acknowledges that no one organisation, level of government or sector has responsibility for environmental health (Key Results Area Five: Environmental Health). The strategy identifies the need to better coordinate all parties, including the range of government portfolios and jurisdictions with responsibility for health, housing, water, sewerage.

Initiatives are evident in the housing and community services portfolio areas. In May 2001, Housing Ministers endorsed a 10-year statement on directions for Indigenous housing reform called *Building a Better Future: Indigenous Housing to 2010* (Australian Housing Ministers Conference 2001). This statement includes among its 4 objectives the achievement of safe, healthy and sustainable housing.

A National Indigenous Housing Guide (Commonwealth Department of Families 2003; FaCSIA 2003; FaCSIA 2007) provides a practical tool to help ensure that housing health hardware (the physical infrastructure necessary to keep healthy) is safe, functional and sustainable. Houses will be designed, constructed and maintained to support Healthy Living Practices, adopted from the environmental health review *Uwankara Palyanyku Kanyintjaku*. The first 4 of 9 healthy living practices are monitored.

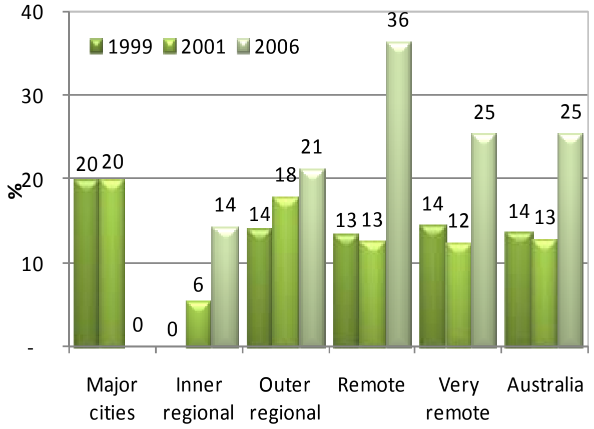
The Fixing Houses for Better Health (FHBH) program, funded by the Department of Families, Housing, Community Services and Indigenous Affairs, is conducted by Healthabitat Pty Ltd in Indigenous communities across Australia in conjunction with state governments and Indigenous organisations.

Table 34 – Main source of drinking water, discrete Indigenous communities, by state/territory, 2006

	Communities										Communities		Population	
	NSW		Qld		WA		SA		NT		Australia			
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Connected to town supply	51	89.5	11	8.9	43	15.9	19	20.9	84	13.1	209	17.6	28,084	30.2
Bore water	2	3.5	32	25.8	197	72.7	48	52.7	414	64.6	694	58.5	48,511	52.2
Rain water tank(s)	2	3.5	24	19.4	—	—	6	6.6	8	1.2	41	3.5	2,378	2.6
River/reservoir	2	3.5	24	19.4	5	1.8	3	3.3	22	3.4	57	4.8	11,667	12.6
Well or spring	—	—	21	16.9	2	0.7	1	1.1	15	2.3	39	3.3	887	1.0
Carted water	—	—	4	3.2	2	0.7	—	—	21	3.3	27	2.3	637	0.7
Other organised water supply	—	—	1	0.8	1	0.4	1	1.1	—	—	3	0.3	104	0.1
No organised water supply	—	—	—	—	1	0.4	1	1.1	7	1.1	9	0.8	20	0.02
Total	57	100.0	124	100.0	271	100.0	91	100.0	641	100.0	1,187	100.0	92,960	100.0

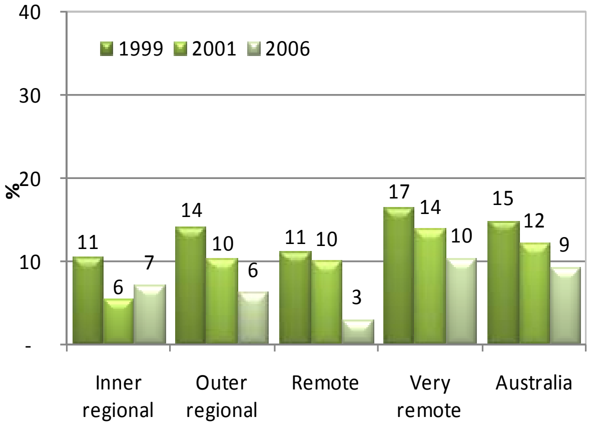
Source: ABS 2007

Figure 63 – Proportion of discrete Indigenous communities, with reported usual population 50 or more, experiencing interruptions to electricity supply greater than 24 hours in the previous 12 months, by remoteness, 1999, 2001 & 2006



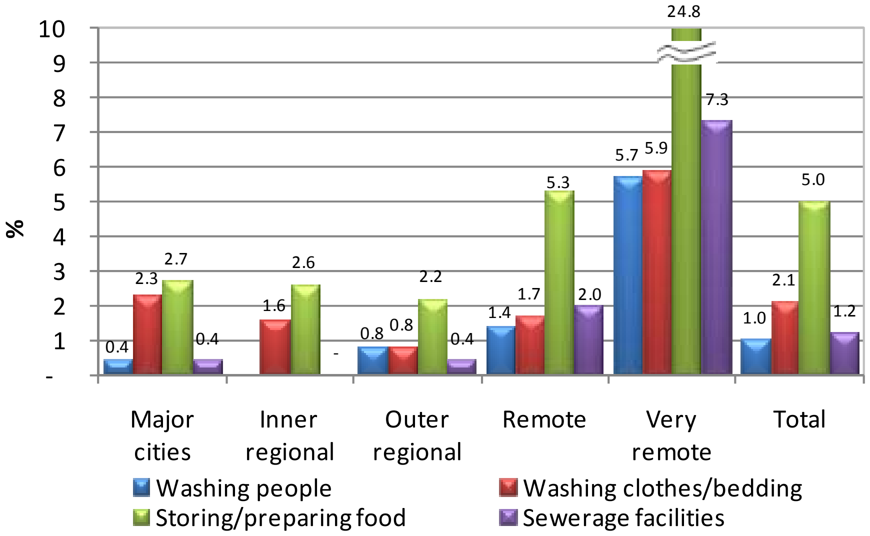
Source: AIHW analysis of ATSIC, Community Housing and Infrastructure Needs Survey 1999 and 2001; AIHW analysis of ABS Community Housing and Infrastructure Needs Survey 2006

Figure 64 – Proportion of discrete Indigenous communities, with reported usual population 50 or more, experiencing 10 or more sewerage system overflows or leakages in previous 12 months, by remoteness, 1999, 2001 and 2006



Source: AIHW analysis of ATSIC, Community Housing and Infrastructure Needs Survey 1999 and 2001; ABS Community Housing and Infrastructure Needs Survey 2006

Figure 65 – Proportion of Indigenous households reporting lack of working facilities for each of the first 4 Healthy Living Practices by remoteness, 2002



Source: (SCRGSP 2003), 2002 National Aboriginal and Torres Strait Islander Social Survey

2.02 Overcrowding in housing

WHY IS IT IMPORTANT? The effects of overcrowding in housing include inadequate access to facilities, which may increase the risk of infectious diseases such as meningitis, acute rheumatic fever, tuberculosis, and skin and respiratory infections (AIHW 2005b). However, the impact of overcrowding occurs in combination with other environmental health factors such as water quality and sanitation. One example is the contribution of overcrowding in housing to failure of sewerage systems. Septic tanks, used in many Indigenous communities, can leak or overflow if they are used by more people than they are designed for.

Overcrowding can potentially affect health in different ways. Overcrowding may increase psychological stress resulting in increased physical or verbal abuse. It may also adversely affect opportunities for student household members to study. However, the presence of more people may decrease social isolation, which may have a positive impact on health (Booth & Carroll 2005). Social and biological factors may also moderate the effects of overcrowding (e.g., vaccination with influenza and nutrition for general immunity to bacterial infections).

As a higher proportion of Aboriginal and Torres Strait Islander peoples live in overcrowded conditions than other Australians, they face a greater risk of experiencing the ill-effects that overcrowding can have on health.

FINDINGS: In 2006, there were 50,515 Aboriginal and Torres Strait Islander persons aged 18 years and over living in overcrowded households, i.e., households requiring one or more additional bedroom according to the Canadian National Occupancy Standard for housing appropriateness. This represented 25% of all Indigenous persons aged 18 years and over. According to the same standard, 5% of other Australians aged 18 years and over were living in overcrowded households in 2006. Approximately 14% of Indigenous people were living in households that required 2 or more additional bedrooms.

Overcrowding increases with remoteness. In 2006, it affected 54% of Indigenous Australians aged 18 years and over living in remote or very remote areas, 21% in outer regional areas, 14% in inner regional areas and 13% in major cities. As a reflection of this, proportions also varied by jurisdiction. The Northern Territory had the highest proportion (64%), followed by Western Australia (30%) and Queensland (25%).

Between 2001 and 2006, the proportion of Indigenous persons aged 18 years and over living in overcrowded households declined from around 29% to 25%. Over the same period, the proportion of non-Indigenous persons living in overcrowded households also declined, from 6% to 5%.

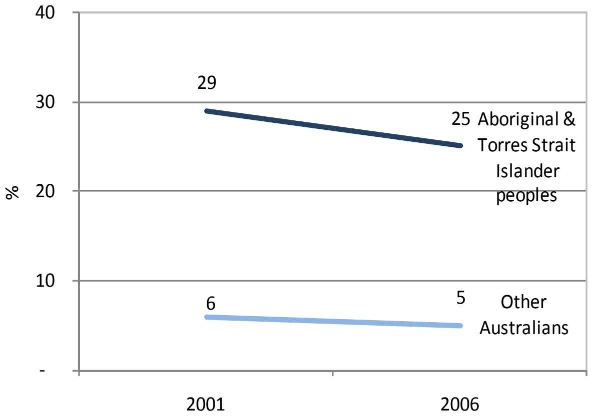
The 2006 census recorded approximately 20,700 Indigenous households (14%) that were overcrowded according to the Canadian National Occupancy Standard, slightly fewer than in 2001. Household overcrowding varies by tenure type. In 2006, approximately 40% of Indigenous households in co-operative/community/church group housing, 16% of state/territory housing authority households, 11% of private and other renter households and 7% of home owners or purchaser households were overcrowded.

The National Aboriginal and Torres Strait Islander Health Survey confirms the association between overcrowding and socio-economic status. In 2004–05, Indigenous Australians aged 15 years and over were more likely to be living in overcrowded households if their household income was in the lowest income quintile rather than the highest income quintile (27% compared with 1%); if the highest year of school completed was Year 9 or below than if Year 12 was the highest year of school completed (28% compared with 15%); and if they were unemployed or not in the labour force than if they were employed (34% and 29% compared with 18%).

IMPLICATIONS: For some Aboriginal and Torres Strait Islander peoples, living with extended family groupings may be culturally desirable. This creates challenges for the provision of appropriate housing (AIHW 2005b). The NSFATSIH includes a Key Result Area on environmental health. This aims to improve standards of environmental health including housing and essential services in Aboriginal and Torres Strait Islander communities commensurate with the standards of the wider Australian community.

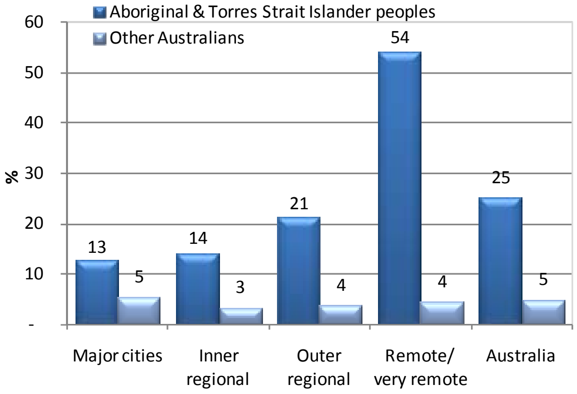
The housing sector has developed strategies targeting housing for Aboriginal and Torres Strait Islander peoples, and includes health outcomes as a specific objective. For instance, *Building a Better Future: Indigenous Housing to 2010* (Australian Housing Ministers Conference 2001) aims to achieve safe, healthy and sustainable housing through implementation of the *National Framework for the Design, Construction and Maintenance of Indigenous Housing*.

Figure 66 – Proportion of people aged 18 years and over living in overcrowded households, by Indigenous status, 2001 and 2006



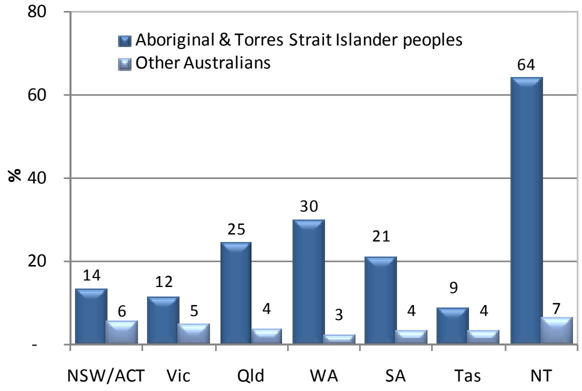
Source: ABS and AIHW analysis of 2001 and 2006 Census data

Figure 67 – Proportion of persons 18 years and over living in overcrowded households, based on the Canadian National Occupancy Standard, by Indigenous status and remoteness, 2006



Source: ABS and AIHW analysis of 2006 Census data

Figure 68 – Proportion of persons aged 18 years and over living in overcrowded households according to the Canadian National Occupancy Standard, by Indigenous status and state/territory, 2006



Source: ABS and AIHW analysis of 2006 Census data

Table 35 –Proportion of overcrowded Indigenous households, using the Canadian National Occupancy Standard, by tenure type and by state and territory, 2006

Tenure type	NSW & ACT	Vic	Qld	WA	SA	Tas	NT	Aust
Home owner/purchaser	6.6	6.0	7.9	7.2	6.1	4.8	11.6	6.9
Renter:								
Mainstream public housing	11.4	12.3	21.5	20.5	14.5	10.7	24.9	15.9
Housing co-operative/ community/ church	17.9	15.6	33.0	41.7	36.9	8.7	60.8	39.9
Private	11.0	10.1	12.8	9.5	9.1	9.2	16.4	11.4
Landlord type not stated	14.9	13.3	24.1	17.9	14.5	7.7	43.3	19.0
Other tenure types	11.2	11.4	20.7	19.4	14.6	11.4	39.9	18.1
Total	9.8	9.0	14.8	16.0	11.8	7.2	38.5	13.6

Source: ABS and AIHW analysis of 2006 Census data

2.03 Environmental tobacco smoke

WHY IS IT IMPORTANT? Environmental tobacco smoke or passive smoking is now firmly established as a significant cause of morbidity and mortality. The first evidence of harm to children emerged in the early 1970s (Colley 1974; Harlap & Davies 1974; Leeder et al. 1976), and the first evidence of increased lung cancer risk in 1981 (Hirayama 1981). By 1986 the US Surgeon General (Centers for Disease Control and Prevention 2006) and the Australian National Health and Medical Research Council (NHMRC 1986; NHMRC 1997) were able to conclude without doubt that passive smoking was harmful (VicHealth Centre for Tobacco Control 2001).

Environmental tobacco smoke is a significant contaminant of indoor air. There is strong and consistent evidence that passive smoking increases a non-smoker's risk of lung cancer and ischaemic heart disease. Passive smoking is also associated with increased risk of respiratory disease in adults (NHMRC 1997) and otitis media in children (Jacoby et al. 2008).

The home is the most important source of exposure to environmental tobacco smoke for children, and young children living with parents or relatives who smoke are particularly vulnerable. Passive 'environment' smoking of tobacco around a new born child is considered to be one of the major risk factors for sudden infant death syndrome (SIDS or cot death). Exposure to second hand smoke in the atmosphere also increases an infant's risk of ear infections, and developing asthma (AMA 1999).

The benefits of reducing exposure to environmental tobacco smoke include reducing the incidence of short, medium and long-term health effects in non-smokers, and reducing the uptake of smoking in children of smokers (VicHealth Centre for Tobacco Control 2001).

FINDINGS: In 2004–05, there were around 119,000 Aboriginal and Torres Strait Islander children aged 0–14 years living in households with a regular smoker, representing 66% of all Aboriginal and Torres Strait Islander children in this age range. In comparison, 35% of non-Indigenous children within the same age range lived in households with a regular smoker.

Between 2001 and 2004–05 there was a reduction from 70% to 66% in the proportion of Indigenous children aged 0–14 years living in households with a regular smoker. For non-Indigenous children there was little change over this time period.

Approximately 28% of Aboriginal and Torres Strait Islander children aged 0–14 years were living in households with a regular smoker who smoked at home indoors compared with 9% of non-Indigenous children of the same age.

A higher proportion of Aboriginal and Torres Strait Islander children aged 0–14 years in very remote areas lived in households with a regular smoker (80%) and in households with a regular smoker who smoked at home indoors (41%) than Indigenous children in major cities, inner regional, outer regional or remote areas.

Aboriginal and Torres Strait Islander children in non-remote areas were 3 times as likely to live in households with a regular smoker who smoked at home indoors as non-Indigenous children. The ratio was higher (3.6) in major cities than in regional areas (2.4).

The proportion of Aboriginal and Torres Strait Islander children aged 0–14 years who lived in households with regular smokers ranged from 53% in Victoria to 82% in the Northern Territory. The proportion of Aboriginal and Torres Strait Islander children aged 0–14 years who lived in households with a regular smoker who smoked at home indoors ranged from 24% in Queensland and Western Australia to 45% in the Northern Territory.

IMPLICATIONS: The policy implications for addressing the dangers of environmental tobacco smoke are similar to those for tobacco smoking in general (measure 2.18) and tobacco smoking during pregnancy (measure 2.19). Exposure to environmental tobacco smoke should be monitored in conjunction with those measures.

The NSFATSIH identifies smoking as one of the immediate priority areas for action and supports the development of initiatives designed specifically for Aboriginal and Torres Strait Islander peoples. The *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009 and the National Tobacco Strategy* provide a framework to improve comprehensive approaches to reduce smoking-related harm among Aboriginal and Torres Strait Islander peoples, including environmental tobacco smoke in the workplace and at home.

In May 2008, the Australian Government announced the new Indigenous Tobacco Control Initiative which aims to address the high rates of tobacco smoking in the Indigenous population by investing $14.5 million over 4 years from 2008–09 until 2011–12. A successful outcome would reduce the high proportion of children who are exposed to environmental tobacco smoke in their households.

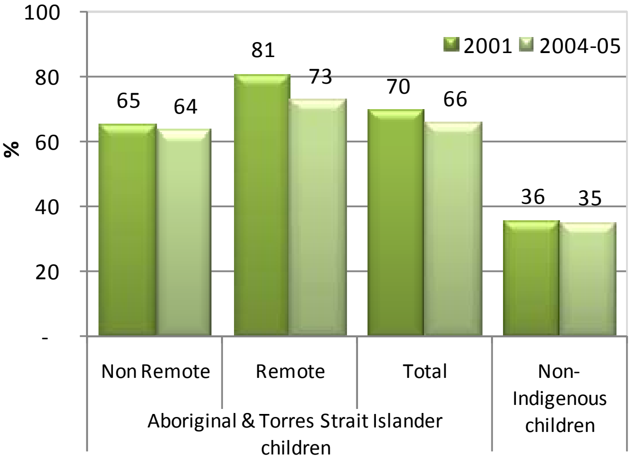
Table 36 – Children aged 0–14 years in households with a regular smoker, by Indigenous status of children, 2004–05

	Aboriginal and Torres Strait Islander children aged 0-14	Non-Indigenous children aged 0-14
	%	%
Regular smokers in household		
No	31*	65
Yes	66*	35
Other	3*	0
Whether any regular smokers smoke at home indoors		
No	38*	26
Yes	28*	9
Other	34*	65
Total Number	**180,669**	**3,760,010**

* Difference between Indigenous/non-Indigenous groups is statistically significant at the p<.05 level.

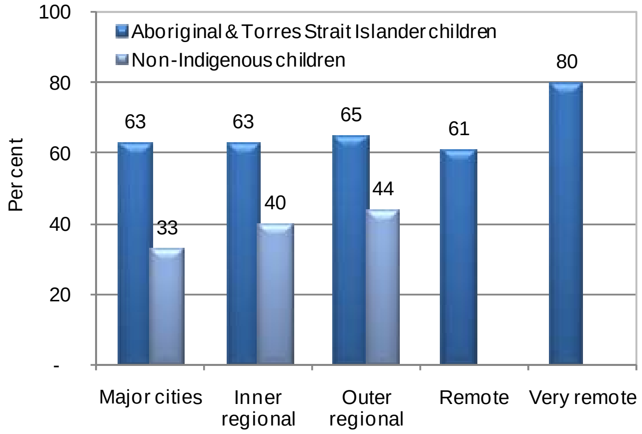
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 69 – Children aged 0–14 years in households with regular smokers, by remoteness and Indigenous status, 2001 & 2004–05



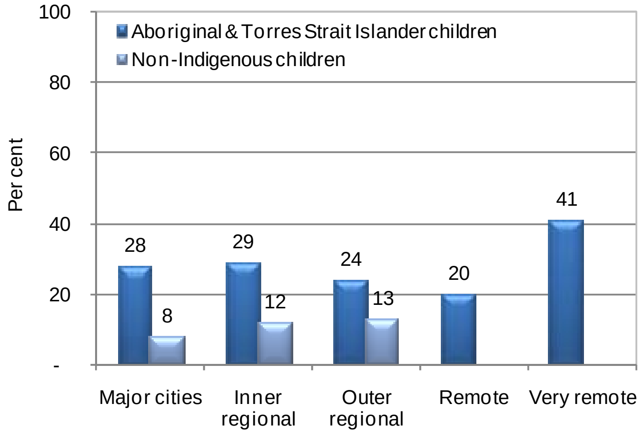
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey (NHS) and 2001 NHS (Indigenous supplement)

Figure 70 – Children aged 0–14 years in households with a regular smoker in the household, by Indigenous status and remoteness area, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 71 – Children aged 0–14 years in households with a regular smoker who smokes at home indoors, by Indigenous status and remoteness area, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

2.04 Years 3, 5 and 7 literacy and numeracy

WHY IS IT IMPORTANT? Education is a key factor for improving the health and wellbeing of Aboriginal and Torres Strait Islander peoples. Access to education is an important determinant of health and links with other social factors such as poverty, unemployment, quality of housing and access to primary health services. Furthermore there is a two-way association between health and education. People who have low educational attainment tend to have poorer health, fewer opportunities, low incomes and lower employment prospects. In turn, poorer health is associated with lower educational attainment impacting unfavourably upon income and employment (Fred Hollows Foundation 2006; ABS & AIHW 2008).

Early educational experiences are important as they influence future academic performance (Frigo et al. 2003; SCRGSP 2007). Students who do not attain the national literacy and numeracy benchmark standards for example will have difficulty progressing through school and are less likely to enter higher education. Furthermore, school leavers who lack fundamental skills in literacy and numeracy face lower employment prospects. Poor educational outcomes of Indigenous Australian students apparent in upper primary/lower secondary school are symptomatic of inadequate educational progress in the early years of schooling (Frigo et al. 2003). Aboriginal and Torres Strait Islander primary school students have considerably lower literacy and numeracy attainment than non-Indigenous students. Improvements in this area are crucial to the achievement of headline educational outcomes such as Years 10 and 12 retention and attainment.

FINDINGS: In 2006, approximately 80% of Indigenous students achieved the Year 3 benchmark in reading, 66% in Year 5 and 63% in Year 7. Around 78% of Indigenous students achieved the writing benchmark in Year 3, 77% in Year 5 and 74% in Year 7. In terms of numeracy, 76% of Indigenous students achieved the benchmark in Year 3, 66% in Year 5 and 48% in Year 7. The proportions of Aboriginal and Torres Strait Islander students achieving reading, writing and numeracy benchmarks in each of Years 3, 5 and 7 remain below corresponding proportions of all students.

Between 1999 and 2006 there was a significant increase in the proportion of Indigenous students achieving the Year 3 reading and writing benchmarks (10% and 18% respectively). Between 2000 and 2006 there was also a significant increase in the proportion of Indigenous students achieving the Year 5 numeracy benchmark (7% over this period). There was also a significant improvement for total students in these areas. Over this period there were no other significant changes for Indigenous students and total students against these benchmarks in Years 3, 5 or 7. (Note in 2004 there was a spike in the data in Queensland that affected the national results for that year.)

Fewer Year 7 students achieve the reading, writing and numeracy benchmarks than Year 3 students. This is particularly evident for Indigenous students in numeracy which drops from 76% in Year 3 to 48% in Year 7.

Proportions of Aboriginal and Torres Strait Islander students achieving literacy and numeracy benchmarks in 2006 varied widely between jurisdictions. The Northern Territory results were consistently below the national proportions while Western Australia and South Australia were also lower on some measures.

In 2006, the proportion of Indigenous students who achieved the Year 3, Year 5 and Year 7 reading and writing benchmarks and the Year 5 and Year 7 numeracy benchmarks were highest in metropolitan areas and lowest in very remote areas of Australia.

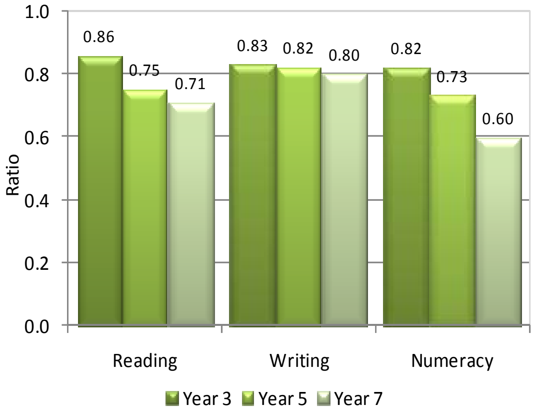
IMPLICATIONS: A specific target agreed by COAG at its December 2007 meeting aims to close the gap in this area of achievement for Aboriginal and Torres Strait Islander children. Specifically, governments have agreed to halve the gap in literacy and numeracy achievement between Aboriginal and Torres Strait Islander students and other students within a decade in a partnership between all levels of government and with Indigenous communities.

COAG has also agreed that in 5 years all Aboriginal and Torres Strait Islander 4 year olds in remote Indigenous communities will have access to a quality early childhood education program.

Improvements for Aboriginal and Torres Strait Islander students in reading and writing are occurring faster than for total students, particularly for students in Year 3. Numeracy has seen improvements for Year 5 but proportions achieving Year 7 benchmarks are still low. The implications of these trends should be considered in conjunction with the education sector. Many older Indigenous Australians have low education attainment and negative experiences at school which may act as barriers to achievement by students. Low expectations by families, communities and schools can impact on academic achievement. Fewer Indigenous Australian children have the opportunity to attend a pre-school, and so are less school ready than children who have attended pre-schools. Indigenous students have lower attendance rates than non-Indigenous students (ACER 2004; Fred Hollows Foundation 2006; Zubrick et al. 2006).

Indigenous students at high risk of clinically significant emotional and behavioural difficulties are less likely to achieve academic milestones (Zubrick et al. 2006). Child hearing loss (see measure 1.12) will also impact on academic achievement. A longitudinal multi-school study conducted by Australian Council for Education Research (ACER 2004) found that a student's school's ability to adapt to the needs of Indigenous students accounted for much of the variation in academic outcomes by the students.

Figure 72 – Ratio of proportion of Indigenous students achieving literacy and numeracy benchmarks to corresponding proportion of all students, 2006



Source: Compiled from National Report on Schooling in Australia 2006, available through MCEETYA

Table 37 – Proportion of students achieving reading, writing and numeracy benchmarks, by Indigenous status, 1999–2006

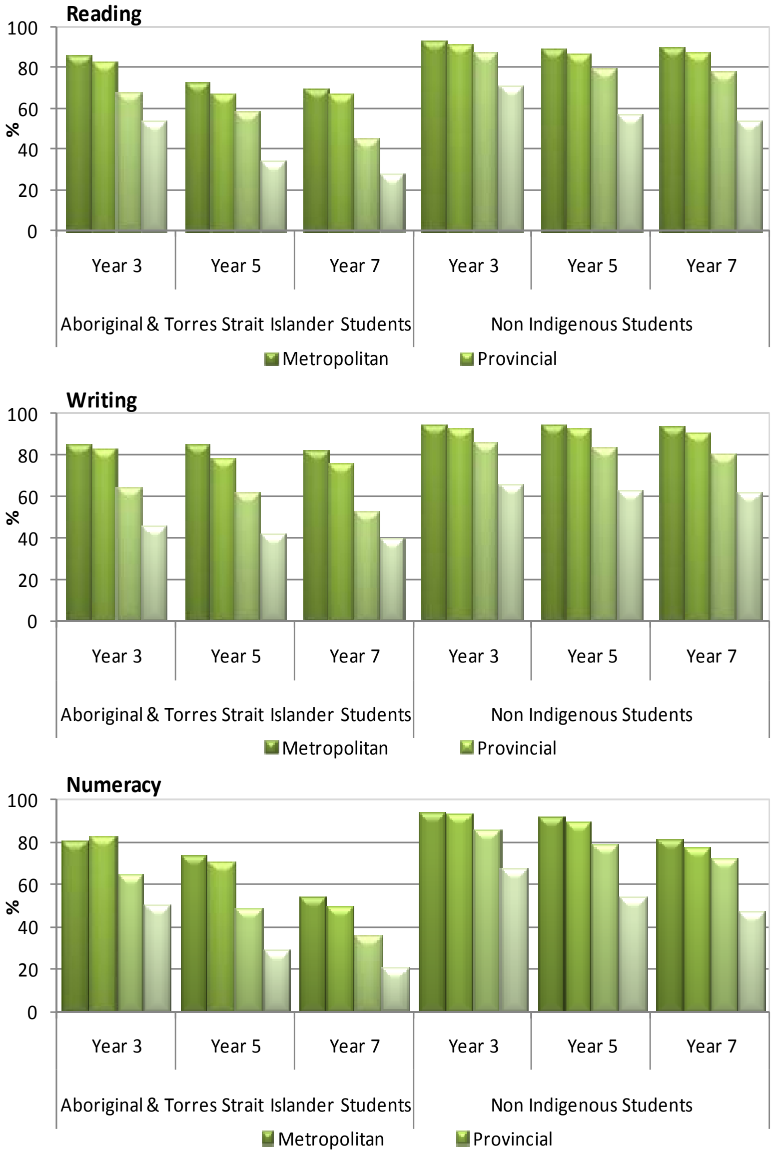
	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	Total Change
									%	%
Reading:										
Indigenous										
Year 3	73.4	76.9	72.0	76.7	78.8	82.9	78.0	79.7	1.0*	9.6
Year 5	58.7	62.0	66.9	68.0	67.7	69.4	62.8	66.3	0.8	9.1
Year 7	n.a.	n.a.	60.1	65.3	66.5	71.0	63.8	63.2	0.4	3.7
All students										
Year 3	89.7	92.5	90.3	92.3	92.4	93.0	92.7	93.0	0.4*	3.0
Year 5	85.6	87.4	89.8	89.3	89.0	88.7	87.5	88.4	0.2	1.6
Year 7	n.a.	n.a.	88.4	89.1	89.4	91.0	89.8	89.2	0.2	1.2
Writing:										
Indigenous										
Year 3	66.9	65.0	67.8	77.1	75.2	76.8	74.0	77.9	1.8*	18.3
Year 5	74.6	74.3	79.9	76.4	79.6	81.7	74.3	77.0	0.3	2.8
Year 7	n.a.	n.a.	74.3	71.6	74.4	78.8	72.3	73.8	0.1	0.8
All students										
Year 3	91.9	90.0	89.5	93.6	92.2	92.9	92.8	93.9	0.4*	3.3
Year 5	93.0	92.5	94.0	93.6	94.1	94.2	93.3	93.8	0.1	1.0
Year 7	n.a.	n.a.	92.6	90.7	92.1	93.6	92.2	92.4	0.1	0.8
Numeracy:										
Indigenous										
Year 3	n.a.	73.7	80.2	77.6	80.5	79.2	80.4	76.2	0.3	2.8
Year 5	n.a.	62.8	63.2	65.6	67.6	69.4	66.5	66.0	0.7*	6.8
Year 7	n.a.	n.a.	48.6	51.9	49.3	51.9	48.8	47.5	-0.3	-3.6
All students										
Year 3	n.a.	92.7	93.9	92.8	94.2	93.7	94.1	93.0	0.1	0.5
Year 5	n.a.	89.6	89.6	90.0	90.8	91.2	90.8	90.3	0.2*	1.4
Year 7	n.a.	n.a.	82.0	83.5	81.3	82.1	81.8	79.7	-0.5	-2.8

* Represents results with statistically significant increases or declines at the p<0.05 level over the periods for which data are available.

(a) Average annual change in proportions determined using linear regression analysis.

Source: AIHW analysis of National Report on Schooling in Australia 2006 available through MCEETYA

Figure 73 – Proportion of Year 3, 5 and 7 students achieving the reading, writing and numeracy benchmarks, by remoteness area and Indigenous status, 2006



Source: MCEETYA 2006.

2.05 Years 10 and 12 retention and attainment

WHY IS IT IMPORTANT? Education is a key factor in improving the health and wellbeing of Aboriginal and Torres Strait Islander peoples. Successful completion of Year 12 is critical to improving the economic and social status of Aboriginal and Torres Strait Islander peoples. Higher levels of education improve employment prospects, thus improving future income, standard of housing and access to health care (ABS 2002; SCRGSP 2007; ABS & AIHW 2008).

There is an established association between education and other socio-economic factors and health status. Generally, population groups with lower socio-economic status have poorer health than those with higher socio-economic status. Health care utilisation and the effectiveness of population health programs are also similarly affected by socio-economic factors.

Higher levels of education have been associated with reduced propensity to engage in health risk behaviours, particularly smoking, but marginally also for alcohol consumption. In addition, improved health literacy is associated with education. Research has shown that health outcomes are influenced by a person's ability to use a wide range of health-related materials (ABS 2008a). Research in the US (Wong et al. 2002) has also found that mortality from all-causes was higher for persons with fewer years of education particularly for smoking-related diseases. Persons without a high school education lost 12.8 potential life-years per person.

International literature has also documented improvements in child mortality associated with increased levels of maternal education and attributed this to a variety of factors, including improved understanding of and greater willingness to access health services (Caldwell 1979).

FINDINGS: Data for the reference year 2007, from the *National Schools Statistics Collection* (ABS 2008b), show that the apparent retention rate of full-time Aboriginal and Torres Strait Islander students from Year 7/8 to Year 10 was 91% compared with 99% for other students. In the same year, the apparent retention rate of full-time Aboriginal and Torres Strait Islander students from Year 7/8 to Year 12 was 43% compared with 76% for other students.

The apparent retention rates for Aboriginal and Torres Strait Islander females were similar to those for males from Year 7/8 to Year 10 (91% compared with 90%) but higher than males for retention from Year 7/8 to Year 12 (46% compared with 39%).

Apparent retention rates for Aboriginal and Torres Strait Islander full time students, from Year 7/8 to both Year 10 and Year 12, have continued to increase over the last 5 years. The rate to Year 10 increased from 86% in 2002 to 91% in 2007. The rate to Year 12 increased from 38% in 2002 to 43% in 2007.

The Australian Capital Territory and Tasmania had the highest retention rates of Aboriginal and Torres Strait Islander students from Year 7/8 to Year 10 (102% and 100% respectively), while the Northern Territory and New South Wales had the lowest (82% and 84% respectively). Retention rates of Aboriginal and Torres Strait Islander students from Year 7/8 to Year 12 were highest in the Australian Capital Territory (60%) and Queensland (57%) and were lowest in Western Australia (30%) and New South Wales (34%). Rates for Tasmania and the Australian Capital Territory should be interpreted with caution, due to the small size of these jurisdictions. Relatively small changes in student numbers can create large movements in retention rates. Some rates exceeded 100%, largely reflecting the movement of students from non-government to government schools in Years 11 and 12, and in the Australian Capital Territory, some New South Wales residents from surrounding areas enrolled in Australian Capital Territory schools during secondary school.

In 2007, approximately 63% of Indigenous Year 11 students went on to achieve a Year 12 certificate compared with 83% of non-Indigenous students. Between 1998 and 2007 there were no significant changes in attainment rates for Indigenous or non-Indigenous students.

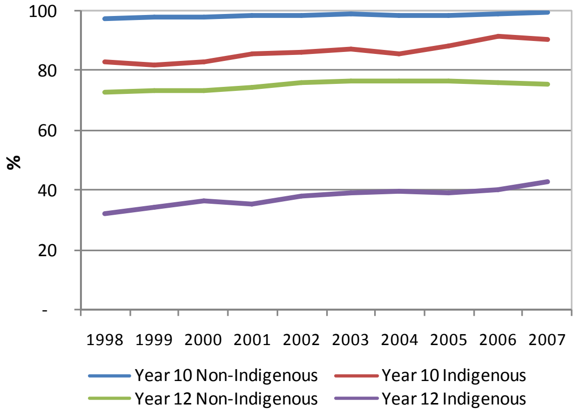
Attainment rates in 2007 were higher for females than for males in both the Aboriginal and Torres Strait Islander and other student populations. Approximately 65% of Indigenous females in Year 11 went on to achieve a Year 12 certificate compared with 62% of Indigenous males.

Attainment rates of Aboriginal and Torres Strait Islander students were highest in Tasmania (77%) and Queensland (76%), and were lowest in Western Australia (39%) and the Northern Territory (46%).

IMPLICATIONS: Important policy issues are physical access to education, availability of work after completion of school education, and community support for students. Consultations conducted for the 2006 report also stressed the importance of education for general life skills, not just for employment. They also identified the importance of appropriate safe places for study, highlighting difficulties experienced by students in crowded housing or in communities where education opportunities are not fostered.

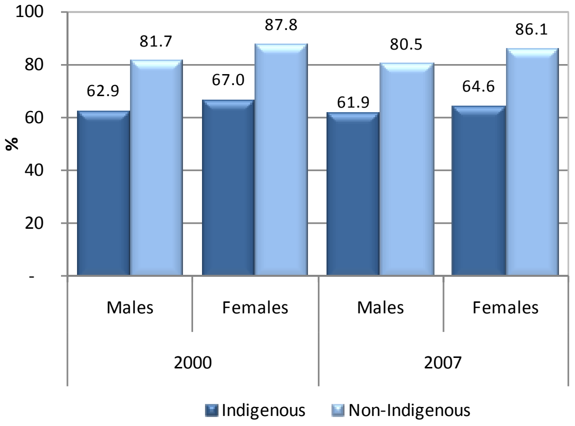
This measure should be examined in conjunction with other education participation, for instance TAFE education (see measure 2.06). The *National Aboriginal and Torres Strait Islander Education Policy* (DEEWR 2008) includes a number of goals relevant to this performance measure including equality of access, participation, involvement and outcomes for Aboriginal and Torres Strait Islander students. COAG has acknowledged that the pathway to closing the gap in Indigenous life outcomes is linked to economic development and improved education outcomes (COAG 2007). COAG agreed to a target to halve the gap in year 12 or equivalent attainment rates by 2020 (COAG 2008).

Figure 74 – Apparent Year 10 and Year 12 retention rates, by Indigenous status, 1998–2007



Source: AIHW analysis of ABS National Schools Statistics Collection

Figure 75 – Attainment rate, Year 11 to year 12 completion, by Indigenous status, 2000 and 2007



Source: AIHW analysis of ABS National Schools Statistics Collection

Table 38 – Apparent retention and attainment rates for Aboriginal and Torres Strait Islander students by jurisdiction and sex, 2007

	Aboriginal and Torres Strait Islander:									Non-Indigenous
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust.	Aust.
Year 7 to 10 - Apparent retention										
Males	84.0	84.2	95.3	94.1	88.8	96.0	123.8	82.1	89.9	98.6
Females	83.9	92.3	96.3	98.7	86.4	104.0	80.0	81.5	91.2	100.3
Total	84.0	88.3	95.8	96.2	87.6	99.8	102.4	81.8	90.5	99.4
Year 7 to 12 - Apparent retention										
Males	30.2	37.3	53.0	29.6	35.5	38.1	64.9	44.4	39.4	70.0
Females	37.8	54.8	60.2	29.4	51.5	54.3	55.6	47.1	46.4	81.4
Total	34.0	46.1	56.5	29.5	43.9	45.5	59.8	45.9	42.9	75.6
Year 11 to year 12 - Attainment										
Males	67.7	65.1	76.0	40.4	54.1	72.2	70.6	44.7	61.9	80.5
Females	72.2	73.3	75.7	37.3	71.9	80.8	71.4	47.6	64.6	86.1
Total	70.1	69.8	75.9	38.9	63.8	76.7	71.0	46.2	63.3	83.3

Source: AIHW analysis of ABS National Schools Statistics Collection (NSSC)

2.06 Educational participation and attainment of Aboriginal and Torres Strait Islander adults

WHY IS IT IMPORTANT? Education is a key factor in improving the health and well-being of Aboriginal and Torres Strait Islander peoples. Longitudinal studies show that people who go on to higher education (universities, colleges of advanced education, and other tertiary institutions) and graduate with a degree or diploma are more likely to obtain full-time work and earn higher incomes compared with those who do not. Likewise people who complete a course at a Technical and Further Education (TAFE) institution are more likely to be employed after the completion of their course than they were before. Those undertaking TAFE education who are already employed are more likely to receive a promotion and/or an increase in income after completion of their TAFE course (SCRGSP 2007).

There is an association between socio-economic factors such as education, employment, income and health status. Generally, population groups with lower socio-economic status have poorer health than those with higher socio-economic status. Reporting socio-economic factors affecting health such as education level will help to inform public policy and encourage whole of government collaboration to address health inequalities.

Research has shown that health outcomes are influenced by a person's ability to use a wide range of health-related materials. The mean health literacy score for Indigenous Australians in 2006 was lower than for non-Indigenous Australians. Lower health literacy is likely to be a barrier to health promotion activities based around health education (Centre for Medicare Education 2000; National Centre for Education and Training Statistics & Australian Bureau of Statistics 2008).

International research has demonstrated that maternal education is a determinant of child health and survival (ABS & AIHW 2008). There has been little conclusive research undertaken in the Indigenous Australian context on this issue (Ewald & Boughton 2002).

FINDINGS: In 2006, 22% of Aboriginal and Torres Strait Islander persons aged 15–24 years were currently attending school compared with 26% of non-Indigenous Australians in this age group. Year 12 was the highest level of school completed by 24% of Aboriginal and Torres Strait Islander adults compared with 49% of non-Indigenous adults. The proportion of Aboriginal and Torres Strait Islander adults who have completed Year 12 increased from 21% in 2001. Younger age groups were more likely to have completed Year 12. Amongst the youngest group, those aged 18 to 24 years, the proportion who had completed Year 12 was 36%. Young people in remote areas were less likely than those in non-remote areas to have completed Year 12 (14% compared with 27%).

In 2006, approximately 30% of Aboriginal and Torres Strait Islander people aged 25–64 years reported they had a non-school qualification compared with 55% of non-Indigenous Australians of the same age. A slightly higher proportion of Indigenous Australians were studying at TAFE, particularly in the older age groups, compared with non-Indigenous Australians. However, a slightly smaller proportion of Indigenous Australians aged 25–64 years had completed a certificate qualification compared with non-Indigenous Australians (18% and 21% respectively). Fewer Indigenous Australians were currently studying at University/Other higher education institutions in 2006 compared with non-Indigenous Australians (3% and 5% respectively), particularly in the younger age groups. Much lower proportions of Aboriginal and Torres Strait Islander persons had a bachelor degree or above as their highest level of non-school qualification (6%) compared with non-Indigenous Australians (23%). These Census data report lower rates of non-school qualifications compared with surveys, particularly in relation to certificates.

Vocational education and training (VET) courses are providing large numbers of Aboriginal and Torres Strait Islander peoples with non-school education training opportunities. During the year 2006, there were approximately 13,924 course completions in the VET sector by Indigenous Australians aged 15 years and over. This constitutes 4% of the Indigenous population aged 15 years and over compared with 2% for other Australians.

Between 1996 and 2006, there was a statistically significant increase in the proportion of Indigenous students and other students who had completed a course in the VET sector, however, the magnitude of the increase among Indigenous students was considerably higher. In 2006, the VET load pass rate for Indigenous students was 67% compared with 80% for non-Indigenous students.

During the year 2006, 0.6% of Aboriginal and Torres Strait Islander Australians completed a course in the higher education sector compared with 1% of other Australians. In the 22–24 year age group, 1.7% of Indigenous Australians completed a course in the higher education sector compared with 10.4% of other Australians. The gap narrows in the older age groups indicating that Indigenous students completing higher education courses have an older age profile than other students.

IMPLICATIONS: A specific target agreed to by COAG aims to halve the gap for Aboriginal and Torres Strait Islander students in Year 12 or equivalent attainment rates by 2020. The NSFATSIH's Key Result Area Six aims to develop partnerships with other sectors, and in the case of this measure to support liaison between health and education portfolios at national, state, territory and regional levels.

The *National Aboriginal and Torres Strait Islander Education Policy* (DEST 2005) includes a number of goals relevant to this performance measure including equality of access, participation, involvement and outcomes for Aboriginal and Torres Strait Islander students.

The *National Vocational Education and Training Strategy 2004–2010* includes a key objective that Aboriginal and Torres Strait Islander Australians will have skills for viable jobs and that their learning culture will be shared. *Partners in a Learning Culture—the Way Forward*, the revised blueprint for Indigenous Australians, is the nationally agreed strategy for action to improve training opportunities and employment outcomes for Indigenous Australians in VET.

The Australian Government is the primary funding source and developer of policy relating to the higher education sector. Institutions receiving operating grants for Aboriginal and Torres Strait Islander education have an obligation to promote educational equity. The Australian Government supplements the higher education institutions' operating grants through the *Indigenous Support Programme* (DEST 2005).

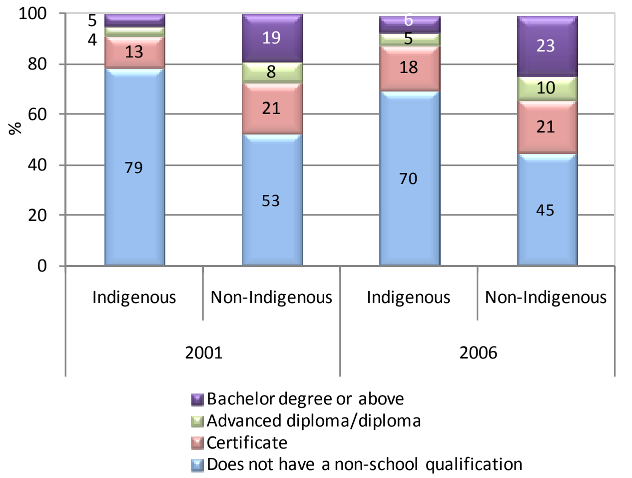
Table 39 – Persons aged 15 years and over: Educational institution currently attended by Indigenous status and age group, Australia 2006

Educational Participation	15-24 years		25-34 years		35-44 years		45 years and over		Total		
	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Rate Ratio
	%	%	%	%	%	%	%	%	%	%	
Secondary school	22	26	. .	. .	. .	. .	. .	. .	7	5	1.5
Technical or Further Education	6	8	4	4	3	3	2	1	4	3	1.4
University/other higher education	4	18	3	7	3	3	1	1	3	5	0.5
Total currently studying	**37**	**56**	**9**	**12**	**8**	**7**	**5**	**2**	**16**	**14**	**1.2**
Not attending	63	44	91	88	92	93	95	98	84	86	1.0
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**na**
Total number ('000)	79,500	2,414,600	56,100	2,402,400	52,500	2,664,400	70,600	6,789,700	258,700	14,271,100	na
Attendance unknown	8	2	10	2	9	2	9	4	9	3	2.9

Note: Non-Indigenous excludes 'not stated'

Source: ABS & AIHW analysis of 2006 Census data.

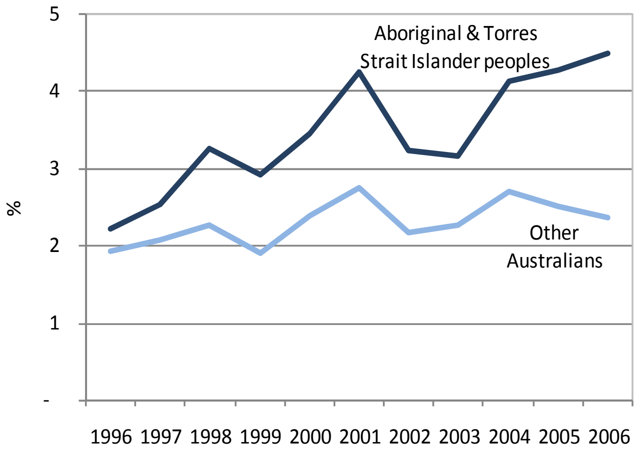
Figure 76 – Non-school qualifications, by Indigenous status, non-remote areas, 2001 and 2006



Note: Non-Indigenous excludes 'not stated'

Source: AIHW analysis of 2001 and 2006 Census data, customised tables

Figure 77 – Total completions in the VET sector as a per cent of total persons aged 15 years and over, by Indigenous status, 1996 to 2006



Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2006, unpublished data.

2.07 Employment status including CDEP participation

WHY IS IT IMPORTANT? Participation in employment has important consequence for living standards and social and emotional wellbeing, including self-esteem, opportunities for self-development and participation in the community. There are also strong associations between socio-economic factors such as employment status and health (OATSIH 2004). Mathers and Schofield concluded that there was 'consistent evidence from different types of studies that unemployment is associated with adverse health outcomes and … unemployment [can have] a direct effect on health over and above the effects of socio-economic status, poverty, risk factors, or prior ill-health' (Mathers & Schofield 1998). McLure (2000) noted that long periods out of the workforce can have negative effects on an individual's health (both physical and psychological). The Steering Committee for the Review of Government Service Provision noted 'strong evidence of an association between unemployment and poor health and mortality which can be caused by material disadvantage in terms of factors such as poor housing and diet' (SCRGSP 2005a p. 3.30). A recent research project reported good health outcomes in people employed in Indigenous Natural and Cultural Resource Management programs (Garnett & Sithole 2007).

There are three key measure of employment participation: the labour force participation rate, the unemployment rate and the employment to population ratio (or employment rate). The labour force includes all people contributing to, or willing to contribute to, the supply of labour. This includes the employed (people who have worked for at least 1 hour in the reference week, including CDEP) and the unemployed (people who are without work, but are actively looking for work and available to start work within 4 weeks). The remainder of the population is not in the labour force. The labour force participation rate is calculated as the number of people in the labour force as a proportion of total people. The unemployment rate is calculated as the number of people unemployed as a proportion of the total labour force. The employment rate is the proportion of employed people (including CDEP) to the total population.

Aboriginal and Torres Strait Islander labour force statistics are particularly influenced by the CDEP scheme, first established in 1977. Through this scheme, Aboriginal and Torres Strait Islander peoples are able to gain access to employment and training opportunities through community projects in rural and remote communities. Participants in the scheme are classified as employed. The program has a large impact on the Aboriginal and Torres Strait Islander unemployment rate especially in remote and very remote areas.

While objectives of the CDEP program have been restated in different terms over its life (Dockery & Milsom 2007). its recently stated aims are to help unemployed Indigenous Australians develop skills to move into the mainstream labour market. The overall goal of the program is to help Indigenous Australians achieve economic independence (DEWR 2007).

FINDINGS: Labour force participation by Aboriginal and Torres Strait Islander peoples remains lower than for other Australians. In 2006, the labour force participation rate for Indigenous persons aged 15–64 years was 57%, compared with 76% for non-Indigenous persons in the same age range. Of Indigenous people who were in the labour force, 16% were unemployed, over 3 times the rate for other Australians (5%). Indigenous employed persons include those participating in the CDEP scheme.

During 2005–06 there were 34,791 CDEP program places (including approximately 4% occupied by non-Indigenous persons) in over 220 CDEP organisations (DEWR 2006). CDEP providers placed 3,704 persons in paid employment outside of the program in 2005–06 and 5,770 in 2006–07 (DEWR 2007).

Labour force participation rates for Indigenous Australians vary by age, ranging from 64% for those aged 35–44 years to 41% for those aged 55–64 years. To a large extent these variations mirror the age-related variations in labour force participation by non-Indigenous persons. Proportions of Aboriginal and Torres Strait Islander persons participating in the labour force are approximately three-quarters of those of non-Indigenous persons at all ages. Participation rates are lower for Indigenous females (51%) than males (63%). These proportions also are around three-quarters of those of non-Indigenous females and males respectively.

Labour force participation by Indigenous Australians is also related to remoteness. Higher proportions of Indigenous persons in remote areas were not in the labour force in 2006 (47% compared with 43% for those living in non-remote areas) or work part-time (21% compared with 16%). Of the employed Indigenous Australians in very remote areas, 56% were working part-time. Part-time CDEP employment is likely to be a factor contributing to this high proportion.

Between 1996 and 2006 Indigenous employment increased from 43% to 48% and unemployment dropped 13% to 9% for those aged 15–64 years.

IMPLICATIONS: In March 2008, the Council of Australian Governments committed to halve the gap between Indigenous and non-Indigenous employment outcomes within a decade (COAG 2008). Achieving the target will require concerted additional effort to:

- build incentives and skills for those currently not in the labour force
- skilling the unemployed to obtain a job
- up-skilling those currently in a job for career development
- ensuring Indigenous youth complete school and transition successfully into a job.

Transition from education into sustainable employment will be aided by the achievement of other targets set by COAG aimed at improving educational attainment. As a large employer the health sector has a role to play in assisting Indigenous Australians in this area.

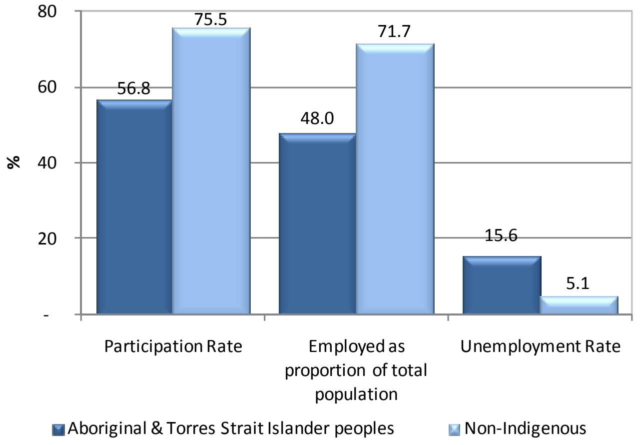
Other initiatives which will support the halving of the employment gap include:

An Indigenous Economic Development Strategy will be released later in 2008 which will set the strategic agenda for the removal of barriers to economic participation and commit Government and stakeholders to improving Indigenous economic development in partnership with individuals, communities, the private sector and all levels.

A new universal employment services model will be introduced from July 2009. The new employment services model will increase the focus on the most highly disadvantaged job seekers. This will be of particular benefit to Indigenous Australians.

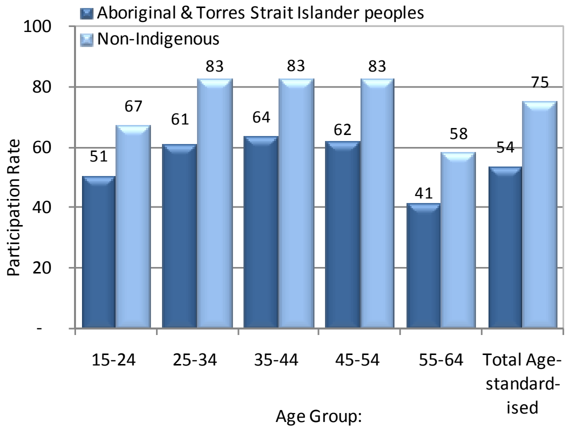
Reforms to the Community Development Employment Projects (CDEP) program and the Indigenous Employment Program (IEP) will be implemented to further increase Indigenous economic development and deliver long-term, sustainable improvements in the lives of Indigenous Australians.

Figure 78 – Labour force participation and unemployment —proportions of persons aged 15–64 years, by Indigenous status, 2006



Source: ABS & AIHW analysis of 2006 Census data

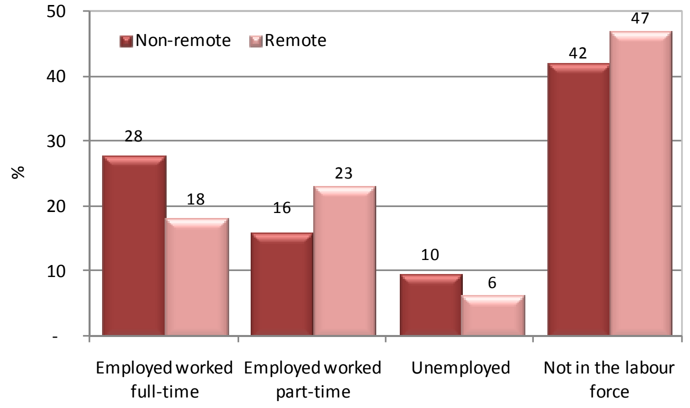
Figure 79 – Age-specific labour force participation rates, by Indigenous status, 2006



Note: Total directly age-standardised using the Australian 2001 Standard population.

Source: ABS & AIHW analysis of 2006 Census data

Figure 80 – Labour force status, by remoteness, Indigenous persons aged 15–64 years, 2006



Note: Unemployed are shown as proportions of total persons aged 15–64 years

Source: ABS & AIHW analysis of 2006 Census data

Figure 81 – Labour force status of persons aged 15–64 years, by Indigenous status, 1996, 2001 and 2006

Source: AIHW analysis ABS 1996, 2001 and 2006 Census data, customised tables

2.08 Income

WHY IS IT IMPORTANT? There is strong evidence, from Australia and other developed countries, that low socio-economic status is associated with poor health (Turrell & Mathers 2000). Low income is associated with a wide range of disadvantages including poor health, short life expectancy, poor education, substance abuse, reduced social participation, crime and violence. People with lower socio-economic status, including many Aboriginal and Torres Strait Islander people, bear a significantly higher burden of disease (Begg et al. 2007). The level of income inequality within a society has been suggested as a determinant of differential health outcomes (Wolfson et al. 1999). There are several competing explanations as to how income is involved with socio-economic status and the reason why low income contributes to poor health (Wagstaff & van Doorslaer 2000).

Disparities in income are one aspect of socio-economic status through which Aboriginal and Torres Strait Islander peoples face disadvantages. Income is closely linked to other measures but most particularly employment status (measure 2.07), single-parent families (measure 2.12) and educational attainment (measures 2.04, 2.05 and 2.06).

In measuring and comparing income, it is important that various factors, such as the number of people living in a household, particularly children and other dependants, are taken into account. The statistical measure adopted here is *equivalised gross household income* which adjusts reported incomes to take these factors into account.

FINDINGS: In 2006, 40% of Aboriginal and Torres Strait Islander Australians had incomes in the bottom 20% of equivalised gross weekly household incomes, i.e., income adjusted for the numbers of adult and child occupants. Examination of mean equivalised household income shows a similar discrepancy ($766 non-Indigenous compared with $512 for Indigenous Australians). This national mean masks considerable geographic variation. For instance, the mean equivalised gross income for Indigenous households ranged from $812 in the Australian Capital Territory to $379 in the Northern Territory and from $617 per week in major cities to $348 per week in very remote areas

There was an increase in the mean equivalised gross household income for Aboriginal and Torres Strait Islander households between 1996 and 2001 ($43; 10% increase) and between 2001 and 2006 ($41; 9% increase). The increase of 20% in Indigenous household equivalised income across two census periods was similar to the percentage increase for non-Indigenous households across the same period. However, the distribution of household income became more uneven across these years for Aboriginal and Torres Strait Islander households. In 2006, 40% of Indigenous households had equivalised incomes below the 20th percentile in 2006, compared with 36% in 1996. An increase on the proportion of Aboriginal and Torres Strait Islander households in the lowest quintile of equivalised income distribution was observed across all states and territories, except the Australian Capital Territory. In the Northern Territory, 59% of Indigenous households were in the bottom income quintile in 2006, compared with 47% in 1996. In Western Australia that proportion increased from 38% to 44%.

In 2006, the median gross weekly individual income for Aboriginal and Torres Strait Islander Australians aged 18 years and over was $318, less than two-thirds that received by other Australians ($504). Indigenous adults were more likely than non-Indigenous people of the same age to have a gross weekly individual income of $249 or less (42% compared with 27%). Only 4% of Indigenous adults had a gross weekly individual income of $1,300 or more compared with 12% of non-Indigenous Australians

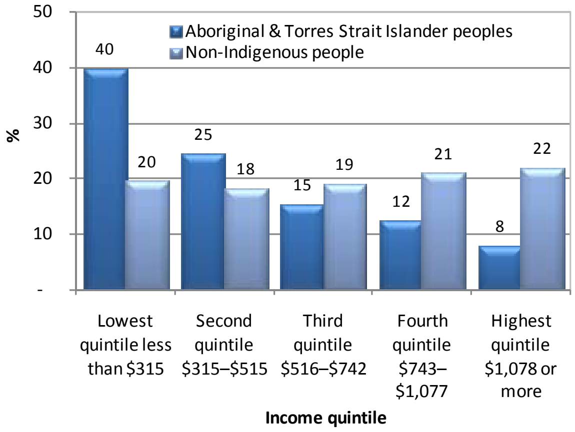
In 2004–05, approximately 46% of Indigenous Australians aged 15 years and over were living in households which reported they could not raise $2,000 within a week in a time of crisis. Indigenous people in remote areas were more likely to report that they could not raise $2,000 within a week than Indigenous people in non-remote areas (67% compared with 41% respectively). Around one-quarter of Indigenous persons aged 15 years and over reported they had days without money for basic living expenses in the last 2 weeks and 37% reported having days without money for basic living expenses in the last 12 months.

A clear indication of the relationship between low income and poorer health is provided by the 2004–05 NATSIHS, which found that 45% of Indigenous people who assessed their health as fair or poor were in the lowest equivalised household income quintile. Relationships between income and educational attainment and employment are also evident. A higher proportion of non-Indigenous Australians reported better health in the lowest and highest incomes quintiles compared with Indigenous Australians (see measure 1.15).

IMPLICATIONS: The large disparity evident in the comparison of Aboriginal and Torres Strait Islander peoples' income quintiles with those of the non-Indigenous population has important direct implications for health. These include the capacity to access services required for a healthy lifestyle, including adequate nutritious food, housing, transport and health care. Other factors that may exacerbate the situation faced by low income households include resource commitments to extended families and the propensity for a large number of visitors to Aboriginal and Torres Strait Islander households (SCRGSP 2007).

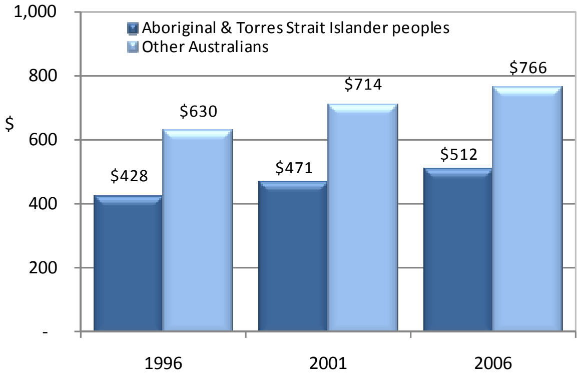
The very wide income discrepancies between states/territories and areas of Australia is also a strong indicator of an uneven capacity to access services as well as uneven health outcomes. Factors influencing the average levels of income and its distribution are generally beyond the influence of the health sector.

Figure 82 – Proportion of persons aged 18 years and over in each equivalised gross weekly household income quintile, by Indigenous status, 2006



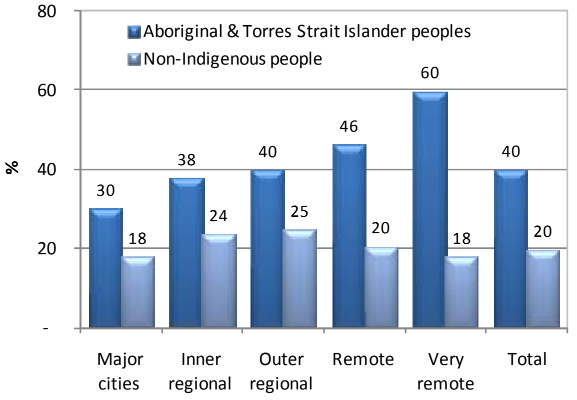
Source: ABS & AIHW analysis of 2006 Census data

Figure 83 – Mean gross weekly equivalised household income, by Indigenous status, persons aged 18 years and over, 1996, 2001 and 2006



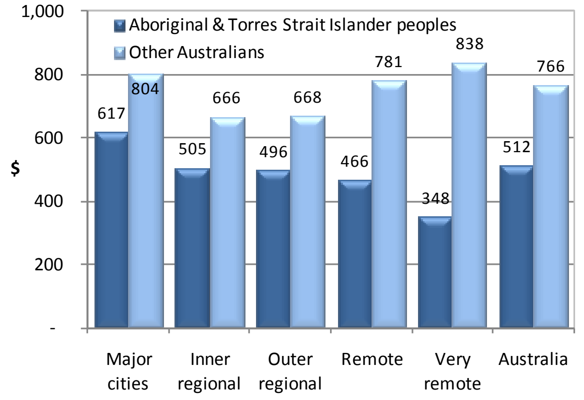
Note: Mean weekly equivalised gross household income for 1996 and 2001 have been adjusted for inflation using the CPI.
Source: ABS & AIHW analysis of 2006 Census data

Figure 84 – Persons aged 18 years and over below the 20th percentile of equivalised gross weekly household income quintiles, by Indigenous status and remoteness, 2006



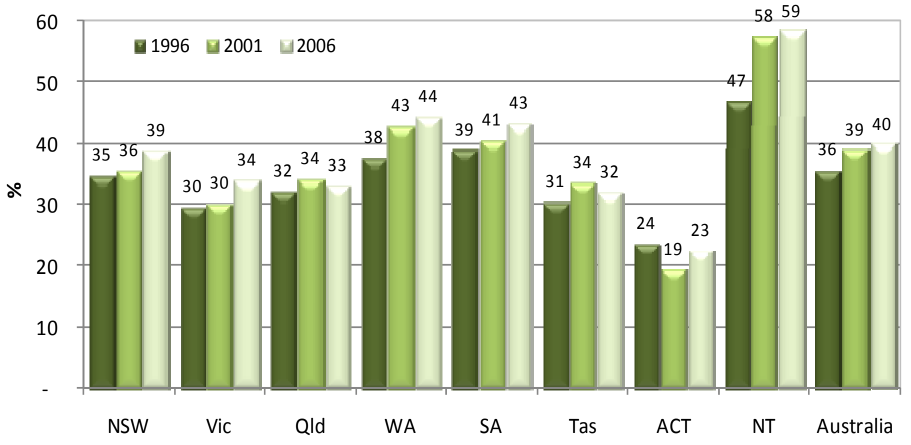
Source: ABS & AIHW analysis of 2006 Census data

Figure 85 – Mean gross weekly equivalised household income, by Indigenous status and remoteness, persons aged 18 years and over, 2006



Source: ABS & AIHW analysis of 2006 Census data

Figure 86 – Percentage of Aboriginal and Torres Strait Islander persons aged 18 years and over who were below the 20th percentile of equivalised gross weekly household income quintiles, 1996, 2001 and 2006



Source: ABS & AIHW analysis of 2006 Census data.

2.09 Housing tenure type

WHY IS IT IMPORTANT? House tenure is associated with health outcomes including mortality and morbidity. People who own their own home typically experience better health than those who rent. There is a complex relationship between housing and health, and a number of inter-related factors. Housing tenure is also associated with socio-economic status, with different levels of health hazards in the dwelling itself (e.g. overcrowding, structural problems) and the immediate environment (e.g. amenities, problems with crime) (Ellaway & Macintyre 1998; Macintyre et al. 1998; Southern Public Health Unit Network & West Moreton Public Health Unit 2006).

The health benefits of home ownership reflect the strong relationship between a person's socio-economic status and their health. Home ownership is closely linked to higher incomes and longer employment, is indicative of a strong savings history and past access to credit, and also represents a secure appreciating asset that can be used against future borrowings (SCRGSP 2007). 'Healthy homes' is 1 of 7 strategic platforms identified by COAG as a 'building block' that needs to be in place in order to comprehensively address the current state of disadvantage. A healthy home is a fundamental precondition of a healthy population.

FINDINGS: In 2006, there were 166,668 Indigenous households, 36% were home owners or purchasers, 31% were private and other renters, and 30% were renters of some form of social housing. This can be compared with non-Indigenous households where 71% were home owners or purchasers, and 28% were renters.

At a person level, approximately 31% of Indigenous persons aged 18 years and over were home owners and 68% were renters in 2006. Around 19% of Indigenous adults were renters of housing cooperative, community or church group housing. In comparison, 74% of non-Indigenous adults were home owners, and 26% were renters. For Aboriginal and Torres Strait Islander persons, home ownership was higher for older age groups, increasing from 25% for those aged 18–24 years to 41% for those aged 55 years and over.

Lower rates of home ownership among Aboriginal and Torres Strait Islander peoples reflect both the lower socio-economic status of many households and also that some households live in remote areas on Indigenous land where individual home ownership is generally not possible. The pattern of housing tenure varies by remoteness. In 2006, in remote areas 18% of Indigenous households were owned or being purchased compared with 39% in non-remote areas. In remote areas the largest category of housing was rentals through housing co-operatives, community or church groups (43%) whereas in non-remote areas this only represented 4% of Indigenous households. State and territory housing authority rentals were similar across areas, around 20%, while private rentals were more common in non-remote areas (32%) compared with remote areas (9%).

Between 1996 and 2006, the proportion of Indigenous home owner households increased from 32% to 35%. Over the same period, there was a decline in households renting through state/territory housing, from 24% to 21%.

In 2006, the Northern Territory had the lowest proportion of Indigenous Australian households who were home owners (20%) and the highest proportion renting from a housing cooperative, community or church group (46%). The proportion of home owners/purchasers was highest in Tasmania (54%), Victoria and the ACT (both 42%) and New South Wales (38%). There was a relatively high proportion of households renting from state/territory housing authorities in South Australia (31%), Western Australia (28%) and the Australian Capital Territory (27%).

IMPLICATIONS: There is a complex relationship between housing and health and inter-related factors such as overcrowding (measure 2.02) and infrastructure (measure 2.01). Housing tenure is influenced by socio-economic status e.g. income (measure 2.08) and employment (measure 2.07), and communal tenancy arrangements in some remote communities.

The NSFATSIH's Key Result Area Five, Environmental health, specifies continuing implementation of the Housing Ministers' 10 year statement of new directions entitled *Building a better future: Indigenous housing to 2010.* The strategy was endorsed by the Australian Housing Ministers' Conference in 2001. The vision articulated in this strategy includes the outcome that Aboriginal and Torres Strait Islander peoples throughout Australia will have access to affordable and appropriate housing which contributes to their health and wellbeing. Children in particular need to live in accommodation with adequate infrastructure conducive to good hygiene and study and free of overcrowding. The current COAG reform processes are exploring the important links between Indigenous housing and broader housing policies.

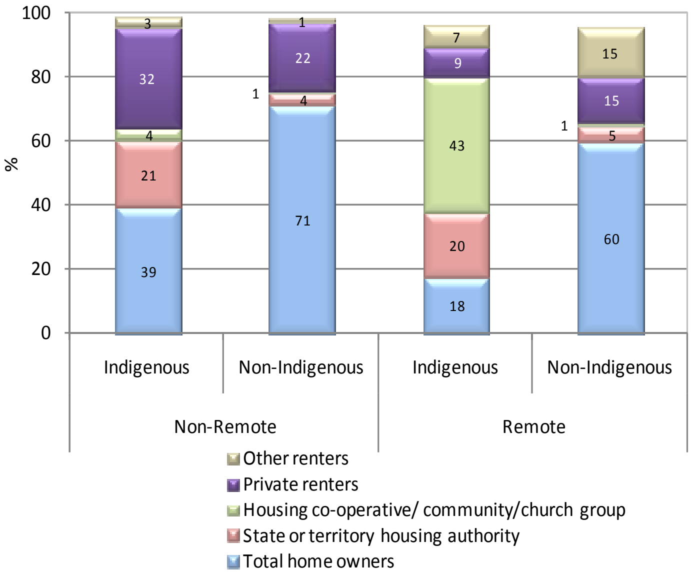
Table 40 – Households and persons, by tenure type and Indigenous status, 2006

	Persons aged 18 years and over			Households [(a)]		
	Indigenous		Non-Indigenous	Indigenous		Non-Indigenous
	Number	%	%	Number	%	%
Home owners:						
Fully owned	24,209	10.8	35.7	18,365	11.6	35.6
Being purchased	45,916	20.5	37.8	38,642	24.4	35.4
Total home owners	*70,125*	*31.3*	*73.5*	*57,005*	*35.9*	*71.0*
Renters:						
State or territory housing authority	48,907	21.8	3.2	33,391	21.1	4.0
Housing co-operative/community/church group	43,007	19.2	0.4	14,872	9.4	0.5
Private	49,972	22.3	20.0	44,963	28.4	21.4
Other	6,771	3.0	1.4	4,963	3.1	1.4
Total renters	*152,135*	*67.8*	*25.7*	*100,405*	*63.3*	*28.2*
Other tenure types	2,099	0.9	0.7	1,168	0.7	0.9
Total stated	**224,359**	**100.0**	**100.0**	**158,578**	**100.0**	**100.0**
Tenure type not stated	12,269	5.2	2.3	8,090	4.9	2.8
Total (including 'not stated')	**236,628**	**100.0**	**100.0**	**166,668**	**100.0**	**100.0**

(a) A household with Indigenous person(s) is any household that had at least 1 person of any age as a resident at the time of the Census who identified as having Aboriginal and/or Torres Strait Islander origin.

Source: ABS & AIHW analysis of 2006 Census data

Figure 87 –Proportion of Indigenous households, by tenure type and remoteness, 2006



Note: Excludes tenure type 'not stated' and 'Other tenure types'

Source: ABS & AIHW analysis of 2006 Census data

2.10 Index of disadvantage

WHY IS IT IMPORTANT? The links between poverty, unemployment, poor education, racism and consequent social dysfunction, stress, social exclusion, and poor health are well documented (Wilkinson & Marmot 2003; Marmot 2005; Paradies 2006). This performance measure is a composite measure (an index) of advantage/disadvantage. This measure provides a broad basis for tracking progress in addressing Indigenous disadvantage across the spectrum of determinants of health.

The Australian Bureau of Statistics has developed indexes to allow measurement of relative socio-economic status at a small area level (Adhikari 2006). These indexes summarise a range of socio-economic variables associated with advantage and disadvantage such as the proportion of families with high incomes, people with a tertiary education, and employees in skilled occupations. The indexes provide an estimate of relative advantage and disadvantage and are available for both urban and rural areas. Low values indicate areas of disadvantage, and high values indicate areas of advantage.

FINDINGS: In 2006, Aboriginal and Torres Strait Islander peoples were overrepresented in the three most disadvantaged deciles, ranked according to the ABS's SEIFA Index of Relative Socio-Economic Advantage/ Disadvantage. For example, 31% of the Indigenous population lived in the most disadvantaged decile areas, compared with 9% of the non-Indigenous population. Only 1% of the Indigenous population lived in areas in the least disadvantaged decile.

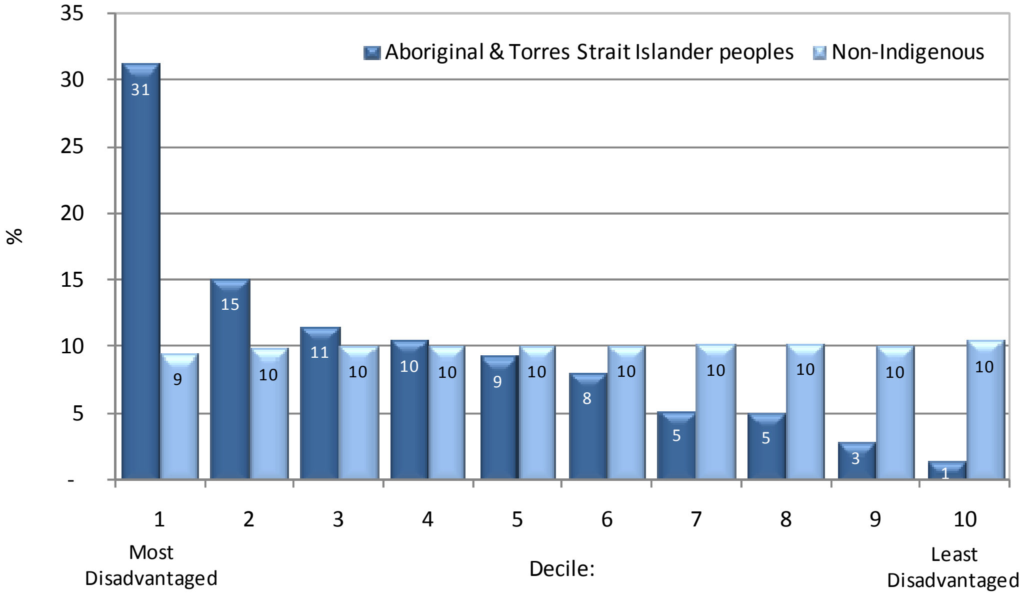
Analysis at the jurisdiction level suggests that in all states and territories a greater proportion of the Indigenous population lived in the most disadvantaged quintile than the non-Indigenous population. The Northern Territory had the highest proportion (58%), and the Australian Capital Territory the lowest proportion (27%), of the Indigenous population living in the most disadvantaged quintile. New South Wales had the lowest proportion (3%), and the Australian Capital Territory the highest proportion (10%), of the Indigenous population living in the least disadvantaged quintile.

These results need to be interpreted with caution. An analysis commissioned from the ABS's 2001 census-based SEIFA Index of Advantage/ Disadvantage (Kennedy & Firman 2004), shows that Indigenous Australians in Queensland have a high level of socio-economic disadvantage regardless of whether they live in SLAs classified at area level as having high or low socio-economic status. The methodology used took the same weights developed for the overall SEIFA Index of Advantage/Disadvantage, but generated a separate score for Indigenous Australians compared with non-Indigenous Australians in each area. The results found that 93% of Indigenous people in Queensland were in the lowest decile for disadvantage. Of the approximately 126,000 Indigenous people living in Queensland in 2001, fewer than 2,000 had SEIFA scores in the top 5 deciles, even though 35,000 live in SLAs coded to SEIFA scores in the top 5 deciles.

For the next version of the HPF it may be possible to report more generally on SEIFA scores applied to individuals, rather than at the SLA level (Baker & Adhikari 2007).

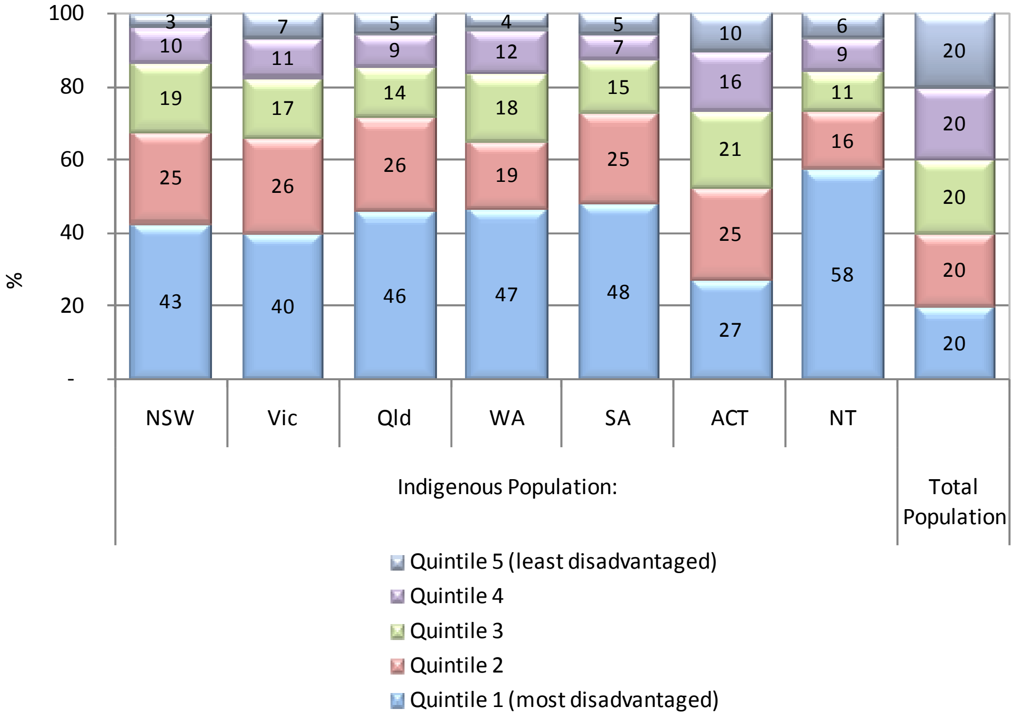
IMPLICATIONS: This summary measure of disadvantage supplements what is known and reported in other measures about the relative disadvantage that Aboriginal and Torres Strait Islander peoples experience across a wide spectrum. Despite the methodological shortcomings mentioned above, there is a clear accumulation of evidence that Indigenous peoples are significantly disadvantaged relative to other Australians. This will be a useful summary measure of progress in closing the gap in Indigenous life chances that are known to impact on health.

Figure 88 – Population distribution by SEIFA advantage/disadvantage decile, by Indigenous status, 2006



Source: AIHW analysis of ABS 2006 Census data

Figure 89 – Population distribution by SEIFA advantage/disadvantage quintiles, Indigenous population by state/territory and total population (Indigenous and non-Indigenous, 2006)



Source: AIHW analysis of ABS 2006 Census data

2.11 Dependency ratio

WHY IS IT IMPORTANT? The dependency ratio is a key demographic indicator which measures the ratio of the economically active section of the population to the economically inactive sector. There is an association between high dependency ratios (proportionately lower numbers of economically active people) and poverty. Poverty is a strong determinant of poor health.

Traditionally dependency ratios are measured as the ratio of people aged under 15 years or 65 years and over to people aged 15 to 64 years. Factors that impact on the usefulness of dependent ratios as a tool for policy analysis include the impact of economically active children or people aged 65 years and over, and people aged 15 to 64 years who are not economically active.

For Aboriginal and Torres Strait Islander peoples the dependency ratio is even less clear-cut as an indicator. The combined dependency ratio for the Indigenous Australian population is mainly influenced by the proportion of children, whereas the combined ratio for the non-Indigenous and total populations is much more strongly influenced by the proportion of older people. Therefore, it is necessary to calculate separately the youth and age dependency ratios for the Aboriginal and Torres Strait Islander population and compare these with the same ratios for other Australians.

The youth dependency ratio for Aboriginal and Torres Strait Islander society is an indicator of the burdens associated with child rearing and provision of support to dependent adolescents.

FINDINGS: It is important to note that this measure does not take into account Aboriginal and Torres Strait Islander children who have one non-Indigenous parent. Such cases will tend to exaggerate the Indigenous youth dependency ratio.

In 2006, 38% of Aboriginal and Torres Strait Islander people were aged under 15 years compared with 19% of non-Indigenous Australians. Both of these proportions had fallen slightly since 2001, from 39% and 20% respectively. People aged 65 years or over comprised 3% of the Aboriginal and Torres Strait Islander population and 13% of the non-Indigenous population, the same proportions as in 2001. These structural differences in the two populations reflect the impact of the higher fertility experience of the Aboriginal and Torres Strait Islander population and higher mortality rates which result in Aboriginal and Torres Strait Islander deaths occurring at younger ages (see Indicators 1.18 and 1.22).

In 2006, the dependency ratio for Aboriginal and Torres Strait Islander Australians was 0.68 compared with 0.48 for other Australians. This was a fall from 1996 when the corresponding dependency ratios were 0.75 and 0.50.

In 2006, the Aboriginal and Torres Strait Islander youth dependency ratio was 0.63, much higher than the ratio for other Australians (0.28). On the other hand, the aged dependency ratio for Aboriginal and Torres Strait Islander peoples was lower (0.05 compared with 0.20 for other Australians).

For the Aboriginal and Torres Strait Islander population, both the overall dependency ratio and the youth dependency ratio were higher in inner and outer regional areas than in either major cities or remote/very remote areas. There was little difference between the Indigenous aged dependency ratios across remoteness categories.

IMPLICATIONS: The younger age profile of the Aboriginal and Torres Strait Islander population presents a challenge as health and other services for children and young people need to be adequately resourced, as well as developed and delivered in culturally sensitive ways.

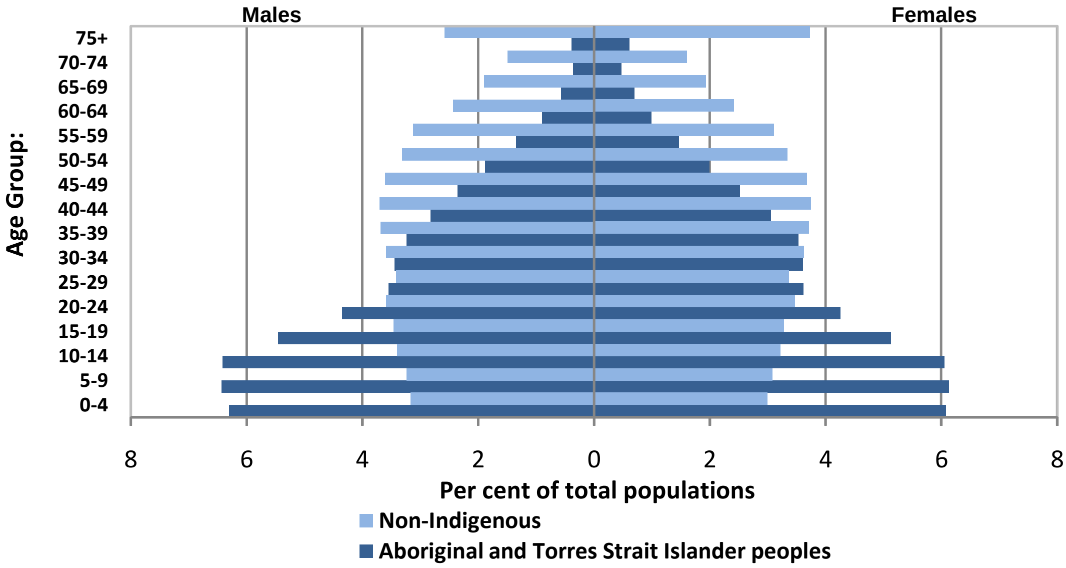
However, the younger age structure also represents an opportunity to implement strategies that could lead to a sustainable improvement in the health of Aboriginal and Torres Strait Islander peoples as the large cohort of children and young people ages into the future. With well designed and delivered antenatal care and early childhood programs, along with effective interventions helping young adults to adopt healthy behaviours, there is a tremendous opportunity to temper the emergence of chronic illnesses and their devastating consequences in this group of younger people.

Two of the 6 targets set by COAG for acting to close the gap in Indigenous life outcomes address this opportunity directly (COAG 2007; COAG 2008). They are:

halve the gap in mortality rates for Indigenous children under 5 within a decade

all 4 year olds in remote communities have access to early childhood education within 5 years.

Figure 90 – Population profile by Indigenous status, age and sex, 2006



Source: AIHW analysis of ABS population estimates based on 2006 Census of Population and Housing

Table 41 – Total and Youth and Aged Dependency Ratios, by remoteness and Indigenous status, 2001 and 2006

	Major cities	Inner regional	Outer regional	Remote	Very remote
	%	%	%	%	%
			2001		
Indigenous					
Dependency ratio	0.70	0.79	0.75	0.69	0.66
Youth dependency ratio	0.65	0.75	0.70	0.63	0.60
Aged dependency ratio	0.04	0.05	0.05	0.06	0.06
Non-Indigenous					
Dependency ratio	0.47	0.56	0.53	0.47	0.39
Youth dependency ratio	0.28	0.33	0.33	0.34	0.29
Aged dependency ratio	0.18	0.22	0.20	0.14	0.10
			2006		
Indigenous					
Dependency ratio	0.66	0.74	0.72	0.64	0.62
Youth dependency ratio	0.61	0.69	0.66	0.58	0.56
Aged dependency ratio	0.05	0.05	0.06	0.06	0.06
Non-Indigenous					
Dependency ratio	0.45	0.55	0.52	0.46	0.37
Youth dependency ratio	0.27	0.31	0.31	0.31	0.26
Aged dependency ratio	0.18	0.23	0.21	0.15	0.11

Source: AIHW analysis derived from ABS population estimates based on the 2001 and 2006 Census of Population and Housing

2.12 Single-parent families

WHY IS IT IMPORTANT? Being a child in a single-parent family is one of the risk factors for wellbeing and health that clusters with others, such a low socio-economic status, low educational attainment, and lack of social support and social networks. In many societies there is also an association between single-parent families and child-abuse and neglect (Chandola & Marmot 2004).

Aboriginal and Torres Strait Islander children are twice as likely to live in single-parent families as non-Indigenous children although there are several considerations which need to be taken into account when discussing Aboriginal and Torres Strait Islander single-parent families. While the term 'sole parent' might describe parental status, it does not adequately describe residential or domestic arrangements in Indigenous families. Senior Indigenous Australian women, who have often been sole parents themselves, play an influential role in household structures and economies. Sole parents are not necessarily isolated from family support and assistance and, perhaps, more importantly, their extended kin networks act as an important reservoir of support and care for their children (Daly & Smith 1999; Daly & Smith 2005). Aboriginal and Torres Strait Islander single-parent families may arise in different ways from non-Indigenous single-parent families, have different characteristics and result in different outcomes for children (Daly & Smith 1998; Taylor & Bell 1999; Hunter & Smith 2000).

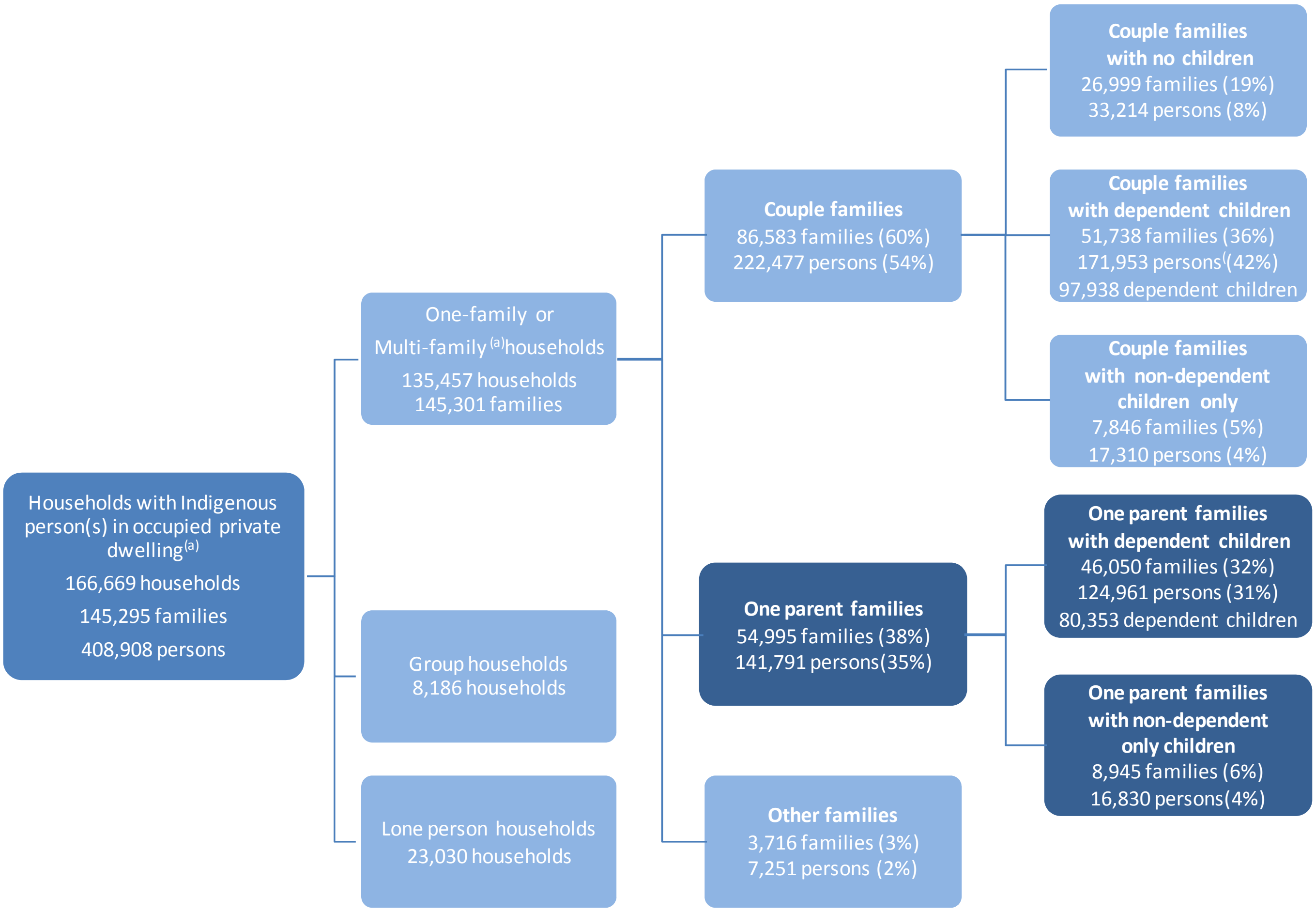
FINDINGS: In 2006, approximately 46,050 Indigenous families were one-parent families with dependent children. This was 32% of all of Indigenous families and 47% of Indigenous families with dependent children. Of a total of around 178,000 dependent children living in Indigenous families, 45% lived in one-parent families. In comparison, 20% of dependent children living in non-Indigenous families lived in one-parent families.

Approximately 15% of households of Aboriginal and Torres Strait Islander people with dependent children had 4 or more children compared with 5% of other households.

Compared with other Indigenous Australians, a higher proportion of Indigenous single parents reported: fair/poor health status (25% for single parents compared with 21% for other Indigenous Australians aged 15 years and over); that they had left school prior to year 12 (84% compared with 69%); that they were not in the labour force (61% compared with 39%); renting (85% compared with 69%); being unable to raise $2000 within a week (61% compared with 49%). Approximately 82% of Indigenous single parents had experienced stressors in the last 12 months compared with 76% of other Indigenous persons aged 15 years and over.

IMPLICATIONS: Functional and resilient families and communities are generally seen as being fundamental to the physical and mental health of adults and children. Characteristics of such families and communities may include: a caring, protective and supportive environment; positive health outcomes and cultural awareness (SCRGSP 2007). The members of single-parent families can face a range of additional disadvantages. However, this measure needs to be interpreted carefully in the context of different family composition norms in Aboriginal and Torres Strait Islander society. Available data may not adequately reflect the extent to which family arrangements provide an environment that is conducive to positive health outcomes. Monitoring should be in conjunction with other measures of community capacity.

Figure 91 – Household and family composition, Indigenous population, 2006



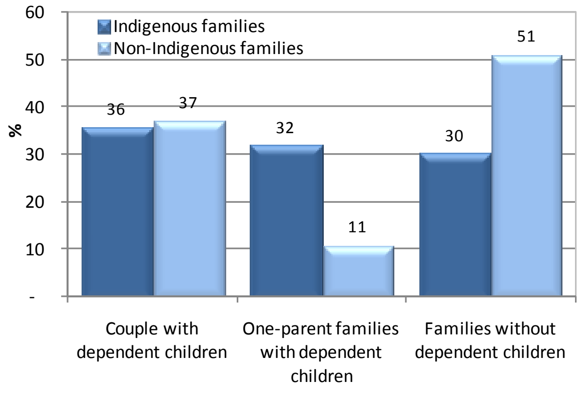
(a) Households occupied by usual residents, where household could be classified

(b) Households with 2 or more families

Dependent children are defined as children under 15 years of age, or those aged 15–24 years who were full-time students

Source: ABS and AIHW analysis of 2006 Census

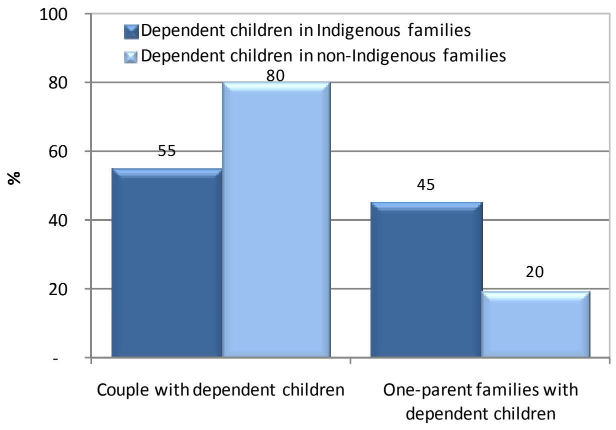
Figure 92 – Selected family types as a proportion of all families, by Indigenous family$^{(a)}$ status, 2006



(a) Indigenous families are families where a parent and/or child(ren) is Indigenous

Source: ABS and AIHW analysis of 2006 Census

Figure 93 – Proportion of dependent children living in Indigenous$^{(a)}$ and non-Indigenous families by family type, 2006



(a) Families where a parent and/or child(ren) is Indigenous

Source: ABS and AIHW analysis of 2006 Census

2.13 Community safety

WHY IS IT IMPORTANT? Experience of threatened violence or a social setting in which violence or a lack of personal safety is common both have negative health effects, and these effects have been noted amongst Indigenous peoples in Australia (Astbury et al. 2000; Krug et al. 2002).

Wilkinson (1999) discusses the relationship between income inequality and violence and also notes the link between experience of discrimination and racism and high levels of family violence found in marginalised and oppressed groups. The high level of violence in Indigenous societies must be seen in the context of colonisation, post-colonial history and discrimination, and subsequent markers of disadvantage such as low income, unemployment, lack of access to traditional lands, and substance use. Krug et al. (2002) notes that 'violence is the result of the complex interplay of individual, relationship, social, cultural and environmental factors'.

The study, *The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples* (Vos et al. 2007) ranked homicide and violence as the 10th largest contributor to total burden. As a health risk factor, intimate partner violence was responsible for 5.4% of the burden for Indigenous females, having its impact not only through homicide and violence but also anxiety and depression, ischaemic heart disease and suicide, amongst other diseases.

FINDINGS: In 2002, 24% of Aboriginal and Torres Strait Islander people aged 15 years and over reported they were a victim of physical or threatened violence in the last 12 months. The proportion declined with age from 33% of those aged 18–24 years to 11% of those aged 55 years and over. After adjusting for differences in age structure, Aboriginal and Torres Strait Islander people aged 18 years and over were twice as likely to report being victims of physical or threatened violence in the last 12 months as non-Indigenous Australians.

Those who had been arrested in the last 5 years were more likely to be a victim of physical or threatened violence (45%) (measure 2.14). Those living in remote areas are more likely to report community problems of assault (41%) than those living in non-remote areas (12%).

A slightly higher proportion of Aboriginal and Torres Strait Islander males (21%) than females (19%) reported being a victim of physical or threatened violence. The proportions of males (11 per 1,000) and females (11 per 1,000) hospitalised for the principal diagnosis of assault during the period July 2004 to June 2006 were similar. After adjusting for differences in the age structure of the two populations, Indigenous males were 8 times more likely to be hospitalised for assault than other males and Indigenous females were 35 times more likely than other females. (See also measure 1.03).

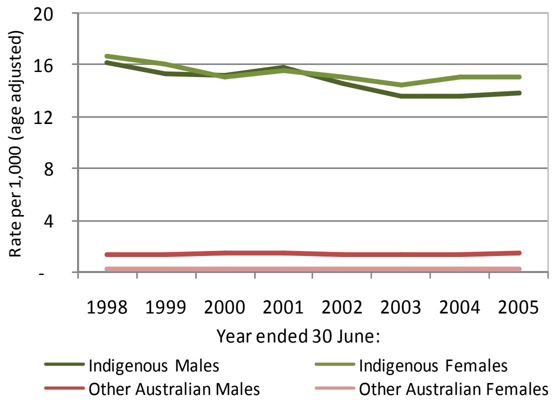
In Queensland, Western Australia, South Australia and the Northern Territory Indigenous age-standardised hospitalisation rates for the principal diagnosis of assault have declined by 16% for males and by 9% for females over the period 1998–99 to 2005–06. This decline has seen a narrowing of the gap between Indigenous and other Australians.

In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians died from assault at around 10 times the rate of other Australians during the period 2002–2006. Mortality rates for assault were highest among those aged 15–24, 25–34 and 35–44 years in both the Indigenous and non-Indigenous populations. However, Indigenous Australians in these age groups died from assault at 8, 15 and 13 times the rate of non-Indigenous Australians in the same age groups.

IMPLICATIONS: Aboriginal and Torres Strait Islander peoples are much more likely to be a victim of violence and to be hospitalised for injuries arising from assault. Women and men experience these problems at a similar level. Compared with other women, Aboriginal and Torres Strait Islander women experience vastly higher levels of violence. Community safety is a major issue for Aboriginal and Torres Strait Islander peoples. In December 2007, the Council of Australian Governments identified basic protective security from violence for Indigenous parents and children as an important area for joint reform. A range of national initiatives have been developed to address community safety: the *National Aboriginal and Torres Strait Islander Safety Promotion Strategy*; the *Women's Safety Agenda* including the *Violence Partnership Program*; the *Family Violence Regional Activities Program* including the *Family Violence Prevention Legal Services Program* and the *Early Intervention and Prevention Program*; the *Family Violence Strategy*; and the *Australian Crime and the Violence Prevention Awards*. The Council of Australian Governments have also agreed to the *National Framework on Indigenous Family Violence and Child Protection* which recognises that everyone has a right to be safe from family violence and abuse and that preventing family violence and child abuse in Indigenous Australian families is best achieved by families, communities, community organisations and different levels of government working together as partners. The available evidence suggests existing strategies have not been successful. Decision makers need to carefully consider evidence on which strategies will be most successful in creating safer community environments in which Aboriginal and Torres Strait Islander peoples live.

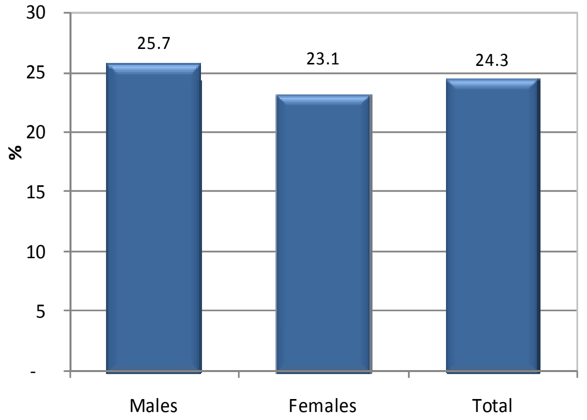
Community safety is one focus for the Northern Territory Emergency Response. For many remote communities in the Northern Territory there were no law-enforcement authorities present and serious violence had often gone unreported. The Northern Territory Emergency Response has provided 'more police and police stations to enforce the law, help prevent violence and anti-social behaviour and enforce the bans on alcohol and prohibited material… Since police have become part of the community, people feel safer and there has been a positive impact on the numbers of intoxicated people in the community and incidents of domestic violence and substance abuse. As opposed to wanting less involvement by police, communities are expressing a desire for police to engage with them more, at all levels. A number of people have expressed the view that, as a result of the policing services provided, they feel they are regaining control' (Australian Government 2008).

Figure 94 – Age-standardised hospitalisation rates for assault by Indigenous status, Qld, WA, SA and NT, 1998–99 to 2005–06



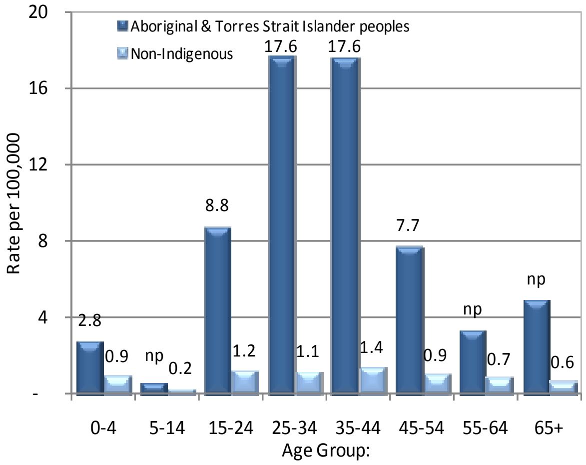
Source: AIHW analysis of National Hospital Morbidity database

Figure 95 – Proportion of Indigenous Australians aged 15 years and over reporting they were a victim of physical or threatened violence in last 12 months, by sex, 2002



Source: AIHW analysis of 1994 National Aboriginal and Torres Strait Islander Survey and 2002 National Aboriginal and Torres Strait Islander Social Survey

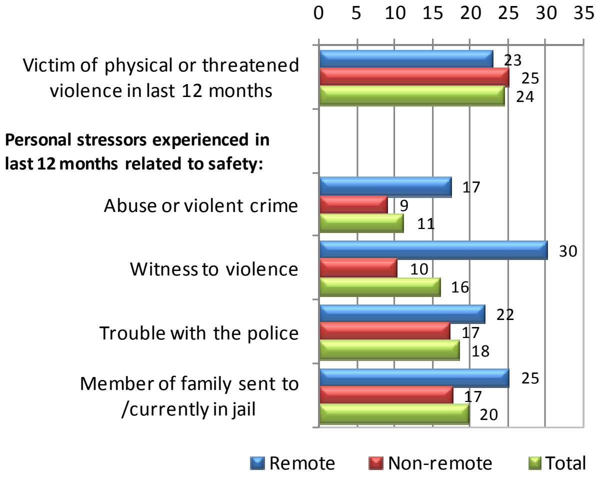
Figure 96 – Age-specific mortality rates for assault (homicide), by Indigenous status, Qld, WA, SA and NT, 2000 to 2006



Np—Not published due to low numbers

Source: AIHW analysis of National Mortality Database

Figure 97 – Issues of community safety, Indigenous persons aged 15 years and over, by remoteness, 2002



Source: AIHW analysis 2002 National Aboriginal and Torres Strait Islander Social Survey

2.14 Contact with the criminal justice system

WHY IS IT IMPORTANT? Aboriginal and Torres Strait Islander peoples have historically experienced higher rates of arrest and incarceration than other sections of the population (Royal Commission into Aboriginal Deaths in Custody 1991). Prisons have a significant over-representation of people with mental health problems, substance abuse problems, learning difficulties and a history of physical and sexual abuse (Butler & Milner 2003; Levy 2005). The little information that is available indicates that Indigenous prisoners experience worse health problems in prison than non-Indigenous prisoners (Butler et al. 1997; Butler & Milner 2003).

The effects of prison custody persist after release. A study in Western Australia (Stewart et al. 2004) found that released prisoners have an increased risk of death compared with the general population, and this risk is greater for Aboriginal people, with female Aboriginal prisoners at particularly high relative risk. Aboriginal and Torres Strait Islander prisoners suffer greater rates of ill-health and injury compared with the Indigenous population generally (Hobbs et al. 2006). Rates of hospital admissions for mental disorders and injury and poisoning were approximately twice as great in Aboriginal and Torres Strait Islander male prisoners, and 3 times higher in female prisoners, as in the Indigenous population in Western Australia.

The social and health effects of imprisonment on Indigenous peoples include: mental and other health problems for children who have a parent in prison custody —20% of Indigenous children have a parent in custody at some stage (Levy 2005); adverse employment and financial consequences (Woodward 2003); lack of positive male role-models in Indigenous society (Woodward 2003); prisoners taking health problems and problematic behaviours out into the community, e.g., hepatitis C, substance abuse, violence (Butler et al. 1997; Butler & Milner 2003; Woodward 2003; van der Poorten et al. 2008).

FINDINGS: As at 30th June 2007, there were 6,630 Aboriginal and Torres Strait Islander prisoners (6,623 aged 18 years and over) recorded in the National Prison Census. This was a 17% increase in numbers since June 2005. Indigenous prisoners represented approximately 24% of the total prisoner population, up from 22% in 2005. After adjusting for differences in age structure, Indigenous persons were more than 13 times more likely than non-Indigenous persons to be in prison at 30 June 2007.

The median age of Indigenous prisoners was 30.5 years compared with 34 years for non-Indigenous prisoners. Ninety-one per cent were male.

The proportion of prisoners who were Indigenous was highest in the Northern Territory (84%) and lowest in Victoria (6%). Western Australia and South Australia recorded the highest age-standardised ratios of Indigenous to non-Indigenous rates of imprisonment, with Indigenous persons being 21 and 15 times as likely to be in prison as non-Indigenous Australians in these jurisdictions respectively.

The median sentence length for Indigenous sentenced prisoners as at 30 June 2007 was 24 months, the same as in 2005 but less than the 42 month median length of sentence of non-Indigenous persons in prison.

Aboriginal and Torres Strait Islander people are more likely to be in prison with a charge related to acts intended to cause injury (32%) than other prisoners (14%). They are less likely to be in prison for illicit drug offences (2%) compared with other prisoners (13%).

Apart from imprisonment, a large number of Aboriginal and Torres Strait Islander people are taken into police custody. In October 2002, there were more than 7,000 incidents of police custody involving Aboriginal and Torres Strait Islander people representing 26% of all incidents reported.

Over the 3-year period 2004–2006, there was a total of 176 deaths in custody, 40 (23%) of which were of Indigenous persons. Of these deaths, 53% were in police custody and 45% were in prison custody. Over the period 1994–95 to 2004–06 there had been a significant decline in the rate of Indigenous deaths in prison custody.

In 2005–06, 4.8% of Aboriginal and Torres Strait Islander young people aged 10 to 17 years had at least 1 day under juvenile justice supervision, an increase from 3.7% in 2003–04. This compared with 0.3% for other young people in each of these years.

IMPLICATIONS: Incarceration of persons whose behaviour is dangerous or disruptive may be beneficial to the community from which they have been removed, and perhaps to themselves. However, the high prevalence of imprisonment of Aboriginal and Torres Strait Islander peoples, male and female, signals problems beyond those which prisons are designed to resolve. Consultations for this report identified issues such as levels of self-esteem, opportunities for employment, substance abuse and availability of mental health services as factors behind the high rates of incarceration of Aboriginal and Torres Strait Islander peoples. The issues highlight important overlaps between health and other aspects of life such as those highlighted in the *Cultural Respect Framework* (SCATSIH 2004) and suggest the need for inter-sectoral responses.

Apart from the health issues before and during a period in prison, incarceration and release also makes continuity of care difficult, e.g., for coordination of hepatitis C treatment (Krieg 2006). Some Aboriginal health organisations have developed their own health programs for prisoners and their families (Commission on Social Determinants of Health 2007; Winnunga Nimmityjah Aboriginal Health Service 2007). There are few programs nationally aimed at helping former prisoners make the transition to life outside prison (Borzycki & Baldry 2003). The Attorney-General's Department, through the National Community Crime Prevention Program and the Prevention, Diversion, Rehabilitation and Restorative Justice Program funds 15 projects that help Indigenous prisoners make the transition to life outside prison, and support them while they are incarcerated. The projects include visitor schemes, counselling and mentoring services, prisoner return home schemes and recidivism reduction schemes.

A priority for the NSFATSIH is improving the health of Aboriginal and Torres Strait Islander peoples in custodial settings. Key Result Area Six deals with wider strategies that impact on health, including policy and program initiatives and effective partnerships which address the needs of Aboriginal and Torres Strait Islander peoples in custodial settings, including health care delivery, health education and post-release programs.

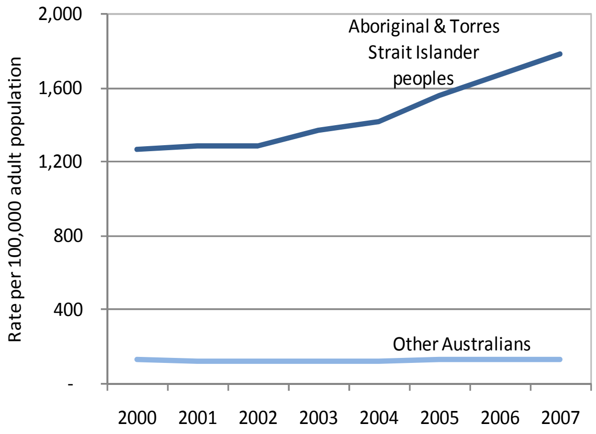
Table 42 – People in Prison Custody by Indigenous status, sex and state/territory 30 June 2007

	Aboriginal and Torres Strait Islander				Other				Rate ratio
	Number			Age standard-ised rate	Number			Age standard-ised rate	
	Males	Females	Persons		Males	Females	Persons		
NSW	1,823	227	2,049	1,988	7,410	529	7,939	162	12.3*
Vic.	222	19	238	1,000	3,706	242	3,945	101	9.9*
Qld	1,343	111	1,454	1,405	3,815	299	4,113	136	10.3*
WA	1,468	182	1,652	3,077	2,051	144	2,195	146	21.1*
SA	359	28	389	1,840	1,289	90	1,379	125	14.7*
Tas.	53	6	67	521	433	20	454	141	3.7*
ACT	16	—	20	673	201	18	217	81	8.4*
NT	727	35	761	1,603	137	6	145	117	13.7*
Aust	**6,016**	**614**	**6,630**	**1,787**	**19,045**	**1,342**	**20,387**	**134**	**13.4***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

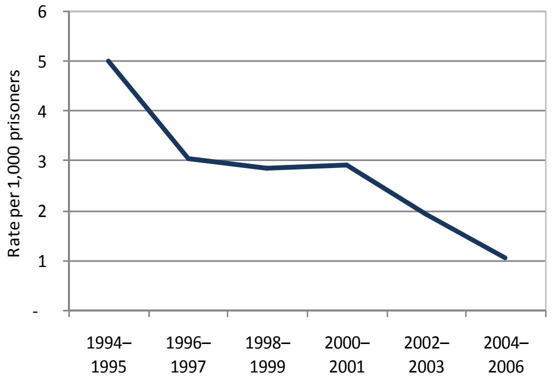
Source: Australian Bureau of Statistics (ABS 2007d)

Figure 98 – Age-standardised rate of persons in prison, by Indigenous status 2000 to 2007



Source: Australian Bureau of Statistics (ABS 2007d)

Figure 99 – Crude rate of deaths of persons in prison custody: Aboriginal and Torres Strait Islander people, 1994–95 to 2004–06



Source: AIHW analysis of AIC Deaths in Custody in Australia data

2.15 Child protection

WHY IS IT IMPORTANT? Child protection services 'receive and assess allegations of child abuse and neglect, and/or harm to children and young people, provide and refer clients to family support and other relevant services, and intervene to protect children' (SCRGSP 2005b). Child protection functions are undertaken at the state and territory level of government. Each jurisdiction has its own legislation, policies and practices in relation to child protection although the processes are broadly similar. Child protection services are typically located in agencies that also have responsibility for providing or funding early intervention and family support services—designed to support families and prevent the abuse and neglect of children. These agencies are also responsible for providing or funding alternative care arrangement such as foster care, where the care of the child in their original family is not an option.

Historically Aboriginal and Torres Strait Islander peoples' experience of child welfare policies has been traumatic, with misguided policies leading to the forcible removal of children now known as the Stolen Generations (HREOC 1997). The consequences of these removal policies have long-term resonance, including social, physical and psychological devastation for the Aboriginal and Torres Strait Islander people directly involved, as well as their families and communities, and the repeated removal of children over several generations (Raphael et al. 1998; Yehuda et al. 2001).

Child protection issues continue to be very significant for Aboriginal and Torres Strait Islander communities, reflecting this history of trauma and stressors that have impacted on parents and communities. The levels of substantiated child protection are an indicator of community functioning.

In responding to situations in which Aboriginal and Torres Strait Islander children are at risk, all child protection agencies have adopted the Aboriginal Child Placement Principle which requires that where Aboriginal and Torres Strait Islander children are removed from their family, the following order of preference for their placement should be followed:

- the child's extended family
- the child's Indigenous community
- with other Indigenous people.

FINDINGS In 2006–07, the rate of substantiated child protection notifications per 1,000 children aged 0–16 years was 32 for Aboriginal and Torres Strait Islander children, more than 5 times the rate for other children (6 per 1,000). This was an increase from 24 per 1,000 in 2004–05. For both Indigenous and non-Indigenous children the rates vary significantly across jurisdictions, reflecting different legislation and practices relating to notification. Rates also vary from year to year within jurisdictions. Therefore, comparisons between jurisdictions should be made with care. However, notification rates for Indigenous children were higher than for other children within each jurisdiction.

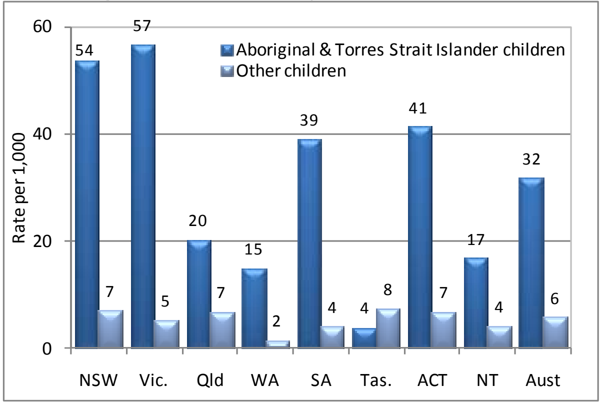
Compared with other children, the reason for substantiated child protection notification for Aboriginal and Torres Strait Islander children is generally less likely to be for sexual or physical abuse but generally more likely to be for neglect, based on jurisdiction figures.

As at 30 June 2007 there were 7,301 Aboriginal and Torres Strait Islander children on care and protection orders, an increase of 155% since June 1998. There was a 63% increase for other children over the same period. The increase in the number of children on care and protection orders may be attributed to a greater awareness of child abuse and neglect but also to the cumulative effect of the growing number of children who enter the child protection system at a young age and remain on orders until they are 18 years of age.

As at 30 June 2007, there were 7,892 Aboriginal and Torres Strait Islander children in out of home care, equivalent to 3.6% of Aboriginal and Torres Strait Islander children. This compared with 0.4% of other children. The proportion of these Aboriginal and Torres Strait Islander children who were placed with either an Indigenous carer or a relative or in Indigenous residential care, was highest in New South Wales, Western Australia and South Australia (86% , 80% and 80% respectively) and lowest in Tasmania (37%).

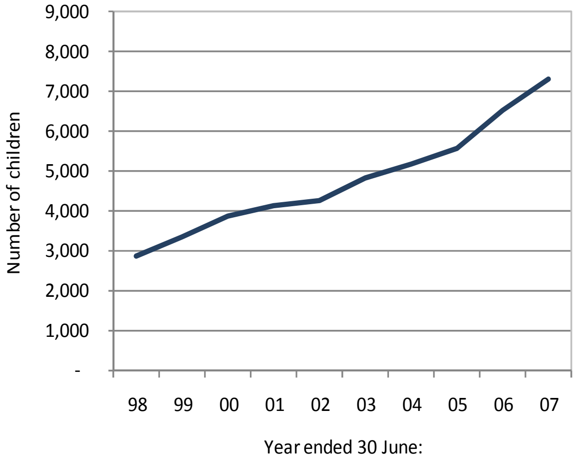
IMPLICATIONS: The Council of Australian Governments (COAG) *National Framework on Indigenous Family Violence and Child Protection* recognises that everyone has a right to be safe from family violence and abuse and that preventing family violence and child abuse in Indigenous Australian families is best achieved by families, communities, community organisations and different levels of government working together as partners. The strategy commits governments to implementing successful prevention strategies that enable Aboriginal and Torres Strait Islander Australians to take control of their lives, regain responsibility for their families and communities and to enhance individual and family wellbeing. The strategy recognises the need to address underlying causes and to build strong and resilient families. In light of the trends identified for this measure, including increasing rates of substantiated child protection reports and increasing numbers of Aboriginal and Torres Strait Islander children in out-of-home placements, decision makers need to consider the extent to which existing strategies are sufficiently effective. A key role for health portfolios is to strengthen child and maternal health services which can play an important role in early intervention.

Figure 100 – Children aged 0–16 years who were the subjects of substantiations: rate per 1,000 children, by Indigenous status and jurisdiction, 2006–07



Source: AIHW National Child Protection Data collections

Figure 101 – Number of Indigenous children aged 0–17 years on care and protection orders, by jurisdiction, 30 June 1998 to 2007



Source: Australian Institute of Health and Welfare (AIHW 2008c) and previous years

Table 43 – Aboriginal and Torres Strait Islander children in out-of-home care: Indigenous status and relationship of carer, by state and territory, at 30 June 2007

Relationship	NSW	Vic.	Qld	WA	SA	Tas.	ACT	NT
	Per cent							
Indigenous relative/kin	60.7	22.2	26.9	53.0	35.3	8.3	32.6	33.2
Other Indigenous caregiver	17.3	18.3	23.4	16.1	34.3	14.8	18.0	22.8
Other relative/kin	8.0	18.1	10.8	8.5	10.1	13.9	15.7	—
Indigenous residential care	0.3	3.4	0.2	2.2	—	—	2.2	—
Total placed with relative/kin, other Indigenous caregivers or Indigenous residential care	*86.4*	*61.9*	*61.2*	*79.8*	*79.6*	*37.0*	*68.5*	*56.0*
Other caregiver	12.8	35.3	37.3	13.8	15.9	53.7	22.5	44.0
Other residential care	0.8	2.8	1.5	6.4	4.5	9.3	9.0	—
Total not placed with relative/kin, other Indigenous caregivers or Indigenous residential care	*13.6*	*38.1*	*38.8*	*20.2*	*20.4*	*63.0*	*31.5*	*44.0*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Australian Institute of Health and Welfare (AIHW 2008c)

2.16 Transport

WHY IS IT IMPORTANT? Transport is seen as an important enabling resource that communities require to achieve desired outcomes, including safety and health.

Research on the impact of transport on health recognises both the beneficial impact of transport on health by enabling access to goods and services, and achieving and maintaining social networks; and the negative effects flowing from reduction in physical activity, e.g., walking and cycling; and the impact of accidents and increased pollution. The United Kingdom Inquiry into Inequalities in Health found that 'lack of access to transport is experienced disproportionately by women, children, disabled people, people from minority ethnic groups, older people and people with low socio-economic status, especially those living in remote rural areas' (Acheson 1998, Part 2 Section 5).

Aboriginal and Torres Strait Islander communities face various challenges related to transport. These challenges have a broader impact on social and economic circumstances, and specific impacts on access to health services. Limited or no public transport options significantly impacts on the capacity to access health care, especially specialist services. Problems in access are particularly significant for patients with chronic illnesses where frequent attendance at specialist clinics may be required. Schemes to assist patients in travel and associated accommodation operate in the various jurisdictions. Other approaches have also been adopted such as support for specialist services flying into remote localities.

FINDINGS: In 2006, households with Aboriginal and Torres Strait Islander persons (72%) were less likely than other Australian households (87%) to own or use a motor vehicle that is parked at or near their dwelling. These figures have increased from 70% and 84% respectively in 2001. In 2006 in non-remote areas, 75% of Aboriginal and Torres Strait Islander households reported having at least 1 vehicle compared with 52% in remote areas in 2006. In contrast, access to motor vehicles in other Australian households was similar in both non-remote and remote areas (87% and 90% respectively).

The Northern Territory had the lowest proportion of Aboriginal and Torres Strait Islander households with at least 1 vehicle (50%) and Tasmania had the highest (86%).

Access to vehicles has decreased over time, with the ratio of persons to vehicles in both Indigenous and non-Indigenous households being higher in 2006 compared with 2001. The difference between the Indigenous and non-Indigenous rates has also increased over the same period.

In 2002, 12% of Aboriginal and Torres Strait Islander peoples reported that they could not get to, or often had difficulty getting to, the places they needed to, compared with only 4% of non-Indigenous Australians. The proportion reporting such difficulty was higher in remote areas (16%) than in non-remote areas (10%).

In 2002, 31% of Aboriginal and Torres Strait Islander people aged 18 years and over in non-remote areas used public transport in the last 2 weeks compared with 14% in remote areas. Of those who did not use public transport, 74% in remote areas said the main reason was that there was no service available.

At a person level, access to a motor vehicle did not vary greatly across age groups in the Aboriginal and Torres Strait Islander population. Around two-thirds of those aged 17 years and over were recorded as having access to a motor vehicle at the 2006 census. In 2002, a higher proportion of Aboriginal and Torres Strait Islander males than females reported having access to a motor vehicle (65% compared with 55%).

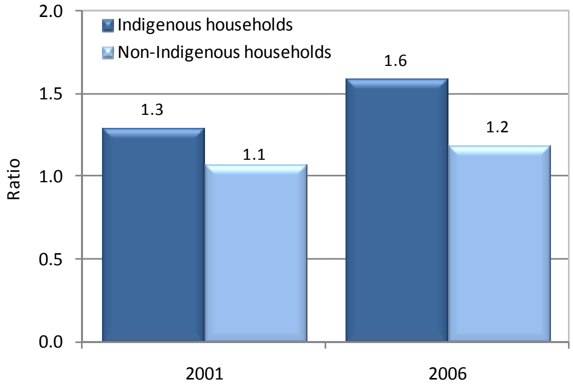
In the 2*004–05 National Aboriginal and Torres Strait Islander Health Survey*, transport/distance was reported as the main reason why Aboriginal and Torres Strait Islander people did not visit a dentist (11%), doctor (14%), other health professional (8%) or hospital (19%) in the last 12 months when needed. Proportions of Aboriginal and Torres Strait Islander peoples for whom transport/distance was the main reason for not visiting a health service were higher for those in remote areas, for persons aged 0 to 14 years and for females. Persons with poorer health were more likely to report difficulty getting to the places needed.

IMPLICATIONS: The NSFATSIH's Key Result Area Six identifies wider strategies that impact on health. Actions related to transport include reviewing the effectiveness, eligibility criteria and payment levels of patient assisted travel schemes to improve equitable access to services by Aboriginal and Torres Strait Islander peoples across Australia. A recent Senate Enquiry recommended improved access and funding for patient assisted travel schemes, national standards including eligibility criteria and subsidy levels, identification of barriers to access and improving access for patients traveling between jurisdictions (Standing Committee on Community Affairs 2007).

While it may be thought that public transportation may compensate for the lack of personal transport particularly in non-remote areas, and clinics may provide some transport, a higher proportion of Indigenous Australians in both remote and non-remote areas report having difficulty getting to places they need to go compared with other Australians.

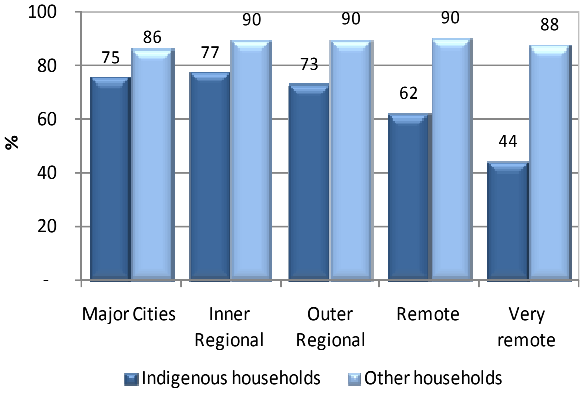
The lower levels of access to transport reported for Aboriginal and Torres Strait Islander women and younger people have implications for maternal and child health.

Figure 102 – Ratio of persons aged 17 years and over in occupied private dwellings to vehicles, by Indigenous status, 2001 and 2006



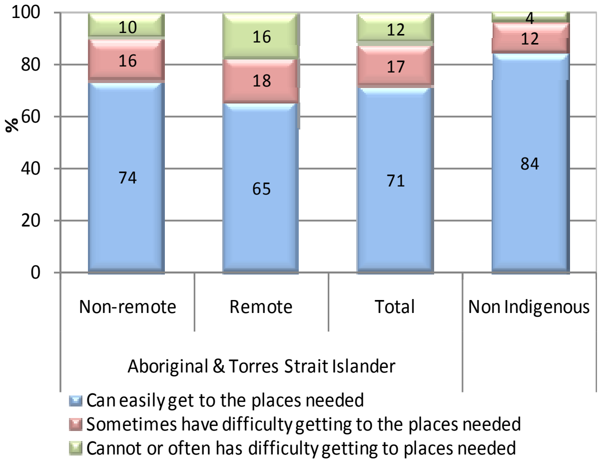
Source: ABS and AIHW analysis of 2001 and 2006 Census data

Figure 103 – Proportion of households with ready access to motor vehicles, by Indigenous status and remoteness area, 2006



Source: AIHW analysis of 2002 National Aboriginal and Torres Strait Islander Social Survey and General Social Survey

Figure 104 – Difficulty with transport, by Indigenous status, and remoteness, persons aged 18 years and over, 2002



Source: ABS & AIHW 2008

Table 44 – Use of public transport transport, by remoteness, Indigenous persons aged 18 years and over, 2002

	Non-remote	Remote	Total
Used public transport in last 2 wks	30.6	13.8	25.9
Used transport but not public transport in last 2 wks	67.5	72.7	68.9
Did not use any transport in last 2 wks	2.0	13.6	5.2
Total	**100**	**100**	**100**
Main reason did not use public transport[(a)]			
Prefer to use own transport or walk	51.9	20.7	41.9
No service available at all	24.6	74.0	40.4
No service available at right/convenient time	7.8	2.5	6.1
Other	15.6	2.7	11.5
Total	**100**	**100**	**100**

(a) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'

Source: ABS & AIHW 2008

2.17 Indigenous people with access to their traditional lands

WHY IS IT IMPORTANT? Loss of traditional land has been associated by many commentators with the trauma, illness and poor social outcomes experienced by Aboriginal and Torres Strait Australians today (Royal Commission into Aboriginal Deaths in Custody 1991; Northern Land Council & Central Land Council 1994). Ongoing access to traditional land is also seen as a determinant of health status, particularly where bush tucker can be accessed, physical exercise is part of daily life and alcohol/drug use is low (Aboriginal and Torres Strait Islander Social Justice Commissioner 2005).

Some quantitative evidence exists to support such views. Several studies demonstrate that where Aboriginal peoples have returned even temporarily to their land and adopted a semi-traditional hunter-gatherer lifestyle, there is a marked improvement in Type 2 diabetes and a reduction in the major risk factors for coronary heart disease. These changes can occur over a relatively short period of time (O'Dea 1984).

One aspect of this may be a reduction in harm caused by excessive alcohol consumption; e.g., the 97 ‘dry’ areas in the Northern Territory, where possession of alcohol is illegal, are all situated on Aboriginal-owned land (Northern Territory Licensing Commission 2008).

Contrasting with this positive view of the health implications of living on traditional lands, however, are data showing that children living in ‘rural communities with an Aboriginal local council’ in the Northern Territory had increased prevalence of infectious disease and were shorter and lighter than urban Aboriginal children (Mackerras et al. 2003). The relative lack of medical services outside cities and regional centres can impact negatively on health status for those living on their country (McLaren 1996).

An important difference is between the larger centralised communities and the decentralised smaller homeland communities/outstations. Both types of communities can be officially classified as ‘remote’, but the smaller homeland communities are distinguished by the closeness of family/kinship ties and the fact that they are situated on land to which all members have a direct cultural connection. The social makeup of the larger centralised communities, on the other hand, reflects their origins as missions, cattle stations or government settlements where many different groups were mixed together. In these situations, traditional governance structures have been confused and the relationship of residents to land has become indirect and diluted.

A study comparing the health of Aboriginal people living at homelands/outstations in Central Australia with that of Aboriginal people living at the surrounding larger centralised communities showed homelands residents had significantly lower prevalence levels of Type 2 diabetes, hypertension and obesity, significantly lower mortality rates, and were significantly less likely to be hospitalised for any cause including infections and injury (particularly injury involving alcohol). They were also likely to live, on average, 10 years longer than residents of the centralised communities. The positive association with health was more marked among younger adults (McDermott et al. 1998).

It has been argued that the distinctly Aboriginal form of social capital exemplified in traditional kinship structures plays a much more prominent role at small homelands/outstations than at the larger centralised communities (where such structures have been damaged and distorted in the colonisation process) (Christie & Greatorex 2004). This Aboriginal, traditional aspect of governance contributes to the greater social cohesion, availability of social support and psychological wellbeing often associated with homelands/outstations (Morphy 2005). Greater social cohesion has long been associated with improved health outcomes in non-Aboriginal and Torres Strait Islander communities (Stansfield 2006).

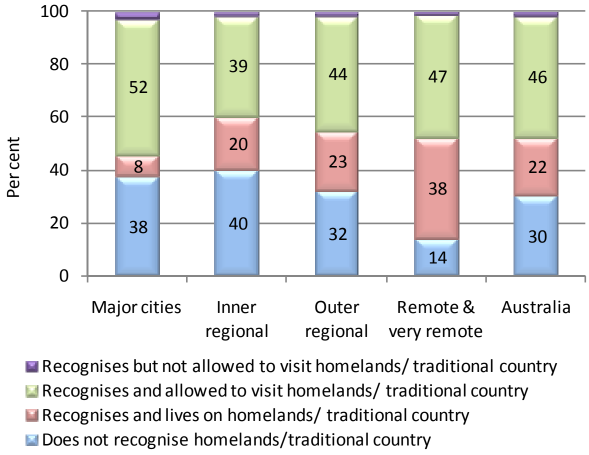
A recent long-term study has found that health outcomes are better at Utopia, a remote Aboriginal community, relative to the NT average for Indigenous populations. Features of this community include people living a more traditional life, including hunting, on outstations away from the community store, which has led to better diet and exercise; the community-controlled health service provides regular health care services to outstations; and the community has mastery and control over life circumstances. Residents are in control of community services and connected to culture, family and land, with the community holding freehold title to their land (Rowley et al. 2008).

FINDINGS: In 2002, approximately 30% of Aboriginal and Torres Strait Islander Australians aged 15 years and over reported they did not recognise their homeland or traditional country. Approximately 22% reported they lived on their homeland, 46% were allowed to visit their homeland, and 1.5% were not allowed to visit their homeland/traditional country. Those who lived in remote areas were more likely to live on homelands/traditional country (38%) or visit (47%), while those in non-remote areas were more likely to not recognise homelands or not be allowed to visit. Results from the 2002 NATSISS provide inconclusive evidence about the impact of access to traditional homelands on self-reported health, risk factors and social cohesion. There were no clear patterns between accessing homelands and health although the small numbers who were not allowed to visit homelands had the highest level of self-reported fair/poor health status and the highest smoking levels. Those who lived on homelands had the highest proportion of both abstainers from drinking and those drinking at medium/high risk levels. Presence of neighbourhood/community problems appear to have been highest for the group of Aboriginal and Torres Strait Islander peoples who recognise but are unable to visit their homelands/traditional country. However, this group made up only a small proportion of the respondents to the NATSISS and therefore, this may not be a reliable indicator.

IMPLICATIONS: While evidence from research studies lends support to policy initiatives, which would encourage Aboriginal and Torres Strait Islander Australians to return to live on their traditional country, for many people this is no longer an option particularly in south-eastern Australia. In this situation, occasional and infrequent visits may be the only realistic possibility. There seems to be little published information on the impact which occasional and infrequent visits may have on health status or general wellbeing and, as evident above, the NATSISS results are not conclusive.

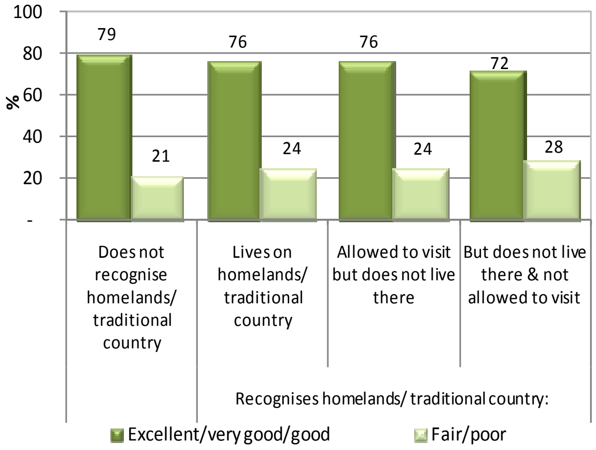
The NSFATSIH's Key Result Area Four: Emotional and Social Wellbeing has as one of its objectives 'reduced impact of grief, loss and trauma resulting from the historical impacts of past policies and practices, social disadvantage, racism and stigma'. It is appropriate for access to homelands/traditional country to be considered as part of strategies to address social and emotional wellbeing and to be monitored in conjunction with that measure (1.16).

Figure 105 – Access to homelands/traditional country, by remoteness area, Indigenous Australians aged 15 years and over, 2002



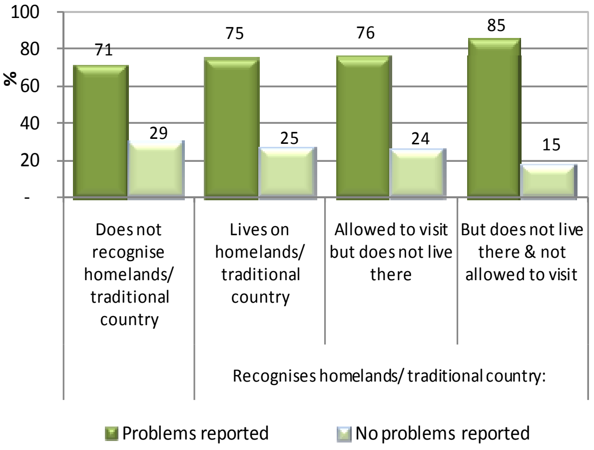
Source: AIHW analysis of 2002 National Aboriginal and Torres Strait Islander Social Survey

Figure 106 – Self-assessed health status by whether Aboriginal and Torres Strait Islander persons recognised/did not recognise homelands/traditional country, Australia, 2002



Source: AIHW analysis of 2002 National Aboriginal and Torres Strait Islander Social Survey

Figure 107 – Presence of neighbourhood/community problems by whether Aboriginal and Torres Strait Islander persons recognised/ did not recognise homelands/ traditional country, Australia, 2002



Source: AIHW analysis of 2002 National Aboriginal and Torres Strait Islander Social Survey

2.18 Tobacco use

WHY IS IT IMPORTANT? Estimates of the burden of disease and injury in Aboriginal and Torres Strait Islander peoples attribute 12% of the total burden to tobacco smoking. Smoking was identified as one of the key risk factors contributing to the burden of disease for Indigenous Australians (Vos et al. 2007). In the Australian population as a whole, the same study estimated 8% of the burden of disease as attributable to tobacco smoking, consistent with national estimates previously reported (AIHW 2006a).

The health impact of smoking is evident in the incidence of a number of diseases, including chronic lung disease, cardiovascular disease and many forms of cancer. It is estimated that smoking is responsible for 35% of the burden of disease from cancers and 33% of the burden from cardiovascular disease for Aboriginal and Torres Strait Islander Australians (Vos et al. 2007). Its health ill-effects extend beyond individuals who are smokers. Environmental tobacco smoke has adverse health effects for others who are in close proximity to a smoker, including asthma in children, lower respiratory tract infections, lung cancer, and coronary heart disease (AIHW 2002a).

Given the adverse impact on the health of the Australian population as a whole, tobacco use is of particular importance for the health of Aboriginal and Torres Strait Islander peoples, amongst whom smoking is more prevalent. In relation to the health of Aboriginal and Torres Strait Islander peoples, the *National Tobacco Strategy 2004–2009* notes that 'encouraging and finding ways to support smokers to quit successfully is probably the single most effective thing that could be done to improve child and maternal health, to reduce chronic diseases and some communicable diseases and to reduce financial stress, all key aims of the *National Strategic Framework for Aboriginal and Torres Strait Islander Health'* (Ministerial Council on Drug Strategy 2004).

FINDINGS: In 2004–05, half of Indigenous Australians aged 18 years and over reported that they were current smokers. This figure had not changed significantly since 1995. It remains twice that of the non-Indigenous population.

Unlike the non-Indigenous population, where the proportion of males who are smokers is one-third higher than for females, the proportion of Aboriginal and Torres Strait Islander females who smoke is similar to that of males. Aboriginal and Torres Strait Islander smoking rates increase towards middle age, then decline with the lowest rate in the 55 years and over age group.

Research shows strong evidence that smoking status is associated with socio-economic factors (Thomas et al. 2008). In 2004–05, Indigenous Australians aged 18 years and over were more likely to report being a non-smoker if they were in the highest household income quintiles, were in the most advantaged SEIFA quintiles, were employed, had non-school qualifications and if the highest year of schooling completed was Year 12. Being a non-smoker was also associated with better self-assessed health status. The survey also found a pattern of multiple risk factors with non-smokers being less likely to report drinking alcohol in the last 2 weeks. Family and cultural factors, such as having been removed from one's natural family or not having support in a time of crisis, were also associated with a lower likelihood of being a non-smoker (0.44 and 0.50 respectively).

No reliable national data are available on the smoking status of young Aboriginal and Torres Strait Islander Australians.

IMPLICATIONS: Tobacco smoking is influenced by a range of social and economic factors. The relative influence of different factors varies across the different community settings and social environments in which Aboriginal and Torres Strait Islander peoples live. Against such a background the *National Tobacco Strategy*'s focus on smoking by Aboriginal and Torres Strait Islander peoples emphasises a need for activities to be 'culturally valid, responsive to local needs and controlled by the community' (Ministerial Council on Drug Strategy 2004, p. 16). It suggests addressing tobacco smoking along with programs to tackle diabetes or maternal and child health and in holistic approaches to improving health.

Research has found that community empowerment and consultation is vital to successful health promotion strategies in Indigenous communities and locally or regionally focused programs that are well coordinated and targeted to groups within local communities work best (DoHA 2001).

The Centre for Excellence in Indigenous Tobacco Control, established in 2003 and funded by the Australian Government, develops culturally appropriate resources and focuses on smoking amongst Indigenous health workers. The *Talkin' up Good Air: Australian Indigenous Tobacco Control Resource Kit* has been developed to provide a practical resource for health workers and Aboriginal and Torres Strait Islander communities to support them in tackling the burden of smoking. The kit provides information on tobacco use and harm, practical tobacco strategies, Indigenous-specific health promotion materials and resources that can be discussed with community members to put together a local relevant campaign to reduce smoking. The kit supports workers in strategies to research smoking in the community and talk with community members about smoking and building support for tobacco control programs (Centre for Excellence in Indigenous Tobacco Control 2007)

In response to these statistics the Indigenous Tobacco Control Initiative has been developed. This Initiative aims to address the high rates of tobacco smoking in the Indigenous population by investing $14.5 million over 4 years from 2008–09 until 2011–12. This Initiative is a key step towards closing the gap in smoking rates between the Indigenous and non-Indigenous population within a generation. Through this initiative:

- An evidence base will be built through carrying out essential formative research to understand the reasons for the higher rates of smoking, the barriers to quitting, as well as identifying what strategies might work, the key messages, and the audiences to be targeted.

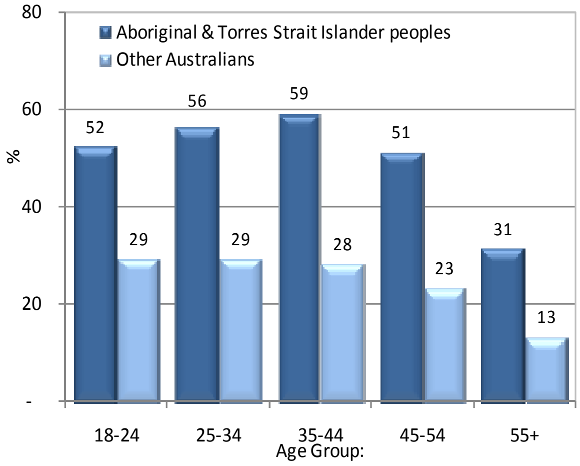
- New community activities will be trialled such as smoking prevention and cessation programs, and targeted communication approaches.
- Smoking prevention and cessation training will be offered to the Indigenous health workforce. Training and education will be ongoing throughout the life of the measure.

A National Preventative Health Strategy is being developed to bring a preventative focus to the health system. One of the priority areas for this strategy will be tobacco.

Figure 108 – Per cent of Aboriginal and Torres Strait Islander people aged 18 years and over reporting they are a current smoker, non-remote areas, 1995, 2001 and 2004–05

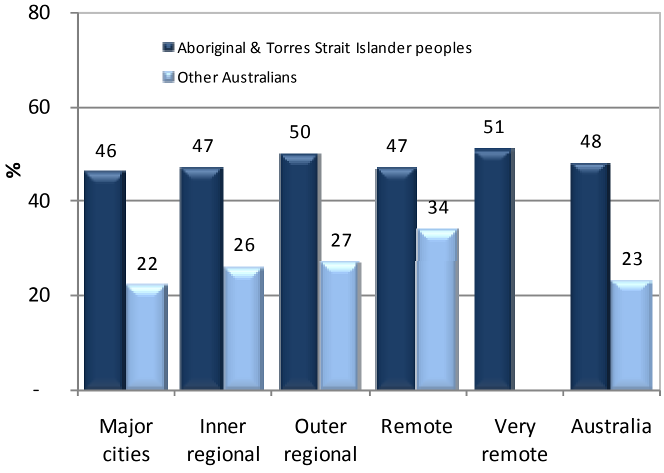
Source: ABS and AIHW analysis of 1995 and 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2001 National Health Survey (Indigenous supplement)

Figure 109 –Per cent of population aged 18 years and over reporting they are a current smoker by Indigenous status and age, 2004–05



Source: Australian Bureau of Statistics (ABS 2006a)

Figure 110 – Age-standardised per cent of population aged 18 years and over reporting they are a current smoker by Indigenous status and remoteness area, 2004–05



Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

2.19 Tobacco smoking during pregnancy

WHY IS IT IMPORTANT? Smoking is a risk factor for adverse events in pregnancy, and is associated with poor perinatal outcomes such as low birthweight (less than 2,500 grams) (AIHW 2004c), preterm birth, fetal growth restriction, congenital anomalies and perinatal death. Low birthweight infants are at a greater risk of dying during the first year of life and are prone to ill health in childhood. Smoking is also associated with increased risk of spontaneous abortion and ectopic pregnancy. Obstetric complications such as preterm labour and antepartum haemorrhage are more common in smoking mothers than non-smoking mothers (Laws & Sullivan 2005). Nicotine, carbon monoxide and other chemicals in tobacco are passed on to the baby through the placenta, which reduces the oxygen supply to the unborn fetus (AMA 1999).

The negative health effects of tobacco smoking towards the unborn fetus may continue after childbirth if one or both of the parents smoke. Passive 'environment' smoking of tobacco around a new born child is considered to be one of the major risk factors for sudden infant death syndrome (SIDS or cot death). Exposure to second hand smoke in the atmosphere also increases an infant's risk of ear infections and developing asthma (AMA 1999). Where the mother smokes, harmful chemicals are passed in the breast milk to new born babies. This increases the risk of respiratory illness, such as bronchitis or pneumonia, during the first year of life (NSW Multicultural Health Communication Service 2004).

Interventions for smoking during pregnancy are complex due to lack of knowledge of the health impacts for some mothers and the need to maintain good relationships with expectant mothers on the part of health professionals (Wood et al. 2008).

FINDINGS: In 2005, approximately 5% of mothers in New South Wales, Queensland, Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory identified as Aboriginal or Torres Strait Islander. When the effect of age was controlled for, Aboriginal and Torres Strait Islander mothers in the 7 jurisdictions smoked during pregnancy at around 3 times the rate of non-Indigenous mothers in these jurisdictions (52% compared with 16%). South Australia had the highest smoking rates at 66% of Indigenous mothers, while New South Wales and Western Australia had the highest rate ratios with Indigenous mothers smoking at around 4 times the rate of non-Indigenous mothers. Of Indigenous mothers who reported smoking during pregnancy (in New South Wales, South Australia and the Australian Capital Territory combined) almost half (47%) smoked an average of more than 10 cigarettes per day.

The proportions of Aboriginal and Torres Strait Islander mothers who smoke during their pregnancy match the Indigenous population prevalence of smoking reported in measure 2.18.

In 2005, the proportion of Indigenous mothers who smoked during pregnancy was very similar across geographic areas and by age group. In contrast, for non-Indigenous mothers there were large differences in smoking rates by remoteness (13% smoked in major cities compared with 24% in outer regional areas). There was also a clear pattern of smoking by age group for non-Indigenous mothers with 39% of the under 20 year age group smoking, leveling off to around 10% from 30 year s and over.

In 2005, approximately 16% of babies born to Indigenous mothers who smoked during pregnancy were of low birthweight compared with 9% of babies born to Indigenous mothers who did not smoke during pregnancy.

Babies born to Indigenous mothers had higher rates of low birthweight compared with babies born to non-Indigenous mothers irrespective of smoking status. In addition, the relationship between smoking and low birthweight was stronger for non-Indigenous mothers. These findings indicate that smoking is one of the many factors influencing low birthweight.

A higher proportion of babies born to Indigenous mothers who smoked during pregnancy were born pre-term than babies born to Indigenous mothers who did not smoke during pregnancy (15% compared with 12%). Once again these rates of pre-term births for Indigenous mothers were higher than babies born to non-Indigenous mothers whether they smoked or not.

IMPLICATIONS: A number of implications identified in relation to measure 2.18 Tobacco use, are also relevant to tobacco smoking during pregnancy. Smoking and child/maternal health are priority areas identified in the NSFATSIH. Development of national data on smoking during pregnancy will be an important element of continued monitoring of progress in this area.

The *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009* (Ministerial Council on Drug Strategy 2006) is designed to address the needs of Aboriginal and Torres Strait Islander peoples through improvement of health, social and economic outcomes, while preventing the uptake and reducing harmful drug use and effects (including tobacco use). This Action Plan contains a range of strategies that are relevant including:

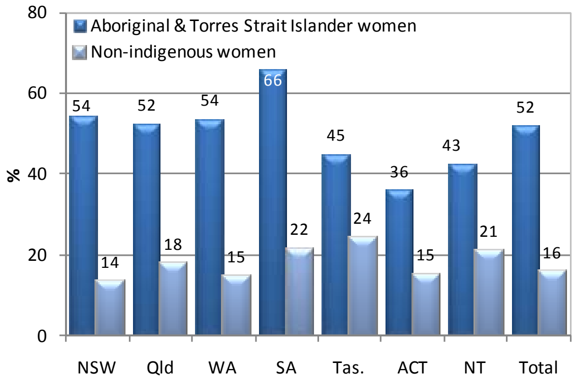
- Local communities should design and develop their own Strong Mothers Strong Babies Program
- The use of health promotion resources should be increased specifically to address the effect of smoking and alcohol consumption on pregnant Aboriginal and Torres Strait women.

The Centre for Excellence in Indigenous Tobacco Control is also focusing on the issue of smoking during pregnancy.

Smoking during pregnancy should be monitored along with related measures from this framework including 1.01 Low birthweight infants, 1.19 Infant mortality, 1.20 Perinatal mortality and 1.21 SIDS. In addition, the Tier 3 measure 3.01 Antenatal care is relevant to the capacity for smoking control strategies for pregnant mothers to be addressed through primary care services. The *National Evidence-Based Antenatal Care Guidelines*, currently under development, will include culturally appropriate guidance and recommendations regarding smoking during pregnancy. The development of this guidance will be led by an Indigenous Working Group of antenatal experts and consumers.

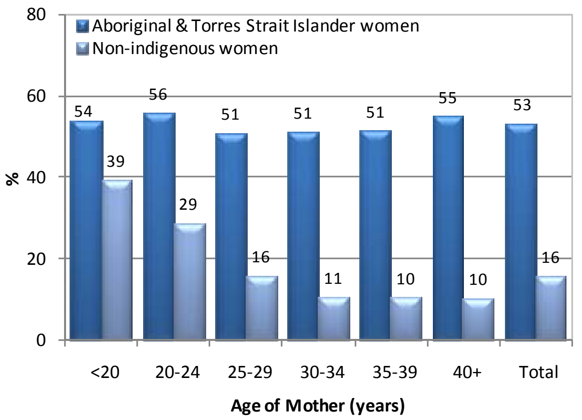
The prevalence of Aboriginal and Torres Strait Islander mothers smoking during pregnancy is similar to the prevalence of smoking in the total adult Aboriginal and Torres Strait Islander population. This suggests the need for new approaches for culturally appropriate and effective health promotion and primary health care interventions.

Figure 111 – Proportion of mothers who smoked during pregnancy, by Indigenous status and selected jurisdictions, 2005



Source: AIHW analysis of National Perinatal Statistics Unit National Perinatal Data Collection

Figure 112 – Proportion of mothers who smoked during pregnancy, by Indigenous status and age of mother, 2005



Source: AIHW analysis of National Perinatal Statistics Unit National Perinatal Data Collection

Table 45 – Smoking during pregnancy by Indigenous status and baby outcomes, NSW, Qld, WA, SA, Tas, ACT and NT, 2005

	Indigenous women		Non-Indigenous women		
Outcome:	**Smoked**	**Did Not Smoke**	**Smoked**	**Did Not Smoke**	**Ratio [(a)]**
		Percentage of babies:			
Pre-term birth	15.3	11.5	10.1	7.2	1.5*
Low birthweight	15.9	9.4	10.0	5.2	1.6*
Apgar score:					
0-3	0.4	0.6	0.4	0.3	1.2
4-6	1.5	1.7	1.3	1.0	1.2
7+	97.6	97.4	98.1	98.7	1.0
		Rate per 1,000 births:			
Perinatal deaths	17.6	18.3	12.5	8.3	1.4*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

(a) Rate ratio: proportion for Indigenous women who smoked during pregnancy divided by proportion for non-Indigenous women who smoked during pregnancy.

Note: Excludes Victoria and the first 6 months of 2005 for Queensland.

Source: AIHW analysis of National Perinatal Statistics Unit (NPSU) National Perinatal Data Collection

2.20 Risky and high risk alcohol consumption

WHY IS IT IMPORTANT? Excessive consumption of alcohol is associated with health and social problems in all populations. It is a major risk factor for conditions such as liver disease, pancreatitis, diabetes and some types of cancer. Alcohol is also a frequent contributor to motor vehicle accidents, falls, burns, and suicide. It has the potential to evoke anti-social behaviour, domestic violence and family breakdown. Babies may be born with fetal alcohol syndrome where mothers have consumed alcohol during pregnancy. Estimates of the burden of disease and injury for Indigenous Australians attribute 5.4% of the total burden to the net effects of alcohol consumption. For Aboriginal and Torres Strait Islander males aged 15–34 years, alcohol was responsible for the greatest burden of disease and injury among the 11 risk factors considered (Vos et al. 2007). For females in this age group, alcohol was the second leading cause of the burden.

Reducing alcohol and other substance misuse can significantly reduce the level of assaults and homicides and the level of disability, while improving the overall health and wellbeing of the population (SCRGSP 2007). A reduction in alcohol and other substance misuse might also increase educational attainment, household and individual income levels, and reduce crime and imprisonment rates (SCRGSP 2007). Among urban Indigenous Australians, 65% regard either alcohol abuse or alcohol-related violence as the most serious issue facing their community (Commonwealth Department of Human Services and Health 1995). Higher visibility of alcohol misuse by some Aboriginal and Torres Strait Islander groups creates a significant problem for some Indigenous communities.

FINDINGS: Compared with the non-Indigenous population, Aboriginal and Torres Strait Islander adults were twice as likely as non-Indigenous Australians to have abstained from alcohol consumption in the last 12 months. However, a greater proportion of those who do drink consume alcohol at levels that pose both short-term and long-term risks for their health and the health of others. Levels of risk associated with short-term (drinking over one day) and long-term risk levels (based on daily consumption over one week) are defined separately for males and females (NHMRC 2001). In 2004–05, an estimated 50% of Indigenous Australian adults reported having consumed alcohol in the previous week and an estimated 17% of Indigenous Australian adults reported drinking at long-term risky/high-risk levels. After adjusting for different age distributions, the proportions of Aboriginal and Torres Strait Islander adults reporting long-term risky/ high risk alcohol consumption were similar to those of the non-Indigenous population.

Short-term risky/high risk alcohol consumption is mainly associated with ‘binge’ drinking. An estimated 55% of Aboriginal and Torres Strait Islander adults drank at short-term risky/high risk levels on at least one occasion in the last 12 months. For 19% of Aboriginal and Torres Strait Islander adults, drinking at short-term risky/high risk levels occurred at least once a week over the 12 month reporting period. This was higher than for the non-Indigenous population in all age groups. After adjusting for the difference in age distributions, this was twice the proportion reported for non-Indigenous adults.

A smaller proportion of Aboriginal and Torres Strait Islander males (17%) reported that they had not consumed alcohol in the past 12 months compared with females (30%). Males were more likely to report drinking at both short-term and long-term risky/high risk levels.

The health effects of risky/high risk alcohol consumption are evident in both mortality and morbidity statistics. Over the period 2002–06 in Queensland, Western Australia, South Australia and the Northern Territory, Aboriginal and Torres Strait Islander males died from alcohol-related causes at 7 times the rate of non-Indigenous males. Females died from causes related to alcohol use at 12 times the rate of non-Indigenous females. Most (212 out of 304 deaths) were due to alcoholic liver disease. Indigenous Australians died from mental and behavioural disorders due to alcohol use at 10 times the rate of non-Indigenous Australians; alcoholic liver disease at 8 times the rate of non-Indigenous Australians; and poisoning by alcohol at 9 times the rate.

Over the period July 2004 to June 2006, there were 6,542 hospitalisations of Indigenous Australians (excluding Tasmania and the ACT) that had a principal diagnosis related to alcohol use, representing 1.4% of all hospitalisations of Indigenous Australians. Indigenous males were hospitalised for diagnoses related to alcohol use at 5 times the rate of other males, and Indigenous females at 3 times the rate of other females. Seventy-nine per cent of all hospital episodes of Indigenous Australians related to alcohol use had a principal diagnosis of mental and behavioural disorders due to alcohol use including acute intoxication, withdrawal state and psychotic disorder. Indigenous Australians were hospitalised for alcoholic liver disease and accidental poisoning by alcohol at 5 times the rate of other Australians.

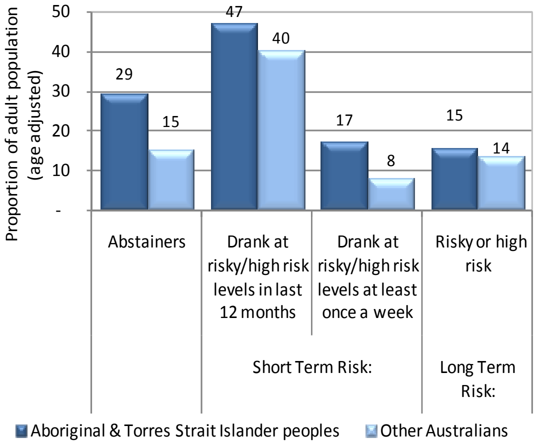
IMPLICATIONS: A policy approach to alcohol abuse is confounded by general community norms and behaviours related to alcohol consumption and a need to respect Aboriginal and Torres Strait Islander peoples’ rights and freedom of choice. Alcohol abuse by Indigenous Australians is closely related to social and emotional wellbeing, mental health and other drug and alcohol co-morbidities. The *Cultural Respect Framework for Aboriginal and Torres Strait Islander Health* recognises the importance of ensuring services are culturally equipped. Action areas within the NSFATSIH include equipping the health workforce, including within mainstream health services, to manage emotional and social wellbeing along with substance misuse issues. The *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009* is structured around 6 key result areas including enhancing capacity of Indigenous communities to address current and future issues around the use of alcohol, tobacco and other drugs to promote their own health and wellbeing. The *National Alcohol Strategy 2006–2009: Towards Safer Drinking Cultures* aims to prevent and minimise alcohol-related harm to individuals, families and communities through developing safer and healthy drinking cultures in Australia. Various local, regional and national strategies have been implemented with the aim of reducing risky and high risk alcohol consumption, including some which restrict supply.

In 2007–08, there were 93 Aboriginal and Torres Strait Islander substance use services across Australia funded by the Office for Aboriginal and Torres Strait Islander Health. Services provide a variety of treatment models including rehabilitation in a residential setting and drug and alcohol workers in Indigenous primary care services. At COAG in July 2006 and again in December 2007, the Australian Government announced additional funding for drug and alcohol treatment and rehabilitation services in regional and remote areas. As part of the Northern Territory Emergency Response, following the introduction of new legislation governing access to alcohol across the Northern Territory, a package of measures was implemented, including increasing treatment and rehabilitation options, drug and alcohol workforce training and community drug and alcohol education programs.

Alcohol Treatment Guidelines for Indigenous Australians have been developed to provide an evidence-based, user-friendly resource to assist health professionals understand and manage alcohol-related issues experienced by their Indigenous clients.

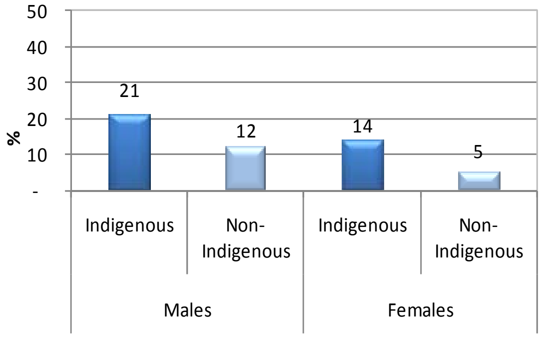
Community involvement in local actions to alleviate the problems of alcohol is vital.

Figure 113 – Alcohol risk levels by Indigenous status, persons aged 18 years and over, age-standardised, Australia 2004–05



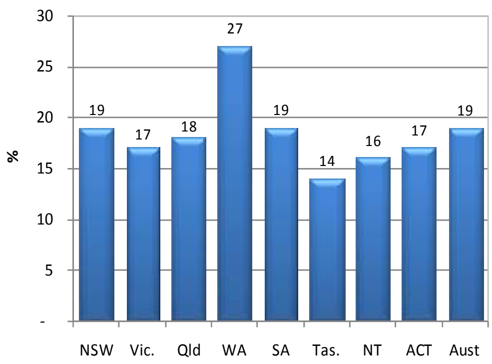
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 114 –Persons aged 18 years and over who drank at short-term risky/high risk levels at least once a week, age-standardised, 2004–05



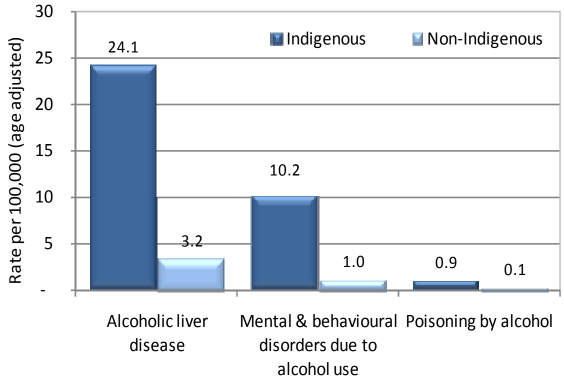
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 115 – Aboriginal and Torres Strait Islander adults who drank at short-term risky/high risk levels at least once a week, by jurisdiction, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 116 – Age-standardised mortality rates for related to alcohol use, Qld, WA, SA and NT, 2002–2006



Source: AIHW analysis of National Mortality Database

2.21 Drug and other substance use including inhalants

WHY IS IT IMPORTANT? Substance misuse is a contributing factor to illness and disease, accident and injury, violence and crime, family and social disruption and workplace problems (SCRGSP 2007). Estimates of the burden of disease and injury in Aboriginal and Torres Strait Islander peoples attribute 3.4% of the total burden to illicit drug use (Vos et al. 2007).

The use of drugs or other substances including inhalants is linked to various medical conditions for individuals. Injecting drug users for example, have an increased risk of blood-borne viruses such as hepatitis or HIV (ABS & AIHW 2008). For communities, there is increased potential for social disruption, such as that caused by domestic violence, crime and assaults. Community-based research has identified issues arising from alcohol, drug and substance use including loss of control and abusive behaviour ranging from physical to emotional violence (Franks 2006). Reducing drug-related harm will improve health, social and economic outcomes at both the individual and community level.

Drugs or other substance consumption plays a significant role in Aboriginal and Torres Strait Islander peoples' involvement in the criminal justice system. According to the Office of the Status of Women there is a correlation between domestic violence, and drug and alcohol use in Aboriginal and Torres Strait Islander communities, with 70 to 90 per cent of assaults being committed under the influence of alcohol and other drugs (SCRGSP 2007). These issues are of significance for the Aboriginal and Torres Strait Islander population, whose adult members are almost twice as likely to report being a recent user as non-Indigenous Australians (AIHW 2006b).

Inhalant use, also referred to as glue sniffing, petrol sniffing, inhalant abuse, or solvent abuse, is difficult to control because the active substances are found in so many common products that have legitimate uses. People that use these substances as inhalants risk long-term health problems, or sudden death. Continued use can also cause the social alienation of sniffers, violence and reduced self-esteem (SCRGSP 2007).

There is concern about an apparent recent increase in marijuana use in some Aboriginal communities (Lee et al. 2008; Senior & Chenhall 2008).

FINDINGS: In 2004–05 an estimated 28% of Aboriginal and Torres Strait Islander people aged 18 years or over in non-remote areas reported illicit substance use in the last 12 months and 50% reported illicit substance use at least once in their lifetime. These results are up slightly from 2002. In 2004–05, substance use was more prevalent among Indigenous males, of whom 56% had tried drugs (compared with 46% of females) and 32% had used at least one substance in the last 12 months (compared with 24% of females). Cannabis was the most common illicit substance used in the last 12 months for Aboriginal and Torres Strait Islander peoples in 2004–05 (23%) followed by amphetamines/speed (7%) and painkillers or analgesics (for non-medical use) (6%). Twelve per cent of Indigenous males and 7% of Indigenous females had used 2 or more substances. The study of Burden of Disease in Aboriginal and Torres Strait Islander Peoples estimated that heroin or polydrug dependence was responsible for 37% of the burden due to illicit drugs (Vos et al. 2007).

In 2004, half of Indigenous Australians had never used drugs or other substances including inhalants compared with 62% of non-Indigenous Australians (AIHW 2006b). Indigenous Australians were almost twice as likely to report being a recent user as non-Indigenous Australians (27% and 15% respectively) (AIHW 2006b). When cannabis is excluded, a different picture emerges. Of Indigenous Australians, 12% were recent users of a drug or other substance other than cannabis, compared with 8% of other Australians (AIHW 2006b).

In 2004–05, a higher proportion of Indigenous Australians aged 15 years and over who were recent substance users reported they were currently daily smokers and drank at risky/high-risk levels than Indigenous persons who had never used illicit substances.

For the period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, there were 5,002 hospitalisations of Indigenous Australians related to substance use. This represented 1.1% of total hospitalisations of Indigenous Australians in these jurisdictions. Indigenous Australians were hospitalised for conditions related to substance use at around twice the rate of other Australians.

The AIC Drug Use Monitoring in Australia survey reports on drug use among police detainees at 9 police stations in metropolitan areas in South Australia, New South Wales, Queensland, Western Australia the Northern Territory and Victoria. In 2006, a higher proportion of Indigenous detainees tested positive to drugs than non-Indigenous detainees in all 9 police stations surveyed.

IMPLICATIONS: The national response to reducing drug-related harm in Australia is set out in the National Drug Strategy 2004–2009. The *National Drug Strategy, Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009* addresses specific issues for Aboriginal and Torres Strait Islander peoples, structured around key result areas which include:

- Enhancing capacity of Aboriginal and Torres Strait Islander communities to address current and future issues in the use of alcohol, tobacco and other drugs to promote their own health and wellbeing.
- Whole of government effort in collaboration with non-government organisations to implement, evaluate and improve comprehensive approaches to reduce drug-related harm.
- Substantially improved access to the appropriate range of health and wellbeing services that play a role in addressing alcohol, tobacco and other drugs issues.

Australian governments are implementing programs under the COAG drug and alcohol initiatives and the *National Action Plan on Mental Health 2006–2011*. For example, the Australian Government is funding 3 Indigenous-specific projects under the *Improved Services for People with Drug and Alcohol Problems and Mental Illness* initiative which aims to build the capacity of non-government drug and alcohol treatment services in identifying and responding to people with coinciding mental illness and substance abuse issues.

Table 46 – Aboriginal and Torres Strait Islander peoples aged 18 years and over in non-remote areas: Substance use by sex, 2002 and 2004−05

Substance use	2002			2004–05		
	Males	Females	Persons	Males	Females	Persons
Used Substances	%	%	%	%	%	%
Used substances in last 12 months						
Analgesics and sedatives for non-medical use	5	7	6	4	8	6
Amphetamines or speed	5	5	5	10	5	7
Marijuana, hashish or cannabis resin	25	16	20	29	17	23
Kava	1(a)	1(a)	1(a)	2(a)	−(b)	1(a)
Total used substances in last 12 months	29	22	25	32	24	28
Used substances but not in last 12 months	19	18	19	22	21	22
Total used substances	48	40	44	56	46	50
Never used substances	51	59	55	42	53	48
Not stated	1(b)	−(a)	−(a)	2(a)	2(a)	2
Total	**100**	**100**	**100**	**100**	**100**	**100**

(a) estimate has a relative standard error of 25% to 50% and should be used with caution
(b) estimate has a relative standard error of greater than 50% and is considered too unreliable for general use nil or rounded to zero (including null cells)

Source: ABS 2006 – 2002 National Aboriginal and Torres Strait Islander Social Survey and 2004–05 National Aboriginal and Torres Strait Islander Health Survey

2.22 Level of physical activity

WHY IS IT IMPORTANT? Physical inactivity is an important modifiable risk factor associated with several potentially preventable chronic diseases that are prevalent in the Aboriginal and Torres Strait Islander population. These include cardiovascular disease, hypertension and diabetes. Physical activity can also be beneficial in the treatment/management of depression, anxiety and stress. Physical inactivity is also related to overweight and obesity, another important risk factor for multiple diseases. Most recent Australian estimates attribute 6.7% of the Australian burden of disease to physical inactivity, with similar impact for both males and females.

The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples 2003 (Vos et al. 2007) attributed 8% of the total burden of disease in the Aboriginal and Torres Strait Islander population to physical inactivity. Physical activity is the third leading risk factor, after tobacco and high body mass. Its effect is manifested through a range of diseases, most notably ischaemic heart disease (55% of the burden attributed to physical inactivity) and diabetes (33%). If Aboriginal and Torres Strait Islander people had the same activity levels as the total Australian population, up to 7 per cent of the total Indigenous excess burden of disease (or health gap) could be avoided (Vos et al. 2007).

Recent studies of the relationship between physical activity and the presence of disease have confirmed the risk reduction that it provides for heart disease (Stephenson et al. 2000; Bull et al. 2004), essential hypertension (Kokkinos et al. 2001), diabetes and the symptoms of depression, anxiety and stress (WHO 2008). In the case of diabetes, large scale trials in China, Finland and the United States have shown that a combination of modest weight loss, diet and moderate physical activity can reduce the risk of developing Type 2 diabetes by 50–60% in those at high risk (Bull et al. 2004).

FINDINGS: There was a noticeable shift towards lower levels of physical activity between 2001 and 2004–05 among Aboriginal and Torres Strait Islander Australians in non-remote areas. The proportion of sedentary Aboriginal and Torres Strait Islander people aged 15 years and over increased between those years from 37% to 47%. The proportion reporting a high level of physical activity remained unchanged over this period at 7%.

After adjusting for differences in age structure, Aboriginal and Torres Strait Islander peoples in non-remote areas were one and a half times as likely as other Australians to be classified as sedentary in 2004–05. A higher proportion of Indigenous females than Indigenous males were sedentary (51% compared with 42%).

The proportion of Indigenous Australians who were sedentary ranged from 37% in Tasmania and the Australian Capital Territory to 51% in New South Wales.

Proportions of Aboriginal and Torres Strait Islander peoples with sedentary or low levels of physical activity were highest among those aged 45 years and over, while moderate or high levels of physical activity were highest among those aged 15–24 and 25–34 years (32% and 27% respectively).

Over three-quarters (78%) of Indigenous people aged 15 years and over who were overweight or obese reported exercising at low or sedentary levels. Most Indigenous current smokers (83%) reported low or sedentary exercise levels.

There is a positive association between level of physical activity and self-assessed health status. For Aboriginal and Torres Strait Islander people in non-remote areas the proportion reporting excellent, very good or good health status rises from 71% for those whose physical activity levels are sedentary to 94% of those engaging in high levels of physical activity.

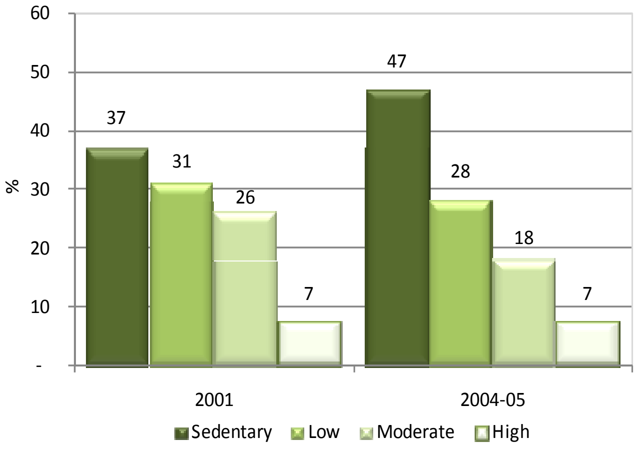
IMPLICATIONS: Improving physical activity levels presents significant opportunity for closing the gap in Indigenous disadvantage, particularly in terms of a reduction in deaths from ischaemic heart disease and diabetes.

Individual health behaviours should be interpreted with an understanding of the socio-economic and structural factors that incline the population to risk (OATSIH 2004). In relation to physical activity, the *Cultural Respect Framework for Aboriginal and Torres Strait Islander Health* (AHMAC 2004) identifies the need for cultural competence standards, action planning and cultural protocols in population health programs at the corporate, organisational and care delivery levels.

A priority of the NSFATSIH is to address the pre-determinants of chronic disease with a particular focus on nutrition and physical activity. Key Result Areas Two and Six identify actions to enhance service delivery to Aboriginal and Torres Strait Islander communities within the comprehensive primary health care context and to develop partnerships with other sectors whose activities impact on health. Action areas include partnerships between state and territory governments, local councils, private sponsors, and sports and recreation organisations to encourage the involvement of Aboriginal and Torres Strait Islander peoples in sport and recreational activities.

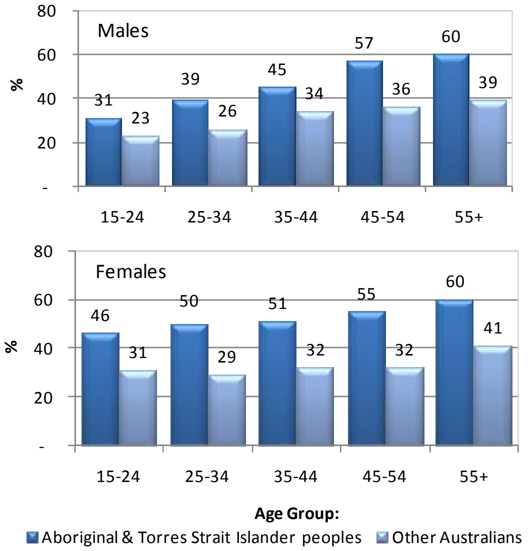
Whole of Government agreements have been signed with a number of communities to promote physical activity. These agreements include funding for sports days, sporting and camping equipment and coaching.

Figure 117 –Indigenous persons aged 15 years and over, level of physical activity, non-remote areas, 2001 and 2004–05



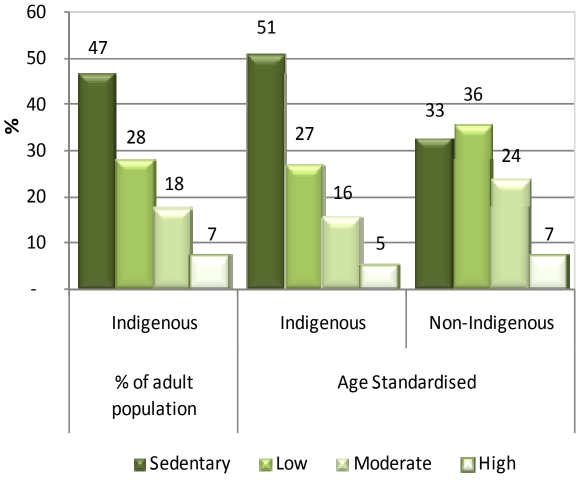
Source: ABS & AIHW analysis of 2001 National Health Survey (Indigenous supplement) and 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 118 – Persons aged 15 years and over reporting a sedentary level of physical activity, by Indigenous status and age group, non-remote areas, 2004–05



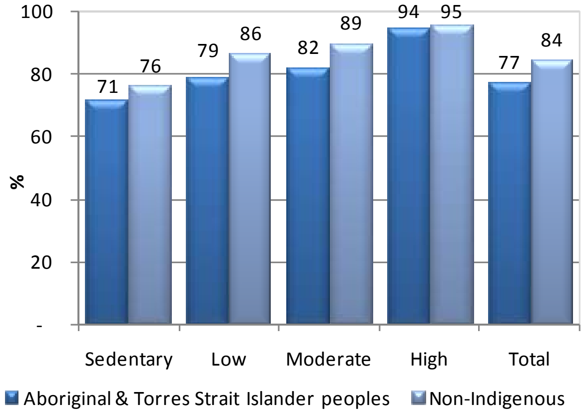
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 119 – Persons aged 15 years and over, level of physical activity, by Indigenous status, non-remote areas, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 120 – Persons aged 15 years and over reporting excellent, very good or good health status by Indigenous status and level of physical activity, non-remote areas, age-standardised, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

2.23 Dietary behaviours

WHY IS IT IMPORTANT? Many of the principal causes of ill-health among Aboriginal and Torres Strait Islander peoples are nutrition-related diseases, such as heart disease, Type 2 diabetes and renal disease. While a diet high in saturated fats and refined carbohydrates increases the likelihood of developing these diseases, regular exercise and intake of fibre-rich foods, such as fruit and vegetables, can have a protective effect against disease. The National Health and Medical Research Council's *Australian Dietary Guidelines* recommend a minimum of 5 serves of vegetables and 2 serves of fruit per day (ABS 2006a; ABS & AIHW 2008).

The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples 2003 (Vos et al. 2007) attributed 3.5% of the total burden of disease in the Aboriginal and Torres Strait Islander population to low fruit and vegetable consumption. Its impact is largely as a risk factor for ischaemic heart disease (Vos et al. 2007). Diet-related diseases are caused by combinations and interactions of environmental, behavioural, biological, social and hereditary factors. There is a substantial quantity of evidence that associates dietary excesses and imbalances with chronic disease. Of particular relevance in Indigenous communities are factors such as socio-economic status and other risk factors including insulin resistance, glucose intolerance, central obesity, hypertension, high blood triglycerides, prenatal and postnatal nutrition and childhood nutrition (NHMRC 2000; Longstreet et al. 2008). Good maternal nutrition and healthy infant and childhood growth are fundamental to the achievement and maintenance of health throughout the life cycle. A mother's nutritional status is one factor that has been associated with low birthweight in babies. Growth retardation among Indigenous infants after the age of 4 to 6 months has consistently been noted. Relatively poor growth has also been shown to persist in older children, although overweight and obesity are also increasing (NHMRC 2003).

FINDINGS: In 2004–05, in non-remote areas, 42% of Aboriginal and Torres Strait Islander people were eating the recommended daily intake of fruit (2 or more serves) and 10% the recommended daily intake of vegetables (5 or more serves). The majority of Indigenous Australians aged 12 years and over reported eating vegetables (95%) and/or fruit (86%) daily. However, 24% of those in non-remote areas reported a low usual daily vegetable intake (does not eat vegetables or 1 or less serves per day). This proportion had increased since it was measured at 18% in 2001 (ABS 2002). A higher proportion (58%) of Indigenous Australians aged 12 years and over in non-remote areas reported a low usual daily fruit intake (does not eat fruit or 1 or less serves per day) in 2004–05, up from 56% in 2001.

Fruit and vegetables may be less accessible to Indigenous Australians in remote areas. In remote areas, 20% of Indigenous Australians aged 12 years and over reported no usual daily fruit intake compared with 12% in non-remote areas. The disparity was even greater for vegetables, where 15% of Indigenous Australians in remote areas reported no usual daily intake compared with 2% in non-remote areas.

After adjusting for differences in age structure, Aboriginal and Torres Strait Islander people aged 12 years and over were twice as likely to report no usual daily fruit intake and 7 times as likely to report no daily vegetable intake as non-Indigenous Australians (ABS 2006a).

The 2004–05 National Aboriginal and Torres Strait Islander Health Survey found an association between dietary behaviour and income, educational attainment and self-assessed health status. For example, Indigenous Australians aged 15 years and over in the lowest quintile of income were much more likely than Indigenous Australians in the two highest quintiles of household income to report no usual daily fruit (17% compared with 8%) and no usual daily vegetable intake (8% compared with 0.8%). Low fruit and vegetable intake was also associated with smoking and risky/high risk alcohol consumption.

IMPLICATIONS: Changes in diet have the potential to help close the gap in Indigenous health outcomes. The Indigenous burden of disease study suggested that 3% of the excess burden of disease could be avoided if Indigenous Australians consumed vegetables and fruit at the same level as the total Australian population (Vos et al. 2007).

There is evidence to suggest that people living in poverty tend to maximise calories per dollar spent on food. Energy-dense foods rich in fats, refined starches and sugars represent the lowest cost options, while healthy diets based on lean meats, whole grains and fresh vegetables and fruits are more costly (Drewnowski & Specter 2004).

A priority of the NSFATSIH is to address the pre-determinants of chronic disease with a particular focus on nutrition. The Strategy's Key Results Area Six outlines action plans for partnerships between the media, the health sector, schools and Aboriginal and Torres Strait Islander communities to encourage understanding of nutrition and healthy eating for children and parents and to promote healthy food choices.

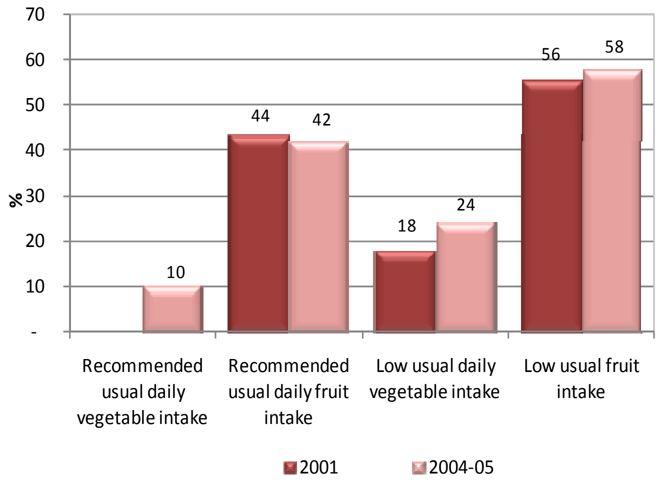
The National Aboriginal and Torres Strait Islander Nutrition Strategy and Action Plan (NATSINSAP) is a component of Eat Well Australia. The plan has been designed to build on existing efforts to make healthy food choices easier choices for Aboriginal and Torres Strait Islander peoples, irrespective of where they live. Key action areas include: the food supply in remote and rural communities; food security/economic status; family focused maternal and child nutrition; nutrition issues in urban areas; environment/household infrastructure; Aboriginal and Torres Strait Islander nutrition workforce and national food/nutrition monitoring systems.

Healthy eating and physical activity guidelines for early childhood settings are also being developed for the Australian population.

The ability to eat a healthy diet has many influences including socio-economic, geographical, environmental and social. Food security, food access and food supply issues are of particular importance in rural and remote areas. Remote stores often have a limited range of foods, particularly perishable foods such as fresh fruit/vegetables and dairy foods, and costs are usually higher.

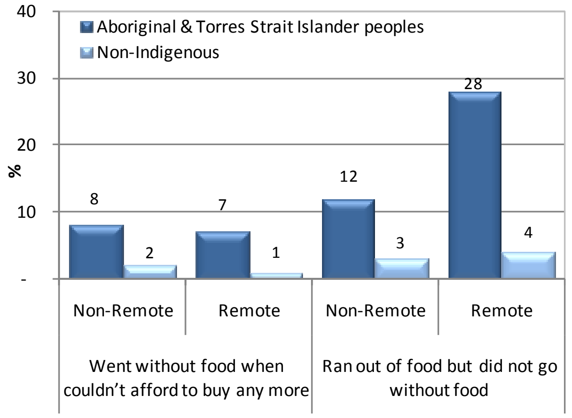
Low income combined with high food costs results in many Aboriginal and Torres Strait Islander peoples spending a large percentage of their income on food and contribute to concerns among Indigenous Australians of going without food. An estimated 30% of Aboriginal adults worry at least occasionally about going without food (Strategic Inter-Governmental Nutrition Alliance 2001).

Figure 121 – Percentage of Indigenous Australians aged 12 years and over, by usual daily intake of vegetables and fruit, non-remote areas, 2001 and 2004–05



Source: AIHW analysis of 2001 National Health Survey (Indigenous supplement) and 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 122 – Age-standardised proportion of persons aged 15 years and over who ran out of food and couldn't afford to buy more at some time over the last year, 2004–05



Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Table 47 – Selected dietary habits, by remoteness, Indigenous persons aged 12 years and over, Australia, 2004–05

Dietary behaviours:	Remote	Non-remote	Total
	%	%	%
Vegetable intake			
Eats vegetables daily	84	98	95
Does not eat vegetables daily	15	2	5
Total	*100*	*100*	*100*
Fruit intake			
Eats fruit daily	80	88	86
Does not eat fruit daily	20	12	14
Total	*100*	*100*	*100*
Usual type of milk consumed			
Whole	87	76	79
Low/reduced fat	4	14	11
Skim	2	5	5
Total drinks milk	95	97	96
Does not drink milk	5	3	4
Total	*100*	*100*	*100*
Salt added after cooking			
Never/rarely	16	35	30
Sometimes	30	23	25
Usually	53	43	46
Total	*100*	*100*	*100*

Source: Australian Bureau of Statistics (ABS 2006a)

2.24 Breastfeeding practices

WHY IS IT IMPORTANT? Breastfeeding is one of the most important health behaviours for promoting the survival, growth, development and health of infants and young children. It offers protection against many conditions, including diarrhoea, respiratory infections, middle ear infections, SIDS and the development of diabetes in later life. Current guidelines recommend exclusive breastfeeding for the first 6 months of life and that continued breastfeeding until 12 months of age and even beyond (NHMRC 2003).

Babies of Aboriginal and Torres Strait Islander mothers have higher rates of infant mortality (see measure 1.19). The most common causes of death in infants and children aged less than 2 years are gastrointestinal and respiratory infections (NHMRC 2003). Aboriginal and Torres Strait Islander babies also have higher death rates from SIDS. Research has found that breastfeeding has a protective effect for these conditions.

Aboriginal and Torres Strait Islander babies are also more likely to experience poorer physical development and disproportionately high prevalence of illness and conditions such as poor dental health. The NHMRC guidelines recognise the protection that breastfeeding can provide against poor health outcomes in early childhood.

FINDINGS: Breastfeeding rates for Indigenous mothers are lower than for non-Indigenous mothers. In 2004–05, 79% of Aboriginal and Torres Strait Islander infants aged 0–3 years in non-remote areas had been breastfed compared with 88% of non-Indigenous infants.

Breastfeeding status varied by remoteness, with a higher proportion of Aboriginal and Torres Strait Islander children aged under 6 months currently being breastfed in remote areas (85%) than in non-remote areas (56%). A smaller proportion of children aged 0–3 years in remote areas had never been breastfed compared with children in non-remote areas (14% and 21% respectively).

In 2004–05, the main reason mothers of Aboriginal and Torres Strait Islander infants aged 0–3 years in non-remote areas had stopped breastfeeding was that they were no longer producing any or adequate milk (32%). Approximately 21% of Indigenous Australian infants were no longer breastfed because mothers felt it was time to stop, and 6% because the mother was pregnant again.

Figures available only for non-remote areas indicate that a higher proportion of Aboriginal and Torres Strait Islander infants (18%) than others (10%) are first given solid food within their first 3 months. By the time they reached 9 months, similar proportions of both groups had been given solid food regularly.

Socio-economic factors appear to have a strong association with propensity for children to be breastfed. In 2004–05, 70% of children aged 0–3 years living in households in the lowest income quintile had been breastfed compared with 90% in the highest income quintile.

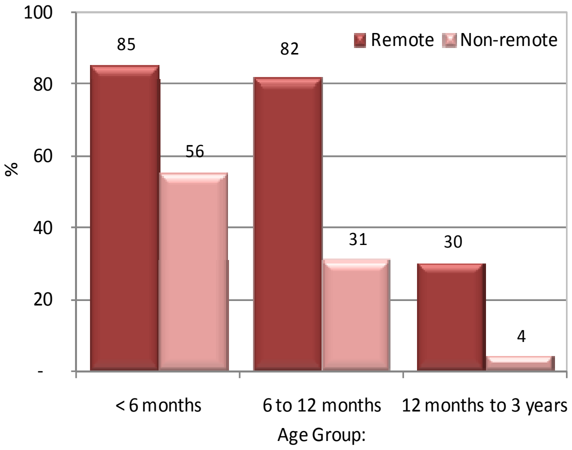
IMPLICATIONS: The NSFATSIH recognises that child and maternal health should be addressed both by health system interventions and through partnerships with other sectors.

There are opportunities for promotion of breastfeeding in educational settings and within the health sector, particularly in antenatal and post-natal care.

The *Cultural Respect Framework for Aboriginal and Torres Strait Islander **Health 2004–**2009* (AHMAC 2004) recognises that relatively poor health outcomes for Aboriginal and Torres Strait Islander peoples are the result of a complex set of interacting factors. Policies therefore need to recognise situations that may determine propensity to breastfeed or not breastfeed a child.

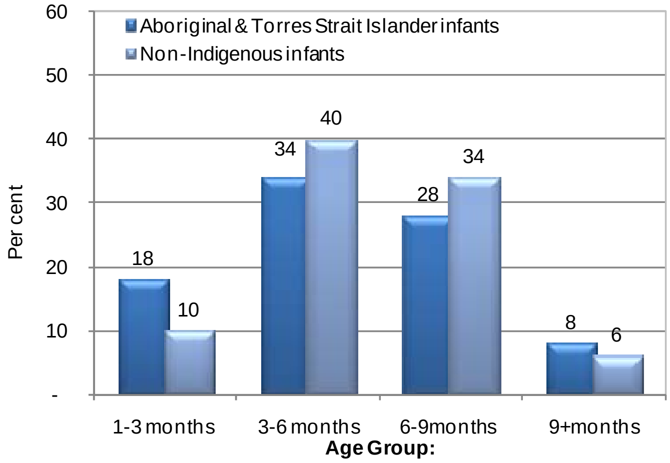
Monitoring of breastfeeding practices should be undertaken in conjunction with measures 1.08 Diabetes, 1.12 Children's hearing loss, 1.19 Infant mortality rate, 1.20 Perinatal mortality, 1.21 Sudden infant death syndrome and 3.01 Antenatal care.

Figure 123 – Aboriginal and Torres Strait Islander children aged less than 3 years and currently breastfeeding, by age and remoteness, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 124 – Children in non-remote areas aged less than 3 years: age at which first given solid food regularly, by Indigenous status 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Table 48 – Aboriginal and Torres Strait Islander children aged 0–3 years in non-remote areas: Breastfeeding status by State/Territory, 2004–05

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Breastfeeding age range:					Per cent				
0 to < 6 months	35	43	31	27	22	51	32	41	33
6 to < 12 months	21	22(b)	19(a)	16(b)	14(a)	15(a)	15(a)	16(a)	19
12 months or more	11	10(b)	18(a)	10(b)	15(a)	9(b)	13(a)	17(a)	13
Currently breastfeeding	8	9	12	18	30(a)	11(b)	29(a)	17(a)	13
Ever breastfed	***76***	***84***	***79***	***70***	***81***	***86***	***89***	***92***	***79***
Never breastfed	24	15(a)	20	30(a)	19(a)	14(a)	11(a)	5(b)	21
Total	100	100	100	100	100	100	100	100	100
					Number				
Total Persons	13,418	2,373	10,325	2,019	3,552	1,762	1,082	433	34,964

(a) estimate has a relative standard error of 25% to 50% and should be used with caution
(b) estimate has a relative standard error of greater than 50% and is considered too unreliable for general use
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

2.25 Unsafe sexual practices

WHY IS IT IMPORTANT? Unsafe sexual practices involve the failure to take precautions during sex, which may result in sexually transmitted infections (STIs), reproductive tract infections (RTIs) and a range of adverse reproductive health consequences such as unintended pregnancy, abortion, infertility and cancer resulting from STIs, sexual dysfunction and certain aspects of mental health (WHO 2006). The consequences of unsafe sexual practices can be high and the impact on individuals, families and communities can continue long after the unsafe sexual practices have ceased. STIs are more common among Indigenous Australians than for other Australians (see measure 1.11). Bacterial STIs can have serious long-term consequences, such as chronic abdominal pain or infertility in women caused by chlamydia and gonorrhoea, genital damage due to donovanosis, and heart and brain damage caused by syphilis. Unsafe sexual practices can in some cases result in sexual dysfunction.

Currently, 1 in 5 Indigenous births are to mothers under the age of 20 (ABS 2007a). Pregnancy at a young age is generally associated with higher rates of complications during pregnancy and delivery. Teenage births are associated with lower annual income, educational attainment and employment prospects for the mother (Women's Health Queensland Wide Inc. 2008).

It should be recognised that teenage pregnancy is only a proxy indicator of unsafe sexual practices. Not all unsafe sexual practices result in teenage pregnancy and not all teenage pregnancies are unplanned or even discouraged by the community.

The burden of disease study (Vos et al. 2007), attributed 1.2% of the total burden of disease in the Aboriginal and Torres Strait Islander population to unsafe sex, primarily through cervical cancer, chlamydia and HIV/AIDS.

FINDINGS: For the period 2004–2006 notification rates for Aboriginal and Torres Strait Islander peoples were 6 times higher for chlamydia, 73 times higher for gonorrhea and 69 times higher for syphilis compared with non-Indigenous Australians in Western Australia, South Australia and the Northern Territory (see also measure 1.11). Over the period 1994–1996 to 2005–2006, notification rates for chlamydia and gonorrhoea have increased significantly for Indigenous people (188% and 74% respectively), but have fallen for syphilis (by 33%).

In 2005, there were 2,138 mothers aged less than 20 years who identified as Aboriginal or Torres Strait Islander. This represented 22% of all Indigenous mothers at a rate of 48 per 1,000 women. Non-Indigenous mothers were less likely to be aged less than 20 years, with a rate of 9 per 1,000 women. A higher proportion of Indigenous women giving birth in very remote and remote areas were aged less than 20 years (26% and 22% respectively) compared with those living in major cities, inner regional and outer regional areas (20%, 21% and 20% respectively).

In 2005, approximately 13% of Indigenous teenage mothers had births that were preterm and 13% gave birth to low birthweight babies. Around 10% of non-Indigenous teenage mothers had pre-term births and 8% gave birth to low birthweight babies.

IMPLICATIONS: Very little data are available on unsafe sexual practices for Aboriginal and Torres Strait Islander Australians. National surveys on this topic do not have sufficient sample sizes to produce reliable estimates for Indigenous Australians. The two proxy measures that are available show high notification rates for STIs and high rates of teenage pregnancy for Aboriginal and Torres Strait Islander peoples. They suggest that there are significant issues with unsafe sexual practices within the population. Several national strategies have specifically addressed sexual health problems among Indigenous Australians. These strategies recognise the need for integrated solutions that address both individual sexual behaviour and education. In relation to health behaviours, key strategies focus on improved surveillance and increasing access to health services. In the education domain, entry points include improved education for young people on safe sexual practices, risks of unplanned pregnancies and STIs; increasing the number of Indigenous health workers trained in sexual health and community-based awareness programs that target out-of-school people who are particularly vulnerable.

The National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy 2005–2008 seeks to:

improve access to testing, diagnosis, treatment and care of HIV/AIDS, STIs and Blood Borne Viruses (BBV) for Aboriginal and Torres Strait Islander people

respond to Australia's role in the prevention of a HIV epidemic in the Torres Strait region

improve surveillance and research activities in order to guide the development and implementation of prevention, treatment and care initiatives in the Aboriginal and Torres Strait Islander community

improve awareness of HIV/AIDS, STIs and BBV in the Aboriginal and Torres Strait Islander community

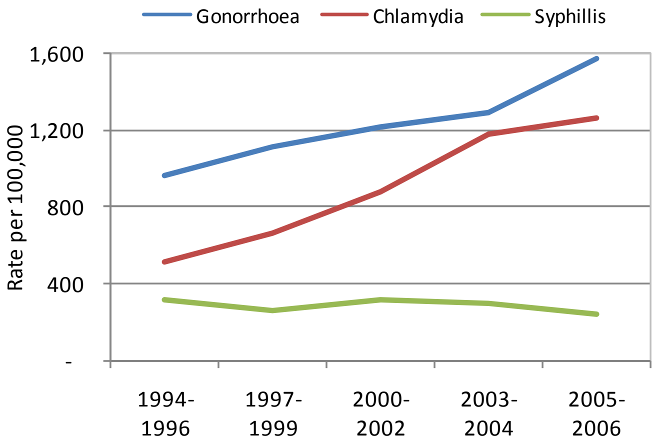
develop and strengthen links with the related national mainstream strategies.

Indigenous Australians are also recognised as a priority group under a number of national sexual health strategies, including the *National HIV/AIDS Strategy*

2005–2008 (DoHA 2005a) and the *National Sexually Transmissible Infection Strategy 2005–2008* (DoHA 2005b).

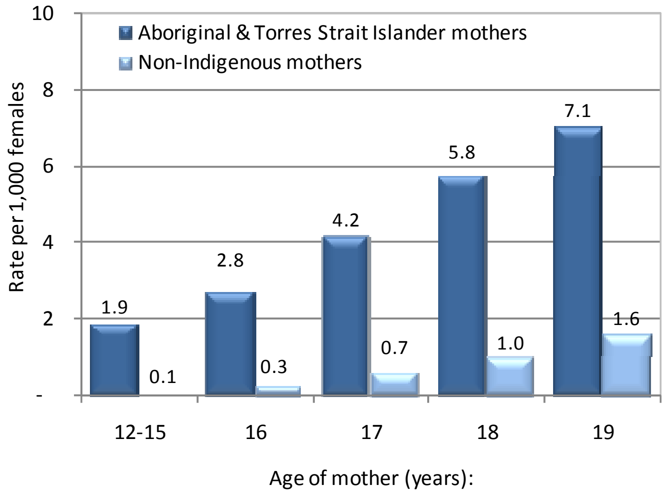
In July 2008, COAG agreed in principle to a National Partnership to address the needs of Indigenous children in the early years. Pre-pregnancy, teenage reproductive health and sexual health have been identified as priority areas for reform within this work.

Figure 125 – Notification rate for 4 infectious diseases, Aboriginal and Torres Strait Islander peoples, WA, SA and NT, 1994–1996 to 2005–2006



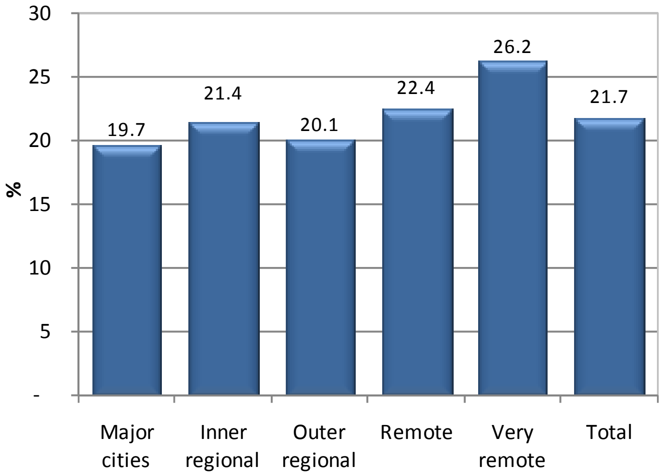
Note: This figure is the same as Figure 28 from Measure 1.11
Source: AIHW analysis of National Notifiable Diseases Surveillance System

Figure 126 – Rate per 1,000 women aged less than 20 years who gave birth, by Indigenous status, 2005



Source: AIHW analysis of National Perinatal Statistics Unit National Perinatal Data Collection

Figure 127 – Aboriginal and Torres Strait Islander women aged less than 20 years who gave birth as a proportion of total women who gave birth, by remoteness, 2005



Source: AIHW analysis of National Perinatal Statistics Unit National Perinatal Data Collection

2.26 Prevalence of overweight and obesity

WHY IS IT IMPORTANT? Overweight and obesity is a global health problem. Being overweight or obese is a risk factor linked to various chronic diseases. The *Australian Burden of Disease* study found that overweight accounted for approximately 4% of the total burden of disease (Mathers et al. 1999). *The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples 2003* (Vos et al. 2007), attributed 11% of the total burden of disease in the Aboriginal and Torres Strait Islander population to high body mass.

Obesity is closely associated with risk factors for the main causes of morbidity and mortality amongst Aboriginal and Torres Strait Islander peoples (NHMRC 2000). Obesity is associated with a higher risk of developing Type 2 diabetes and cardiovascular disease. It is the second leading cause of burden among the 11 risk factors examined. Its impact is largely through diabetes, which is responsible for 49% of the burden attributed to high body mass, and ischaemic heart disease (40%). Obesity is estimated to contribute 16% of the health gap between Aboriginal and Torres Strait Islander peoples and the total Australian population (Vos et al. 2007).

FINDINGS: The proportion of Aboriginal and Torres Strait Islander people aged 18 years and over and living in non-remote areas who were overweight or obese increased steadily from 51% in 1995 to 60% in 2004–05. There was little change between 2001 and 2004–05 in remote areas and for the total Indigenous population (59% and 60% respectively). Obesity levels steadily increased with age. A higher proportion of Indigenous males were overweight (34%) compared with Indigenous females (24%), however, Indigenous females were more likely to be obese than Indigenous males (34% compared with 28%).

After adjusting for differences in the age structure of the two populations Indigenous Australian adults were twice as likely to be obese as non-Indigenous Australian adults.

There are no current data on the prevalence of overweight and obesity among Aboriginal and Torres Strait Islander children.

Results from the 2004–05 NATSIHS show higher proportions of Torres Strait Islanders in the overweight or obese categories than in the Aboriginal population (61% versus 56%) (ABS 2006a).

IMPLICATIONS: Given the health risks associated with being obese or overweight, the situation for Aboriginal and Torres Strait Islander peoples requires urgent attention. It is second only to tobacco consumption in terms of contribution of modifiable risk factors to the health gap experienced by Aboriginal and Torres Strait Islander peoples.

In the first instance, arresting the increase in proportions of people who are overweight or obese is a reasonable target. As Australia is ranked as one of the ‘fattest developed nations’ (DoHA 2008a), this is one measure where it may be unwise to benchmark targets against the non-Indigenous population for the longer term.

While genetic factors account for a proportion of overweight and obesity within the Australian population, poor eating patterns and lack of physical activity are regarded as the main causes (AMA 2005). Nutrition and physical activity are therefore the areas on which policies should focus. The NSFATSIH proposes partnerships with (a) food wholesalers, retailers and Aboriginal and Torres Strait Islander communities to ensure accessibility and affordability of healthy food choices; (b) media, health and education sectors to encourage understanding of nutrition and healthy food choices; and (c) state and territory governments, local councils, private sponsors and sports and recreation bodies to encourage the involvement of Aboriginal and Torres Strait Islander peoples in sport and recreational activities.

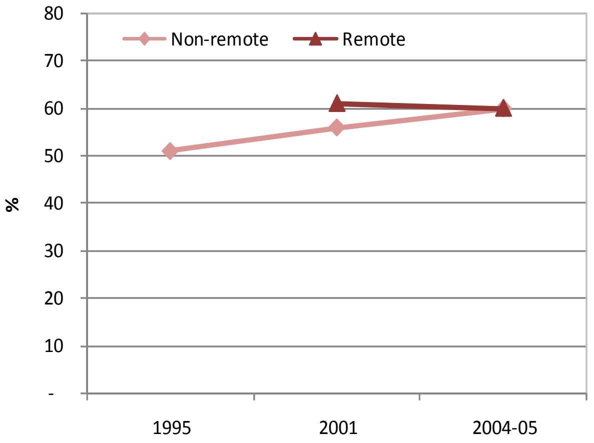
The National Obesity Taskforce (2003) nominated focus areas for Aboriginal and Torres Strait Islander children and young people, including whole of community education and social marketing and communication strategies for nutrition.

In addition, *Healthy Weight for Adults and Older Australians 2006–2010* also includes outcomes and actions for Indigenous Australians.

Monitoring of this measure should be in conjunction with measures 2.22 Level of physical activity and 2.23 Dietary behaviours.

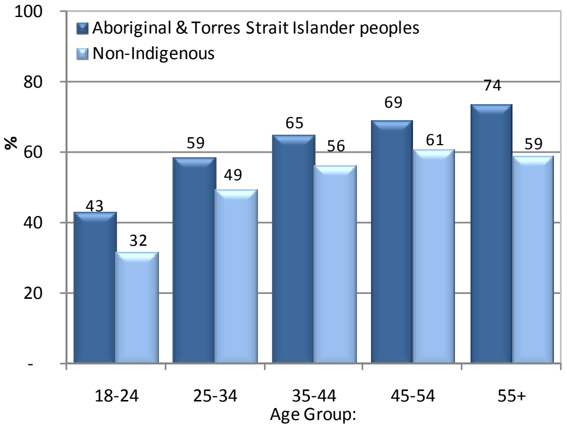
A specific focus is also needed for Torres Strait Islander peoples, particularly those living in the Torres Strait Island area.

Figure 128 – Proportion of Aboriginal and Torres Strait Islander adults who were overweight or obese, 1995, 2001 and 2004–05



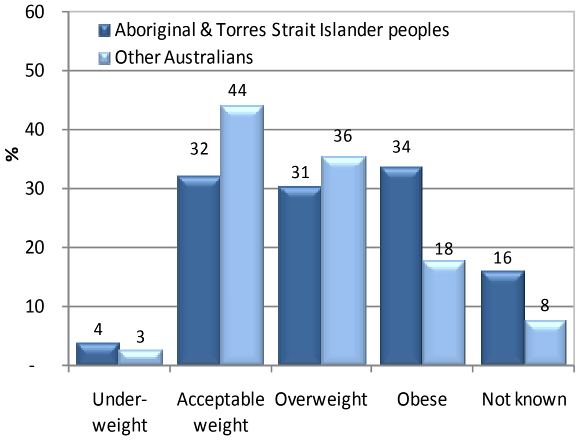
Source: ABS and AIHW analysis 1995 and 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2001 National Health Survey (Indigenous supplement)

Figure 129 – Proportion of adults who were overweight or obese, by Indigenous status and age, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 130 – Proportion of adults (age-standardised) by weight characteristics and Indigenous status, 2004–05



Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Chapter 6 Health System Performance (Tier 3)

Tier 3 includes measures of the performance of the health system including population health, primary health care and secondary/tertiary care services. Six performance domains are identified: measures of the extent to which health services are effective/appropriate/efficient, the responsiveness of health services to Aboriginal and Torres Strait Islander communities and individuals, accessibility of services, continuity of services, capability and sustainability. The measures deal with a range of programs and service types including:

Child and maternal health

- antenatal care (3.01)
- immunisation (3.02)

Health promotion (3.07)

Early detection and chronic disease management

- early detection and early treatment (including cancer screening) (3.03)
- chronic disease management (3.02)
- care planning for clients with chronic diseases (3.16)
- ambulatory care sensitive hospital admissions (3.06)
- access to services by types compared to need (3.12)
- access to prescription medicines (3.13)

Continuous Care

- regular GP or health service (3.15)
- care planning for clients with chronic diseases (3.16)

Access to care

- differential access to key hospital procedures (3.05)
- discharge against medical advice (3.08)
- access to services by types compared to need (3.12)
- access to after-hours primary care (3.14)
- access to prescription medicines (3.13)
- access to mental health services (3.09)

The health workforce

- Aboriginal and Torres Strait Islander people in Tertiary Education for health-related disciplines (3.18)
- Aboriginal and Torres Strait Islander Australians in the health workforce (3.10)
- recruitment and retention of clinical and management staff (3.20)

Adequacy of resources

- expenditure on Aboriginal and Torres Strait Islander health compared to need (3.19).

3.01 Antenatal care

WHY IS IT IMPORTANT? Antenatal care involves 'recording medical history, assessment of individual needs, advice and guidance on pregnancy and delivery, screening tests, education on self-care during pregnancy, identification of conditions detrimental to health during pregnancy, first-line management and referral if necessary' (WHO 2007). Antenatal care for pregnant women commenced in the early 1900s as a process of screening asymptomatic pregnant women, with the aim of detecting, and thereby preventing, both maternal and neonatal adverse events (Dodd et al. 2002). 'Good access to primary health care can make a difference to the health of women of childbearing ages and women during pregnancy, as well as the fetus during growth and development and the infant and young child' (Eades 2004). Antenatal care may be especially important for Aboriginal and Torres Strait Islander women, as they are at higher risk of giving birth to low birthweight babies and there are various risk factors which could be targeted through antenatal care such as anaemia, poor nutritional status, hypertension, diabetes or glucose intolerance, genital and urinary tract infections and smoking. Two studies of women attending tertiary referral hospitals for obstetric care found poorer birth outcomes associated with late antenatal bookings for pregnant Aboriginal and Torres Strait Islander women (Eades 2004).

National Evidence-Based Antenatal Care Guidelines are currently under development. Existing guidelines for antenatal care vary and are not always consistent with national policies or research evidence (Hunt & Lumley 2002). Most guidelines recommend that the antenatal care should commence during the first trimester, as it is at this early stage that risk factors can best be assessed (Mercy Hospital for Women et al. 2001). The schedule of antenatal visits most commonly followed in Australia is monthly visits up until 28 weeks of pregnancy, fortnightly visits until 36 weeks and weekly visits thereafter. However, research has found that the frequency of visits could safely be reduced to between 7 and 10 visits for low risk women (Mercy Hospital for Women et al. 2001; Wallace & Oats 2002).

FINDINGS: In the 4 jurisdictions that recorded information on antenatal care in 2005 (New South Wales, Queensland, South Australia and Northern Territory) an estimated 96% of Aboriginal and Torres Strait Islander mothers accessed antenatal care services at least once during their pregnancy. This compares with 99% for non-Indigenous mothers. There have been significant increases in access to antenatal care in South Australia and New South Wales between 1998 and 2005 for both Indigenous and non-Indigenous mothers. Despite this, access to antenatal care appears to be lower in South Australia (83%) than in other States. In 2005, there was little difference in the proportion of Indigenous mothers who attended at least one antenatal care session by remoteness (around 96% in major cities, 97%–98% in regional areas and 94%–95% in remote areas).

Aboriginal and Torres Strait Islander mothers access services later in the pregnancy and have significantly fewer antenatal care sessions. In New South Wales, 53% of Aboriginal and Torres Strait Islander mothers had their first antenatal session in the first trimester of the pregnancy, compared with 63% for other mothers. In the Northern Territory, 35% of Indigenous mothers had their first antenatal session in the first trimester of the pregnancy, compared with 54% for other mothers. Fewer Aboriginal and Torres Strait Islander mothers access 5 or more antenatal sessions compared with other mothers in Queensland (72% versus 93%), South Australia (64% versus 88%) and the Northern Territory (77% versus 96%).

Indigenous mothers who attended antenatal care were less likely to have low birthweight babies (13%) than those who did not attend (39%). This relationship was also evident for non-Indigenous mothers, although the rates of low birthweight were lower (6% and 21% respectively). Low-birthweight babies are also associated with later commencement of antenatal care and less than 5 antenatal care sessions. Similar relationships are evident with pre-term births and perinatal mortality.

In 2006–07, 16 Indigenous primary health care services participating in the *Healthy for Life Program* provided data on antenatal care. Of the 498 Indigenous mothers who gave birth to an Indigenous baby who were regular clients of these services, 41% attended their first antenatal visit in the first trimester of pregnancy.

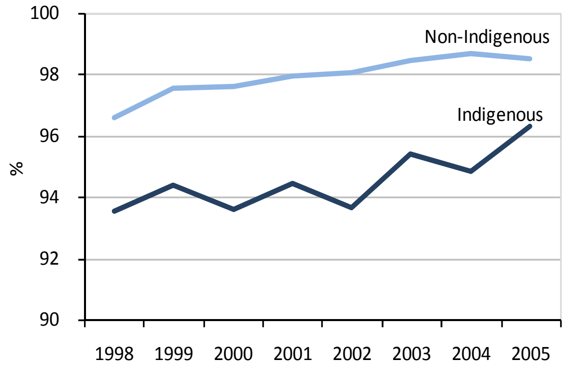
IMPLICATIONS: Around 96% of Aboriginal and Torres Strait Islander mothers access antenatal services at least once during their pregnancy. However, Indigenous mothers are accessing these services later in their pregnancy and less frequently than other mothers. Little is known about the factors contributing to lower levels of access, how the pregnancies for Indigenous women with higher risks are managed and whether these women have adequate access to specialist obstetric care.

Targeted programs suggest improved antenatal visiting can be achieved and that these can translate into improvements in health outcomes such as increased birthweight and reduced premature birth (Eades 2004; Herceg 2005; Panaretto et al. 2007). One recent study demonstrated sustained access to a community-based, integrated, shared antenatal service has improved perinatal outcomes among Indigenous women in Townsville (Panaretto et al. 2007). Programs that have been reviewed are mostly based in Aboriginal and Torres Strait Islander health services or tertiary maternity services. Little is known about the factors likely to impact on antenatal care for mothers seeking care through private general practitioners.

Early childhood is a high priority for Australian governments. The Council of Australian Governments aims to halve the gap in mortality rates between Indigenous and non-Indigenous children under the age of 5 within a decade. Under the policy *New Directions: An Equal Start in Life for Indigenous Children,* the Australian Government has committed to providing all Indigenous children and their mothers with access to antenatal care; standard information about baby care; practical advice and assistance with parenting; monitoring of developmental milestones by a primary health care service; and health checks for children. Both the *Healthy for Life* and *Health@Home Plus* programs aim to improve access to antenatal and postnatal care and child health care. These programs aim to improve pregnancy, birth and child health outcomes (including birthweight) and reduce the incidence of illness for Aboriginal and Torres Strait Islander babies and children.

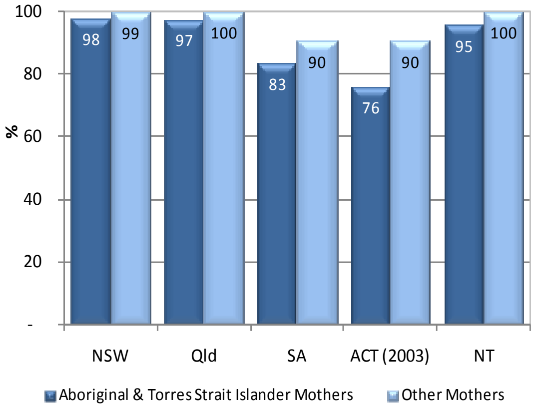
Australian governments are working collaboratively to develop National Evidence-Based Antenatal Care Guidelines which will provide nationally consistent guidance to assist health professionals provide the most effective and appropriate antenatal care and advice, including culturally appropriate recommendations.

Figure 131 – Per cent of mothers who attended at least one antenatal care session, by Indigenous status NSW, Qld, SA, 1998–2005



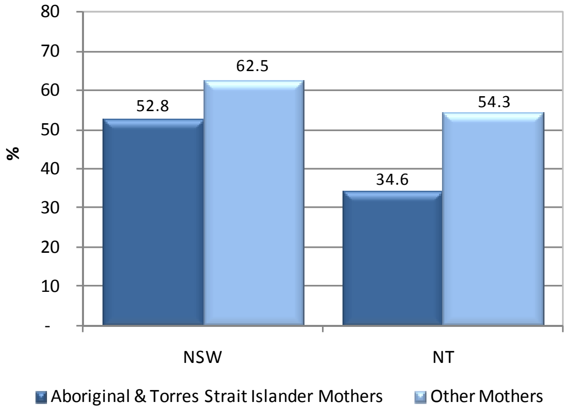
Source: AIHW analyses state/territory Perinatal Collections

Figure 132 – Per cent of mothers who attended at least one antenatal care session, by Indigenous status, by jurisdiction, NSW, Qld, SA, NT, 2005, ACT 2003



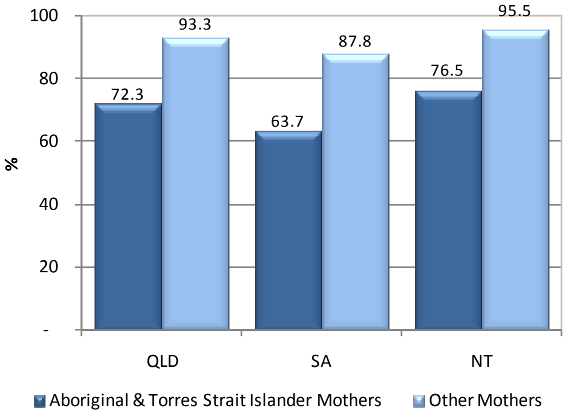
Source: AIHW analyses state/territory Perinatal Collections

Figure 133 – Per cent of mothers whose first antenatal care session occurred in the first trimester (<13 weeks), by Indigenous status, NSW, NT, 2005



Source: AIHW analyses state/territory Perinatal Collections

Figure 134 – Per cent of mothers attending 5 or more antenatal care sessions, by Indigenous status, Qld, SA, NT, 2005



Source: AIHW analyses state/territory Perinatal Collections

3.02 Immunisation (child and adult)

WHY IS IT IMPORTANT? Immunisation is highly effective in reducing morbidity and mortality caused by vaccine-preventable diseases. Childhood vaccination for diphtheria was introduced in 1932 in Australia and use of vaccines to prevent tetanus, pertussis (whooping cough), and poliomyelitis became widespread in the 1950s, followed by measles, mumps and rubella in the 1960s. In more recent years vaccines have been included for hepatitis B, haemophilus influenza type b (Hib), pneumococcal disease, meningococcal C, varicella (chicken pox) and rotavirus. The *National Immunisation Program Schedule* provides free childhood vaccines for Australian children aged 0–7 years. Aboriginal and Torres Strait Islander children living in some states and territories also have access to a hepatitis A vaccine. Since the introduction of childhood vaccination, deaths from vaccine-preventable diseases have fallen for the general population by 99%. Vaccinations are estimated to have saved some 78,000 lives (Burgess 2003). Vaccination rates are estimated from data recorded in the Australian Immunisation Register (ACIR). A study in 2001 found the ACIR underestimated overall Australian immunisation coverage by 2.7% at 1 year of age and 5% at 24 months (Hull et al. 2002). Variations in Indigenous identification in the immunisation records and Medicare enrolments used in the denominator affect data accuracy.

The *National Indigenous Pneumococcal and Influenza Immunisation Program* provides free pneumococcal and influenza vaccines for all Indigenous people aged over 50 years and those in the 15–49 years age group medically at risk. For the general population, free vaccinations are available for people aged 65 years and older. Influenza and its consequences, together with pneumonia, account for many deaths in the elderly population and place significant burden on the health system. Vaccination has been demonstrated to reduce deaths (Nichol et al. 1994; Gross et al. 1995).

FINDINGS: In December 2007, vaccination coverage for Aboriginal and Torres Strait Islander children at 1 year of age was around 9 percentage points lower than for other children (83% compared with 92%). This difference is mainly due to delayed vaccination in Aboriginal and Torres Strait Islander children. By 2 years of age, the difference is around 2% (91% of Indigenous children compared with 93% for other children). At 6 years of age, 85% of Indigenous children were fully vaccinated compared with 89% of other children. Coverage rates are highest in the Northern Territory followed by Victoria and New South Wales. Coverage rates for 6 year old Aboriginal and Torres Strait Islander children are significantly lower in South Australia (69% compared with 85% for the 5 jurisdictions with comparable data). Between 2001 and 2007, there was no significant change in the per cent of Aboriginal and Torres Strait Islander and other children who were fully vaccinated at 1 year of age. There was a non-significant increase over the same period for children at 2 years of age and a significant increase for children aged 6 years (from 83% in 2002 to 85% in 2007).

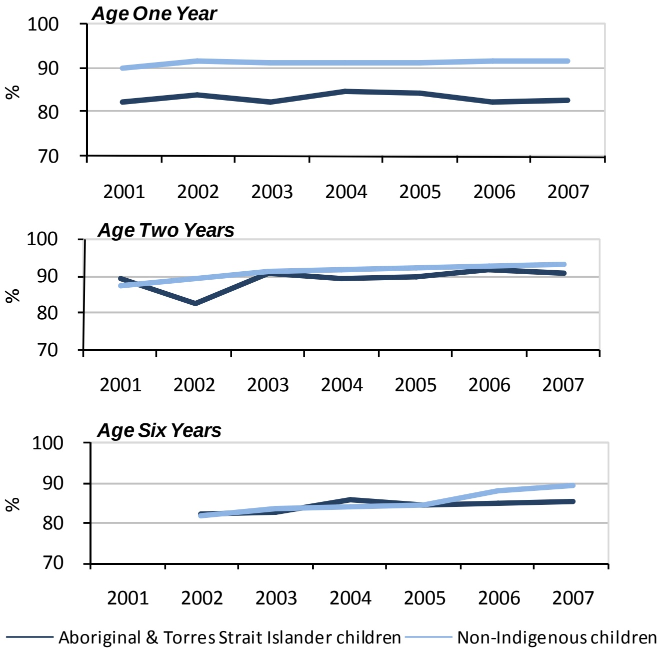
In 2004–05, an estimated 60% of Aboriginal and Torres Strait Islander people aged 50 years and over reported they had been vaccinated against influenza in the last 12 months, which is an increase from an estimated 51% for 2001. Coverage in the target group for non-Indigenous Australians aged (65 years and over) was 73% in 2004–05. In the same year, approximately 34% of Aboriginal and Torres Strait Islander people aged 50 years and over had been vaccinated against invasive pneumococcal disease in the last 5 years, an increase from an estimated 25% in 2001. Coverage in the target group for non-Indigenous Australians aged (65 years and over) was 43% in 2004–05. A higher proportion of Aboriginal and Torres Strait Islander people aged 50 years and over, living in remote areas, have been vaccinated against influenza in the last 12 months and invasive pneumococcal disease in the last 5 years (80% and 56% respectively) than in non-remote areas (52% and 26% respectively). Adult vaccinations are also targeted at younger Aboriginal and Torres Strait Islander people who have various risk factors. Twenty-three per cent of Indigenous adults aged 18–49 years had an influenza vaccination in the previous year. This was higher for those with at least one risk factor (29%). Twelve per cent of Indigenous adults aged 18–49 years had a pneumococcal vaccination in the previous 5 years. Those with at least one risk factor had only marginally higher rates (13%) (Menzies et al. 2008).

Between July 2007 and May 2008 approximately 10,900 Child Health Checks were undertaken in the prescribed areas of the Northern Territory Emergency Response. Immunisations were due for 16% of children. A higher percentage of children aged 12–15 years (25%) were due for vaccinations compared with children aged 0–5 years (17%) and those aged 6–11 years (11%). Overall, 6% of children received a vaccination during their health check but this rate varied by age group: 11% of children aged 12–15 years received a vaccination compared with 8% of those aged 0–5 years and 3% of those aged 6–11 years.

IMPLICATIONS: Achieving good immunisation coverage is primarily a reflection of the strength and effectiveness of primary health care. Rates of coverage for Aboriginal and Torres Strait Islander children fall slightly below the rest of the community for children aged 1 year, but are very close to the rates reported for other Australian children at 2 years and 6 years of age. Improving immunisation timeliness for Aboriginal and Torres Strait Islander children remains a challenge. The benefits of improved coverage and new vaccines have been demonstrated for Hib hepatitis B, measles and pneumococcal disease (Menzies et al. 2008). Periodic epidemics of pertussis continue to be a problem, partly due to delayed vaccination in Indigenous infants and environmental living conditions (Kolos et al. 2007). Benefits are expected from the more recent introduction of vaccines for hepatitis A and chickenpox (Menzies et al. 2008). Coverage for adult vaccination for influenza and invasive pneumococcal disease has increased, but opportunities to improve coverage further exist. Improving GP identification of Aboriginal and Torres

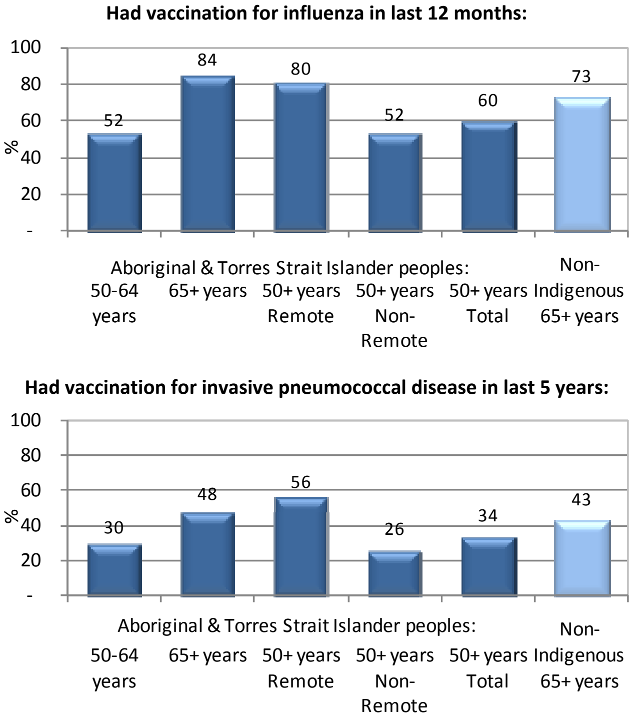
Strait Islander clients is critical to improving uptake. Effective processes for identification by GPs are uncommon and this is a key limiting factor in improving vaccination (Norris et al. 2004). Around 30% of all Indigenous Australians who had never been vaccinated against influenza or invasive pneumococcal disease had visited a doctor in the last 2 weeks. Adult vaccination rates are significantly lower in non-remote areas.

Figure 135 – Proportion of children fully vaccinated at age 1 year, 2 years and 6 years, NSW, Vic., SA, WA and NT combined, by Indigenous status, 2001 to 2007.



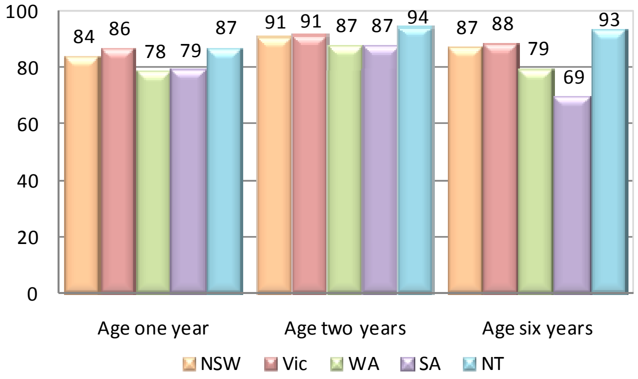
Source: AIHW analysis of Australian Childhood Immunisation Register, Medicare Australia

Figure 136 – Proportion of Aboriginal & Torres Strait Islander people aged 50 years and over and other people aged 65 years and over: immunisation status 2004–05



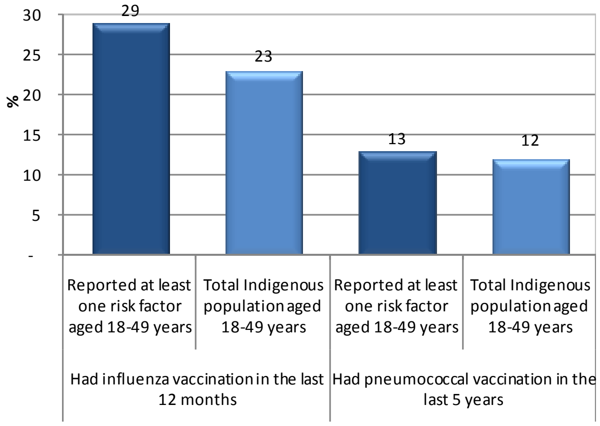
Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey, and 2004–05 National Health Survey.

Figure 137 – Percentage of Aboriginal and Torres Strait Islander children fully vaccinated at age 1 year, 2 years and 6 years, NSW, Vic., SA, WA and NT, 2007



Source: AIHW analysis of Australian Childhood Immunisation Register, Medicare Australia

Figure 138 – Percentage of Aboriginal and Torres Strait Islander people aged 18 to 49 years who had (a) influenza vaccination in previous 12 months and (b) pneumococcal vaccination in previous 5 years, 2004–05



Source: Menzies et al. 2008

3.03 Early detection and early treatment

WHY IS IT IMPORTANT? Early detection is the discovery of a disease or condition at an early stage of its development or onset, usually prior to the development of symptoms. Early detection may occur for individual patients, where clinically indicated, or for all members of a population through screening programs. In Australia, primary health care providers including Aboriginal and Torres Strait Islander health services and general practitioners, are a key element in early detection and early treatment programs. This role has been reinforced in recent years through the introduction of additional items under the MBS. In November 1999, MBS items were introduced to encourage annual health assessments for people aged 75 years and over, and Aboriginal and Torres Strait Islander people aged 55 years and over. Items were also introduced to encourage health assessments for Aboriginal and Torres Strait Islander people aged 15–54 years (May 2004) and 0–14 years (May 2006). Early detection and treatment programs are most effective when there are systematic approaches to ensuring assessments and screening occur regularly in line with recommended intervals.

Breast, bowel and cervical cancer screening programs are designed to detect cancer early (breast and bowel cancer) or prevent its occurrence in the first place (cervical cancer). National organised programs for breast and cervical screening were implemented in Australia in the early 1990s, and have been followed by reductions in mortality for these cancers. A national bowel cancer screening program commenced in 2006, using Faecal Occult Blood Tests (FOBT). FOBT screening has the potential to reduce bowel cancer mortality by 15–33% (National Cancer Institute 2008). Cancer mortality rates are higher for Aboriginal and Torres Strait Islander peoples than for other Australians (Condon et al. 2004). For jurisdictions in which data are available, mortality appears to be 5 times higher for cervical cancer compared with other women, but lower for breast and bowel cancers. Indigenous Australians in the Northern Territory have lower cancer survival for most cancer sites than other people. Compared with non-Indigenous Australians diagnosed with the same cancer, Indigenous Australians are doubly disadvantaged because they are not only diagnosed later, with more advanced disease, but also have lower survival for every stage at diagnosis (Condon et al. 2005; Cunningham et al. 2008). Indigenous patients were less likely to have had treatment for cancer (surgery, chemotherapy, radiotherapy) and waited longer for surgery (hazard ratio = 0.84, 95% CI 0.72–0.97) than non-Indigenous patients (Valery et al. 2006).

FINDINGS: MBS items for health checks for Indigenous children aged 0–14 years were introduced in 2006. During 2006–07 there were 6,315 health assessments undertaken, representing around 3% of children in the target group. Two-yearly health checks for Indigenous Australians aged 15–54 years were introduced in 2004. In 2006–07, there were 12,776 health checks performed, representing around 5% of the target group. MBS items for health assessments for Indigenous Australians aged 55 years and older were introduced in 1999. In 2006–07, health assessments were undertaken for 3,473 Aboriginal and Torres Strait Islander people aged 55 years and over, around 9% of the target population. This is less than a half the rate for the equivalent MBS items for annual health checks for the general population aged 75 years and over.

Rates of use of the health checks and health assessment items have been increasing since their introduction. Further increases are expected in 2007–08, particularly for Child Health Checks, which have been an important focus for the Northern Territory Emergency Response. Between July 2007 and May 2008, approximately 10,900 Child Health Checks had been undertaken in the prescribed areas of the Northern Territory Emergency Response. Approximately 9,000 of these Child Health Checks were provided or funded by the Australian Government as part of the Northern Territory Emergency Response and are not captured in the Medicare dataset.

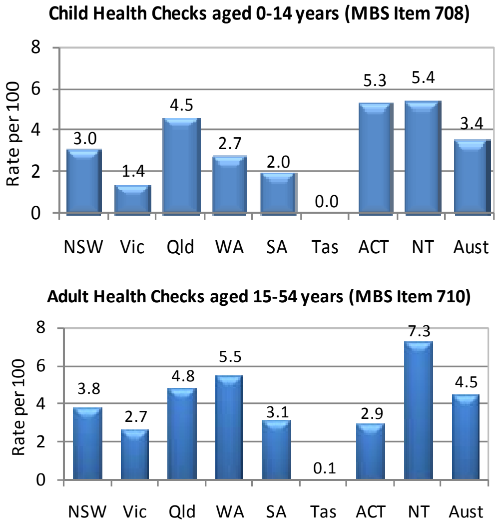
An estimated 36% of Aboriginal and Torres Strait Islander women aged 50–69 years participated in mammography screening for breast cancer compared with 56% for other Australian women. Participation by Indigenous women has increased significantly from 32% in 2000. Participation rates are highest in Queensland (50%) and lowest in the Northern Territory (15%). In 2004–05, 58% of Aboriginal and Torres Strait Islander women aged 18 years and over reported having a regular pap smear test. This compares with an estimated 61% of all Australian women aged 20–69 years who were recorded in the national cervical cancer screening register in 2004–05 (AIHW 2008b). The proportion of Aboriginal and Torres Strait Islander women who reported having a regular pap smear test was highest in the remote/very remote areas (65%) and lowest in major cities (54%). Between August 2006 and July 2007 149,262 Australians participated in a trial National Bowel Screening Program. Of these, 490 identified as Aboriginal and Torres Strait Islander people. Positive result rates were higher in this group (9%), than the non-Indigenous group (6%).

Most Aboriginal and Torres Strait Islander primary health care services funded by the Australian Government provide early detection and early intervention services. In 2005–06, Aboriginal and Torres Strait Islander primary health care services reported providing screening for diabetes (77%), cervical cancer (75%), hearing problems (71%), eye disease (65%), sexually transmissible diseases (63%) cardiovascular disease (53%) and renal disease (43%). Sixty-five per cent of services provided regular well persons' checks.

IMPLICATIONS: Early detection and early treatment through primary health care services could have significant benefits for Indigenous Australians. Not all primary health care services for Aboriginal and Torres Strait Islander peoples have established systems for screening and early detection, suggesting opportunities to extend systematic approaches. This is a challenge shared with mainstream general practice. The take-up of annual health assessments for Indigenous Australians aged 55 years and over is low but increasing. Only a minority of mainstream general practitioners currently identify which of their patients are Aboriginal and/or Torres Strait Islander (Norris et al. 2004; Riley et al. 2004). If general practitioners do not identify these patients they are not in a position to offer any Aboriginal and Torres Strait Islander-specific health initiatives including the additional MBS, PBS and immunisation programs available. Such barriers need targeted solutions before significant improvements in uptake can be expected. Divisions of General Practice are now required to report on the uptake of health assessments in their new performance indicators.

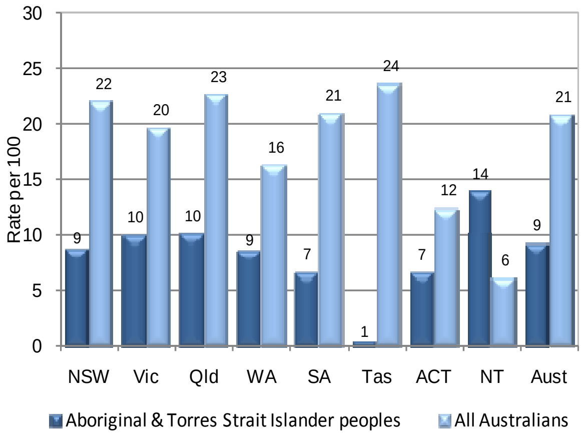
Achieving better participation rates in screening programs could have important positive impacts on Indigenous health. Up to 90% of all cases of cervical cancer could be prevented through regular screening. The HPV vaccination provides a new opportunity to reduce the excess in cervical cancer mortality. However, screening through pap smears will remain vital for many decades, as the current vaccine are not effective against all types of HPV that cause cervical cancer.

Figure 139 – Rate per 100 persons in target group receiving Medicare Benefits Schedule Health Checks, Aboriginal and Torres Strait Islander people aged 0–14 years and 15–54 years, 2006–07



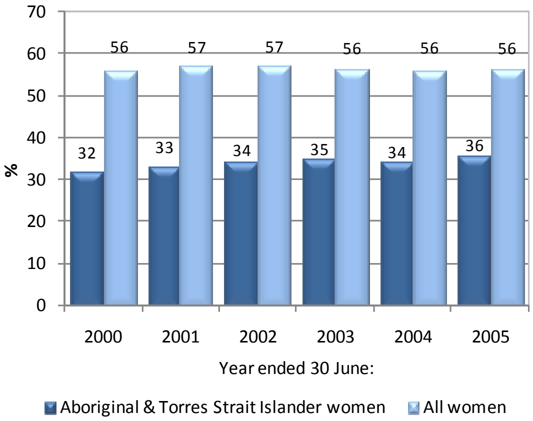
Source: AIHW analysis of Medicare data

Figure 140 – Rate per 100 persons in target group receiving Medicare Benefits Schedule Health Assessments, Aboriginal and Torres Strait Islander people aged 55 years and over, all Australian aged 75 years and over, 2006–07



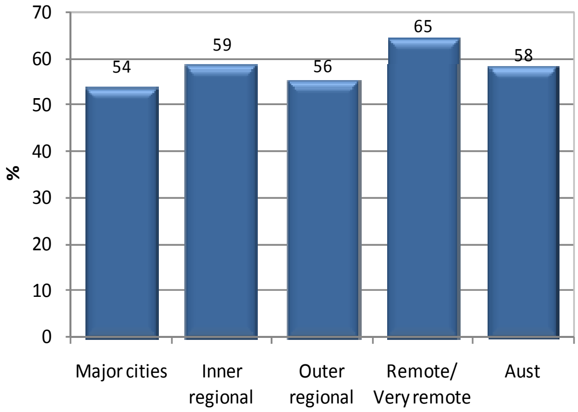
Source: AIHW analysis of Medicare data

Figure 141 – Participation rates for Breastscreen Australia, Women 50–69 years by Indigenous status, 1999–2000 to 2004–05



Source: AIHW analysis of BreastScreen Australia data

Figure 142 – Aboriginal and Torres Strait Islander women aged 18 years and over who had regular pap smear tests by remoteness, 2004–05



Source: AIHW analysis of the 2004–05 National Aboriginal and Torres Strait Islander Health Survey

3.04 Chronic disease management

WHY IS IT IMPORTANT? Chronic diseases such as circulatory disease, diabetes, renal disease, chronic respiratory disease, cancers and chronic mental health conditions are a major cause of morbidity and mortality among Aboriginal and Torres Strait Islander peoples. Better management of these conditions is a key factor in meeting the target of closing the life expectancy gap between Indigenous and non-Indigenous Australians within a generation. Chronic disease is estimated to be responsible for 70% of the health gap (Vos et al. 2007). Effective management of chronic disease can delay the progression of disease, decrease the need for high-cost interventions, improve quality of life, and increase life expectancy. Good quality care for people with chronic disease generally involves multiple health care providers across multiple settings. For example, Aboriginal and Torres Strait Islander primary health care services, general practice, community health, hospitals, specialists, allied health professionals and the engagement of the client and their families in self-management of the condition (NHPAC 2006). Typically, the primary health care provider plays a central role in chronic disease management through regular or opportunistic screening to identify patients with asymptomatic disease, development of a management plan with the patient and their family, regular assessment of the extent to which the chronic illness is well controlled, regular checks to identify early signs of complications, and referral to specialist care where this is warranted. For example, people with Type 2 diabetes should have their glycosylated haemoglobin (HbA1c) measured at least every 6 months or more frequently depending on the level of blood glucose control, their blood pressure measured at every clinic visit, or at least every 6 months (Jerums, Colagiuri 2004), and their cholesterol levels tested. Chronic disease management requires early access to specialist care, although primary care providers continue to play a key role in the management of the disease. To play an effective role in chronic disease management, primary health care services need to take an organised approach reflecting evidence-based guidelines (Wagner et al. 1996; Bodenheimer et al. 2002).

FINDINGS: Aboriginal and Torres Strait Islander people with chronic conditions such as diabetes receive their care from both Aboriginal and Torres Strait Islander primary health care services and mainstream general practitioners and (see measure 3.15). It is important to understand how well chronic diseases are managed in both these settings.

Information on Indigenous Australians receiving care from general practitioners is available through the Divisions of General Practice National Performance Indicators. Based on data reported from 107 divisions, 51% of Aboriginal and Torres Strait Islander patients on practice diabetes registers had an HbA1c test in the last 12 months where the results were recorded on the register, compared with 75% of non-Indigenous Australians. However, 56% of Aboriginal and Torres Strait Islander people on the diabetes registers had a cholesterol test, compared with 35% of non-Indigenous Australians. These data are limited by the poor quality of GP Indigenous identification.

Information on the management of chronic conditions by Aboriginal and Torres Strait Islander primary health care services is available through Service Activity Reporting and the *Healthy for Life* collection. Through the Services Activity Reporting for 2005–06 it is estimated that approximately 82% of services had a doctor working at the service. An estimated 80% of services provided management of chronic illness, 57% reported keeping track of clients needing follow-up (e.g. through monitoring sheets/follow-up files), 51% reported they maintained health registers (e.g. chronic disease register) and 55% used clinical practice guidelines. Approximately 53% of Aboriginal and Torres Strait Islander primary health care services reported they used Patient Information and Recall Systems (PIRS) which automatically provide reminders for follow-up and routine health checks. Similar responses were received in previous years, except for services reporting that they ‘keep track of clients needing follow-up’ which has fallen from 70% in 2002–03.

Through *Healthy for Life*, around 50 sites have been funded to improve delivery of high quality primary care including care for people with chronic illnesses. Services submit data on 11 essential indicators including management of diabetes and circulatory disease. Based on these indicators submitted by 25 services, it is estimated that 44% of Aboriginal and Torres Strait Islander people with Type 2 diabetes had an HbA1c test in the last 6 months, and 61% had their blood pressure assessed. For the services that reported the results of these tests, an estimated 72% had HbA1c that were higher than the target for people with diabetes (i.e., 7%), and 51% had elevated blood pressure. In comparison National Primary Care Collaborative data from 171 general practitioners in 2007 found that 62% of patients with Type 2 diabetes had elevated HbA1c levels and 66% had elevated blood pressure. For Aboriginal and Torres Strait Islander people with coronary heart disease who are regular clients of *Healthy for Life* services 68% had their blood pressure assessed in the last 6 months. For the services that reported the results of these tests, an estimated 45% of people with coronary heart disease had elevated blood pressure.

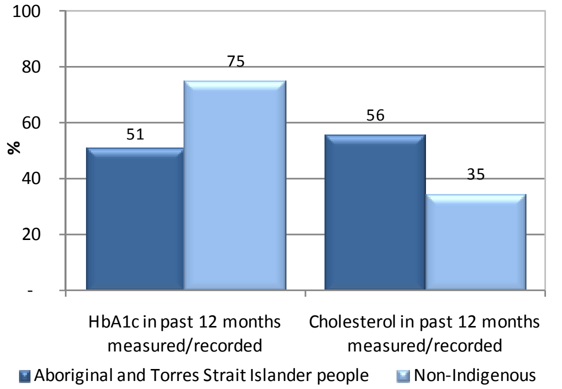
Implementation of continuous quality improvement approaches to chronic disease management in Aboriginal and Torres Strait Islander primary health care services has demonstrated that significant improvements in care delivered can be achieved. The Audit and Best Practice for Chronic Disease (ABCD) program found that 6-monthly HbA1c tests for Aboriginal and Torres Strait Islander people with Type 2 diabetes, attending 12 health services in remote areas in the Northern Territory, increased from 41% to 72% of clients (Bailie et al. 2007). There are now 50 remote health services participating in the ABCD program.

IMPLICATIONS: The provision of organised chronic disease management in Aboriginal and Torres Strait

Islander primary health care services has been demonstrated to result in improvement in various health outcomes (Hoy et al. 1999; Hoy et al. 2000; Rowley et al. 2000; McDermott et al. 2003; Bailie et al. 2007). However, there are significant challenges in sustaining improvements in the management of chronic illnesses. These issues need to be addressed across the health system, not just in Aboriginal and Torres Strait Islander services. Some of the strategies recommended to address these challenges include systematic support from central agencies to buffer the effects of local factors, transparent work-practice systems backed by written disease management guidelines and manuals, delineated roles for practices for all practitioner types, appropriate staffing and training policies and raising awareness in communities through education and health promotion strategies with strong local participation (Bailie et al. 2004).

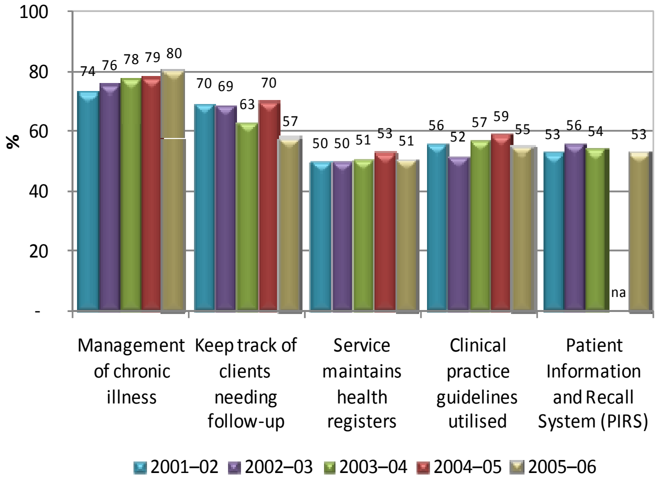
Australian governments are supporting various initiatives to improve chronic disease management including MBS items for chronic disease management, support of the *Australian Primary Care Collaboratives Pro**gram*** and the *Healthy for Life* program.

Figure 143 – Percentage of patients on General Practice Diabetes Registers receiving HbA1c and Cholesterol tests in the last 12 months with results recorded on the register, 2006–07



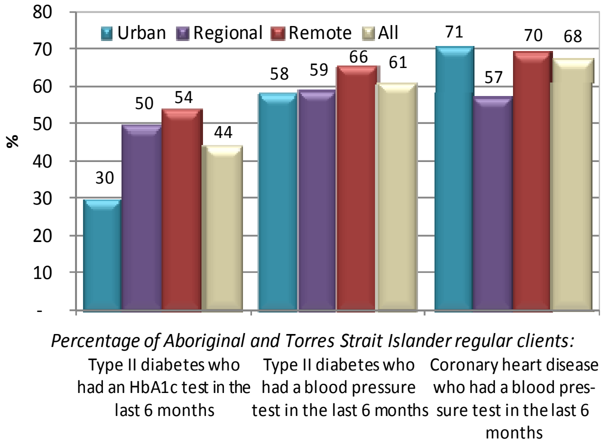
Source: Department of Health and Ageing. National Performance Indicators for Divisions of General Practice.

Figure 144 – Percentage of respondent Aboriginal and Torres Strait Islander primary health care services that provide management of Chronic Disease, 2001–02 to 2005–06



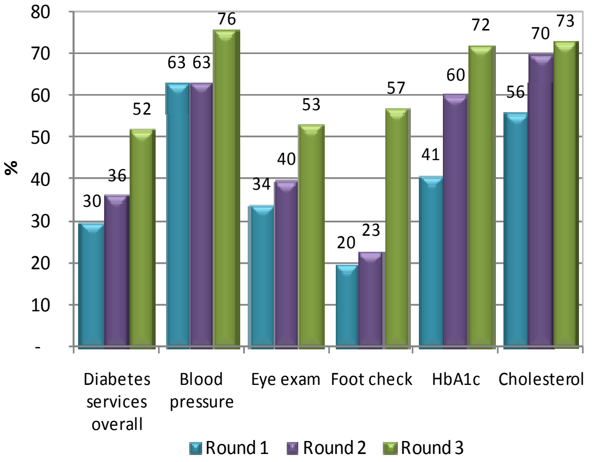
Source: Department of Health and Ageing Service Activity Report 2001–02, 2002–03, 2003–04, 2004–05, 2005–06

Figure 145 – Percentage of Aboriginal and Torres Strait Islander regular clients of Healthy For Life Services receiving recommended care 1 January to 30 June 2007



Source: AIHW analysis of Healthy for Life data collection

Figure 146 – Percentage of Aboriginal and Torres Strait Islander people with diabetes Type 2 receiving recommended care, 12 remote primary care services, Northern Territory, 2003–04 to 2005–06



Source: Bailie et al. 2007

3.05 Differential access to key hospital procedures

WHY IS IT IMPORTANT? Australians with illnesses that can be effectively treated by hospital-based medical and surgical procedures should have equitable access to these procedures. Studies have shown that while Aboriginal and Torres Strait Islander peoples, are more likely to be hospitalised than other people they are less likely to receive a medical or surgical procedure while in hospital (Cunningham 2002; ABS & AIHW 2005; ABS & AIHW 2008). The disparities are not explained by diagnosis, age, sex or place of residence (Cunningham 2002).

There is some information available on patterns of access for particular conditions. For patients admitted to hospital with coronary heart disease, access to coronary angiography can be important in diagnosis and establishment of a course of treatment. Coronary heart disease may be treated medically (with drugs) or through repairing the heart’s blood vessels, either using a medical procedure (percutaneous coronary interventions) or a surgical procedure (coronary artery by-pass grafts). A study of patients admitted to Queensland hospitals for acute myocardial infarction (heart attack) between 1998 and 2002 found that rates of coronary procedures among Indigenous Australian patients were 22% lower than rates for other patients (Coory & Walsh 2005).

Several studies have shown Aboriginal and Torres Strait Islander peoples have poorer survival for cancer. This is partly explained by the stage of cancer when patients are referred for specialist treatment (Condon et al. 2006; Valery et al. 2006). However, Aboriginal and Torres Strait Islander peoples are less likely to have treatment for cancer (surgery, chemotherapy, radiotherapy) and tend to wait longer for surgery (Hall et al. 2004; Valery et al. 2006). After adjusting for stage at diagnosis, treatment and comorbidities, non-Indigenous Australians had better survival than Indigenous patients.

Aboriginal and Torres Strait Islander peoples with end stage renal failure have a lower rate of kidney transplants, reflecting both lower rates of acceptance onto waiting lists for transplantation and lower rates of moving from the list to transplantation (Cass et al. 2003). These disparities are not explained by age, sex, comorbidities or the cause of renal disease.

FINDINGS: In the 2 years to June 2006, excluding care involving dialysis, 55% of hospital episodes for Aboriginal and Torres Strait Islander people had a procedure recorded, compared with 80% of hospital episodes for other Australians.

For Indigenous Australians 5% of hospitalisations with a procedure recorded occurred in private hospitals compared with 50% for non-Indigenous Australians.

There are many factors associated with the likelihood of receiving a procedure when admitted to hospital. An analysis of the combined impact of a range of factors found that the most significant factors (in order or importance) were: whether the hospital was a public or private hospital; the number of additional diagnoses recorded for a patient; the principal diagnosis for which a person is admitted (with admissions for cancers, diseases of the skin, diseases of the eye, diseases of the genitourinary system, diseases of the blood, pregnancy and childbirth, and diseases of the ear and mastoid process all increasing the likelihood a procedure will occur); Indigenous status; remoteness of usual residence; and jurisdiction of residence.

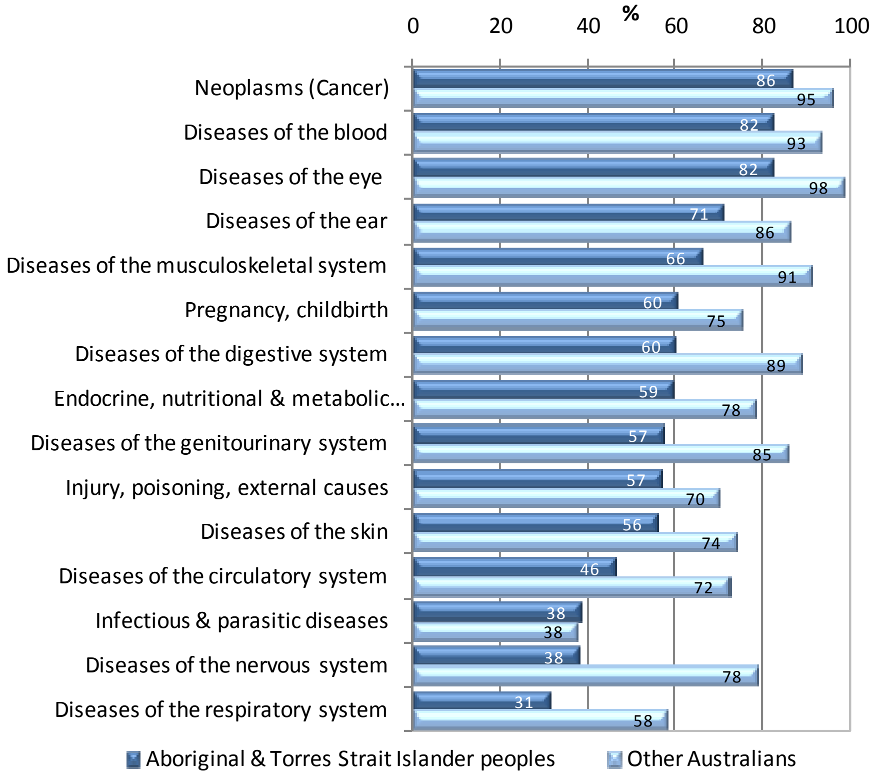
In 2002–03, among those hospitalised with coronary heart disease, Aboriginal and Torres Strait Islander people were half as likely to receive coronary procedures such as coronary angiography and revascularisation procedures. The largest difference in procedure rates between Indigenous Australians and other Australians occurred in the least complex groups (i.e., with no, or 1 to 2, comorbidities present).

A study looking at hospital procedures performed for diseases of the digestive tract between July 2003 and June 2006 found that Aboriginal and Torres Islander people were significantly less likely to receive a corresponding procedure during hospital admissions for complicated or uncomplicated hernias, diseases of the extrahepatic biliary tree and non-neoplastic diseases of the anus or rectum. Aboriginal and Torres Strait Islander people were as likely as other Australians to receive an appendicectomy for a principal diagnosis recorded as appendicitis and only marginally less likely to receive a large intestinal resection for admissions where a malignant neoplasm of the large intestine/rectum was recorded as the principal diagnosis. These results were statistically adjusted for age, sex, hospital type, urgency of admission, remoteness of usual residence and several co-morbidities (Moore et al. 2008).

IMPLICATIONS: Disparities in access to hospital procedures are likely to reflect a range of factors, including ‘systemic practices, not ill-intentioned but still discriminatory, and almost invisible in the patient provider encounter’ (Fisher & Weeramanthri 2002). An adequate primary health care system is a prerequisite for effective hospital and specialist services. Aboriginal and Torres Strait Islander patients with chronic disease sometimes present later in the course of these illnesses, which negatively affects treatment options (Valery et al. 2006). Access to non-hospital specialist services for Aboriginal and Torres Strait Islander peoples is known to be well below national averages (Deeble et al. 1998). Other factors that have been suggested include: that the presence of comorbidities limits treatment options (although this did not explain the difference in coronary procedures outlined above); clinical judgments concerning post procedural compliance; communication issues, including difficulties for a patient whose main language is not English; and patient knowledge and attitudes, e.g., fatalistic attitudes towards cancer. Physical, social and cultural distance from mainstream health services also play a role, along with financial issues patients and their families face when seeking treatment in specialist referral services.

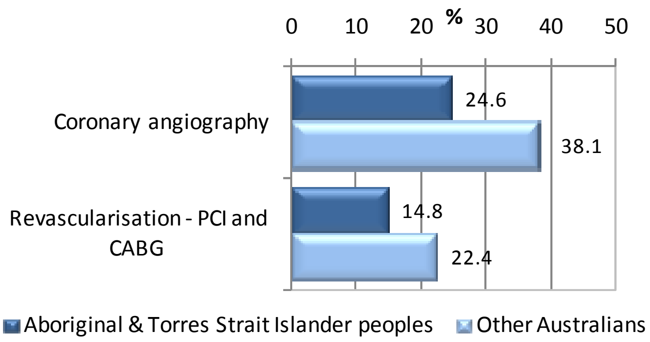
Effective strategies will require a better understanding of the factors leading to the observed disparities. Improvements in the primary care sector will increase early detection, referrals and improve support for patients following discharge. A range of measures have been taken by the Australian Government and jurisdictions to support outreach specialist services for people living in remote areas. However, little is known of the extent of under-provision of specialist services for Aboriginal and Torres Strait Islander peoples. Clinicians and clinical colleges could also play a role in reviewing decision making processes and relevant data to identify what drives differential access to procedures and develop strategies to address these issues (Fisher & Weeramanthri 2002).

Figure 147 – Proportion of separations with a procedure reported, by principal diagnosis and Indigenous status, Australia, July 2004 to June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Figure 148 – Use of coronary procedures for those hospitalised with coronary heart disease in Qld, WA, SA and NT, 2002–03



Source: AIHW 2006

3.06 Ambulatory care sensitive hospital admissions

WHY IS IT IMPORTANT? Analysis of the conditions for which people are admitted to hospital reveals that in many cases the hospital admission could have been prevented if more effective non-hospital care were available, either at an earlier stage in the disease progression or as an alternative to hospital care. Conditions that are sensitive to the effectiveness, timeliness and adequacy of non-hospital care are referred to as ambulatory care sensitive conditions (NHPC 2001; Public Health Division 2001; Centre for Epidemiology and Research 2006). Studies of hospitalisation for these conditions have shown that the availability of non-hospital care explains a significant component of the variation between geographic areas in hospitalisation rates for the specified conditions (Weissman et al. 1992; Billings et al. 1993; Bindman et al. 1995; University of California San Francisco and Stanford University Evidence-based Practice Center 2001; Ansari et al. 2006).

Ambulatory care sensitive conditions can be considered in three categories: *Vaccine-preventable conditions* including influenza, invasive pneumococcal disease, tetanus, measles, mumps, rubella, pertussis, and polio; *Potentially preventable acute conditions* including dehydration/gastroenteritis, kidney infection, perforated ulcer, cellulitis, pelvic inflammatory disease, dental conditions, and ear, nose and throat infections; and *Potentially preventable chronic conditions* including diabetes, asthma, angina, hypertension, congestive heart failure, and chronic obstructive pulmonary disease (COPD).

Systematic differences in the rates for Aboriginal and Torres Strait Islander peoples and other Australians could indicate gaps in the provision of population health interventions (such as immunisation), primary care services (such as early interventions to detect and treat high blood pressure, or availability of doctors to assist with treating patients with acute conditions such as kidney infection), and continuing care support (e.g., care planning for people with chronic illnesses such as congestive heart failure). Other explanations for differences could be that there is a higher prevalence for the underlying diseases and that Aboriginal and Torres Strait Islander peoples are more likely to live in remote areas where non-hospital alternatives are limited.

FINDINGS: In the 2-year period from July 2004 to June 2006 admission rates for ambulatory care sensitive conditions were 6 times higher for Aboriginal and Torres Strait Islander peoples compared with other Australians (excluding Tasmania and ACT and adjusted for under-identification.) Ambulatory care sensitive conditions accounted for 22% of all hospital admissions for Aboriginal and Torres Strait Islander people. Differences in rates between Indigenous and other Australians were particularly striking for older age groups.

Compared with other Australians, hospitalisation rates for these conditions were around 3 times higher for Aboriginal and Torres Strait Islander peoples living in New South Wales and Victoria, 4–5 times higher in Queensland, South Australia and Northern Territory and 13 times higher in Western Australia.

For Aboriginal and Torres Strait Islander peoples *vaccine-preventable conditions* account for around 2% of all ambulatory care sensitive hospital admissions, *acute conditions* for 23% of admissions and *chronic conditions* for 78% of admissions. The most significant ambulatory care sensitive conditions are diabetes complications, chronic obstructive pulmonary disease, convulsions and epilepsy and congestive heart failure.

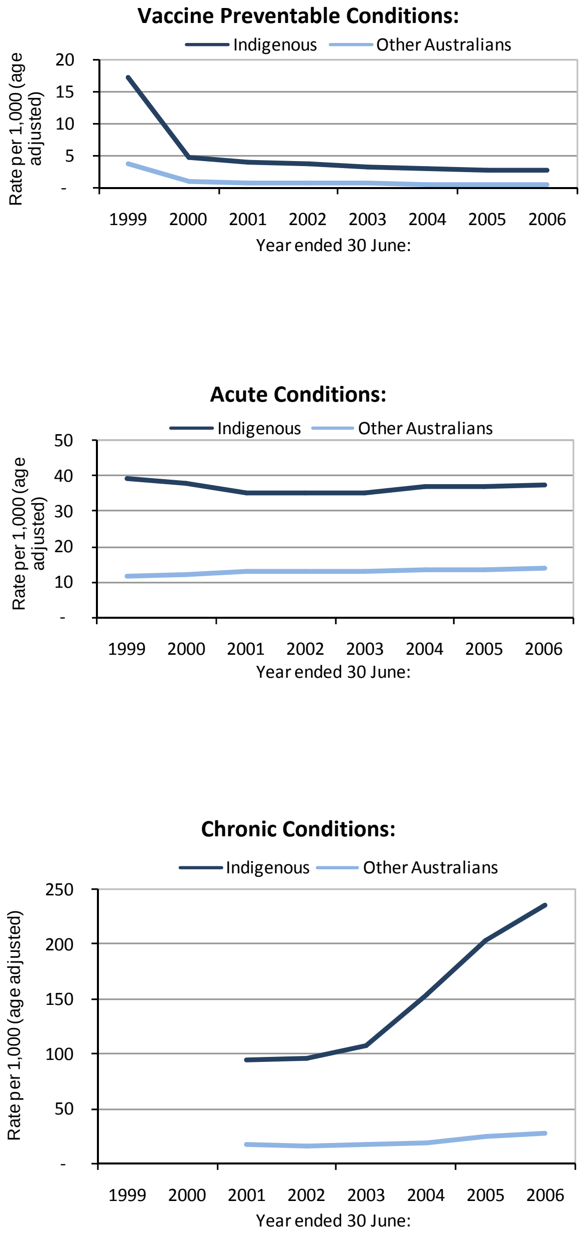
In Queensland, Western Australia, South Australia and Northern Territory rates for vaccine preventable conditions have declined dramatically between 1998–99 and 1999–2000, and have continued to decline at a gradual rate since. There were no significant trends in the admission rates for *acute* ambulatory care sensitive conditions for Indigenous Australians over the 7 years to 2005–06. There were significant increases for other Australians. In these jurisdictions, rates for *chronic* ambulatory care sensitive conditions have increased dramatically since 2000–01 and the gap with other Australians has increased in both absolute and relative terms.

IMPLICATIONS: Declines in rates of vaccine-preventable ambulatory care sensitive conditions will mainly reflect improvements in the coverage of childhood and adult immunisation (see measure 3.02). The main challenges are to address gaps in coverage, e.g., in Aboriginal and Torres Strait Islander adults over 40 years receiving influenza and pneumococcal vaccines.

Hospitalisation rates for acute ambulatory care sensitive conditions have declined slightly since 1998–99. The most significant conditions included in this group are ear, nose and throat infections and dental conditions. The significant gap between Aboriginal and Torres Strait Islander peoples and other Australians requires attention to fill gaps in the primary health care system, including access to dental health services.

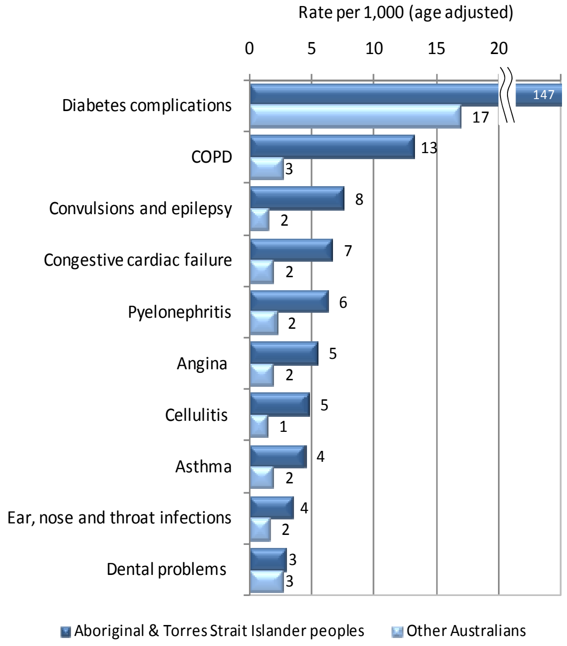
Hospitalisation for chronic ambulatory care sensitive conditions for Aboriginal and Torres Strait Islander peoples occurs at rates that are more than 8 times the rest of the population. These high rates reflect gaps in non-hospital care including primary care, the absence of alternatives to hospital care in the more remote areas of Australia, and the much higher rates of illness in Aboriginal and Torres Strait Islander peoples. The major conditions within the chronic group—diabetes complications, chronic obstructive pulmonary disease, and congestive heart failure—all require effective primary care with good links to (out of hospital) specialist/outpatient care. The high rates highlight the need for strengthening services that intervene earlier in the disease process, particularly at the primary care level and addressing barriers Indigenous Australians face in accessing these services. In the medium-term, improved primary care may result in increased admissions, as patients with established disease are more appropriately identified and treated.

Figure 149 – Age-standardised hospitalisation rates for ambulatory care sensitive hospital admissions, Qld, WA, SA and NT, 1998–99 to 2005–06



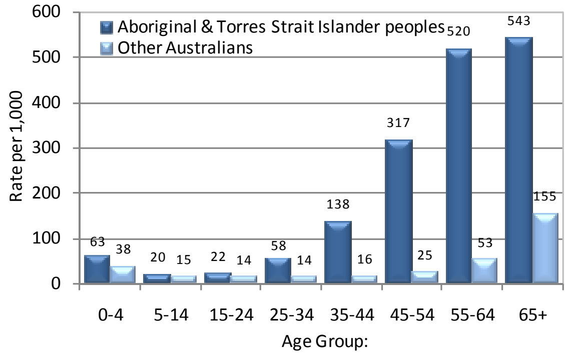
Source: AIHW Analysis of National Hospital Morbidity Database

Figure 150 – Top 10 ambulatory care sensitive hospital admissions, by Indigenous status, NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Source AIHW Analysis of National Hospital Morbidity Database

Figure 151 – Hospitalisation rates for ambulatory care sensitive hospital admissions, by Indigenous status and age group, NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Source AIHW Analysis of National Hospital Morbidity Database

3.07 Health promotion

WHY IS IT IMPORTANT? Health promotion involves activities designed to enable people to exert control over the determinants of health and thereby improve their health (WHO 1986; WHO 1998). Many of the underlying determinants of health can be improved through health promotion activities. Health promotion includes health behaviour interventions such as lifestyle advice (e.g., smoking, alcohol and drug use, physical activity, diet), social marketing (e.g., sunscreen, safe sex), mass media campaigns (e.g., drink-driving, road safety) and public policy interventions. Health promotion also includes promoting social responsibility for health, empowerment of individuals and increased community capacity. Currently there are limited methods for measuring the nature and level of health promotion programs and activities and their reach within Indigenous communities.

FINDINGS: In 2004–05, total government expenditure per person on selected public health activities mainly related to health promotion (selected health promotion and prevention of hazardous and harmful drug use) was estimated to be around $48 for Indigenous persons and $20 for non-Indigenous persons. These estimates are not robust and are also likely to understate expenditures as health promotion is often embedded within other funding sources and programs (e.g., funding for general practice). Sixty per cent of this funding related to activities targeted at preventing hazardous and harmful drug use. State and territory governments provided 93% of government expenditure for these functions. Expenditures on these functions accounted for 26% of public health expenditures for Indigenous and 1% of total health expenditures. Government expenditure per Indigenous person for other aspects of public health is estimated to be around $13 for environmental health and $2 for food standards/hygiene.

In 2005–06, around three-quarters of Divisions of General Practice ran programs for Type 2 diabetes, lifescripts and health promotion; 68% ran programs for physical activity, 60% for nutrition, 57% for alcohol and other drugs, 46% for smoking and 24% for injury prevention. Around 28% of Divisions targeted Indigenous Australians in their health promotion programs, 31% in nutrition programs, around one-quarter in their Type 2 diabetes and smoking programs, 16% in their lifescripts programs, 19% in physical activity programs, and 18% in their alcohol and other drugs programs. It is not known how many actual GP practices or patients were reached through these programs.

Based on the BEACH survey (2002–03 to 2006–07), it is estimated that selected clinical treatments related to health promotion are provided in around 20% of GP encounters for Indigenous patients. The most common of these are general (unspecified) ‘advice/education’ which is provided in an estimated 6% of GP encounters. This is followed by counselling/advice related to nutrition and weight (4% of encounters for Indigenous patients, particularly for those with diabetes). Counselling/advice related to smoking is provided in 2% of GP encounters for Indigenous patients which is 3 times the rate for non-Indigenous patients. Counselling/advice related to alcohol is provided in around 1% of GP encounters for Indigenous patients which is also 3 times the rate for non-Indigenous patients.

CHINS data on health promotion programs are available for discrete Indigenous communities. In 2006, 67% of discrete Indigenous communities reported that 1 or more health promotion programs had been conducted, with women’s health programs reported by 58%, well babies programs by 54%, immunisation programs by 54% and men’s health programs by 52% of communities. Stop smoking programs were reported for only 26% of communities. Most programs were conducted weekly or monthly, except for trachoma control and eye health, which were most often conducted less than 3 monthly.

In 2005–06, 91% of Aboriginal and Torres Strait Islander primary health care services offered health promotion/education programs, 84% offered women’s health programs, 74% offered dietary and nutrition programs and 69% offered men’s health programs. Programs for ‘working with food stores to encourage healthy eating and advice’ and ‘advice and advocacy in relation to environmental health issues’ were less common (25% and 39% respectively). In 2005–06, 62% of Aboriginal and Torres Strait Islander primary health care services ran at least one health promotion/prevention group activity. Health promotion activities are also a key feature of programs run by Aboriginal and Torres Strait Islander substance use specific services.

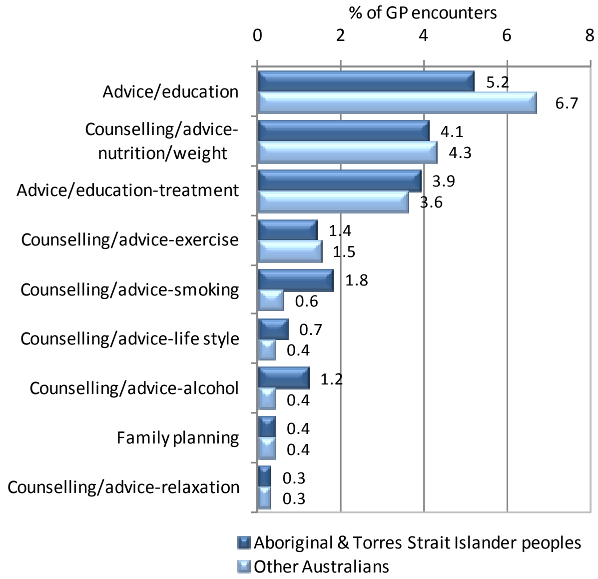
IMPLICATIONS: A key policy question is whether the Australian health care system and other sectors are providing effective and appropriate health promotion activities based on the needs of Aboriginal and Torres Strait Islander Australians? At face value only 1% of total health expenditures are spent on selected health promotion activities. The data presented here provide a sense that there are a range of health promotion activities occurring, sometimes in areas where health promotion activity is not included in expenditure estimates. However, the extent and reach of these activities is unclear, and better data are needed on health promotion across the full range of determinants of health. Some gaps are evident. Programs focused on smoking have generally received less emphasis at a community level, with one indicator suggesting these are available in only 26% of discrete Indigenous communities. Health promotion advice is provided in only a small proportion of GP encounters. *Making the Connections* (NPHP 2006) provides guidance on including Indigenous issues in public health policy. Factors that are important in designing effective health promotion interventions for Indigenous communities include: involving local Indigenous people in design and implementation of programs; building effective partnerships between community members and the organisations involved; cultural understanding and mechanisms for effective feedback to individuals and families; developing trusting relationships, community ownership and support for interventions (Black 2007). It is also important to be aware that there is the potential for harm as a result of some of these interventions, such as occurred for vulnerable families in some early intervention studies. Possible adverse outcomes should be monitored.

Table 49 – Expenditure for selected public health activities related to health promotion, by Indigenous status, 2004–05

Selected public health activities:	Expenditure			Expenditure per person		
	Indigenous	Non-Indigenous	Indigenous share	Indigenous	Non-Indigenous	Ratio
	$m	$m	%	$	$	
Selected health promotion	9.3	222.3	4.2	19.0	11.3	1.7
Prevention of hazardous & harmful drug use	14.0	180.1	7.8	28.6	9.1	3.1
Total:	**23.3**	**402.4**	**5.8**	**47.6**	**20.4**	**2.3**
Environmental health	6.2	77.2	8.0	12.7	3.9	3.2
Food standards and hygiene	1.2	31.6	3.8	2.4	1.6	1.5

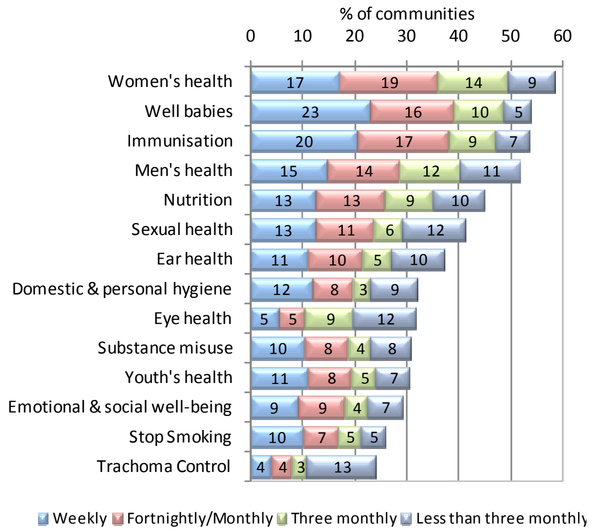
Source: AIHW analysis of expenditures on health for Aboriginal and Torres Strait Islander people 2004–05; and detailed state and territory tables and methodology tables and methods.

Figure 152 – Selected clinical treatments related to health promotion provided by GPs, Rate per 100 GP encounters (age-adjusted), by Indigenous status, 2002–03 to 2006–07



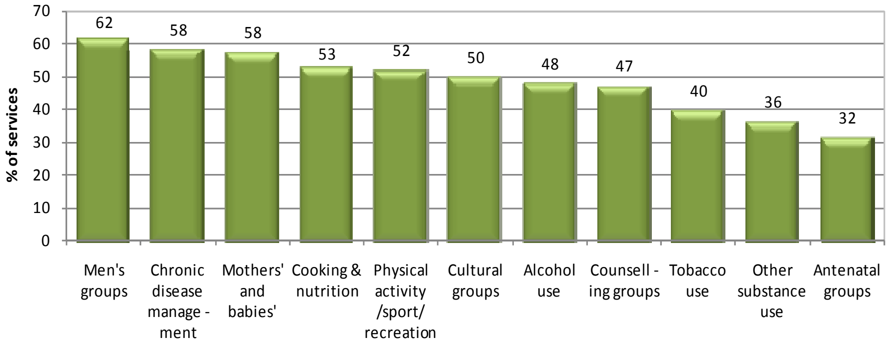
Source: AIHW analysis of Bettering the Evaluation and Care of Health (BEACH) data

Figure 153 – Discrete Indigenous communities located 10 kilometres or more from a hospital: Selected health promotion programs conducted in community, 2006



Source: AIHW analysis of ABS 2006 Community Housing and Infrastructure Needs Survey (CHINS)

Figure 154 – Percentage of Australian Government funded Aboriginal and Torres Strait Islander primary health care services that ran health promotion/prevention group activities during 2005–06



Source: AIHW analysis of Service Activity Reporting 2005–06

3.08 Discharge against medical advice

WHY IS IT IMPORTANT? Feedback on patient experiences, and community views of health care services and providers are important for shaping health services and policy. It is important to estimate consumer satisfaction as it is believed to impact on health-related behaviours. For example, satisfied consumers may be more likely to cooperate with treatment, continue using services, maintain a relationship with a specific provider, and actively participate in their own treatment. Australia has a mixed history of systematically seeking feedback from the people for whom health services are intended to benefit. A review of patient satisfaction and experience surveys found jurisdictions had adopted a range of methods for seeking feedback on patient experiences of hospitals and related services (Pearse 2005). Surveying the experiences of Aboriginal and Torres Strait Islander patients poses challenges which have been investigated by some jurisdictions.

In view of these problems, the measure reported here is based on the extent to which Aboriginal and Torres Strait Islander people ‘vote with their feet’, e.g., in discharging themselves from hospital against medical advice. This measure provides indirect evidence of the extent to which hospital services are responsive to the need of Aboriginal and Torres Strait Islander patients.

FINDINGS: Between July 2004 and June 2006, there were 11,867 hospitalisations (excluding ACT and Tasmania and admissions for mental and behavioural disorders) where Aboriginal and Torres Strait Islander people left hospital against medical advice or were discharged at their own risk. This represented around 2.6% of all hospitalisations for Aboriginal and Torres Strait Islander people, which compares with 0.3% for other Australians.

Indigenous Australians were discharged from hospital against medical advice at 6 times the rate of other Australians. Discharges from hospital against medical advice are most common for Aboriginal and Torres Strait Islander people aged 15–54 years. They are also more common for Indigenous people living in remote and very remote areas. The proportion of discharges against medical advice for Aboriginal and Torres Strait Islander people was highest in the Northern Territory (4% of episodes) and lowest in Victoria and Queensland (2% of episodes).

The most common principal diagnoses of hospitalisations of Indigenous Australians who were discharged against medical advice were injury and poisoning (2,578 separations) followed by respiratory diseases (1,677 separations). These two groups of diagnoses represented 36% of all hospitalisations discharged against medical advice. As a proportion of all Indigenous separations for each specific diagnoses group, discharge against medical advice was also highest for injury and poisoning (7.1%), followed by diseases of the skin (6.7%).

An analysis of the relative impact of a range of factors found that Indigenous status was the most significant variable contributing to whether a patient would discharge themselves from hospital against medical advice, even after controlling for the other factors.

IMPLICATIONS: The significantly elevated levels of discharge against medical advice suggest that there are significant issues in the responsiveness of hospitals to the needs and perceptions of Aboriginal and Torres Strait Islander peoples. Whilst there are major challenges in developing culturally appropriate mechanisms for obtaining feedback from Aboriginal and Torres Strait Islander patients, health systems need to design and implement these mechanisms. The data suggest these issues are important for all age groups, although the issues are most evident for those aged 15–54 years.

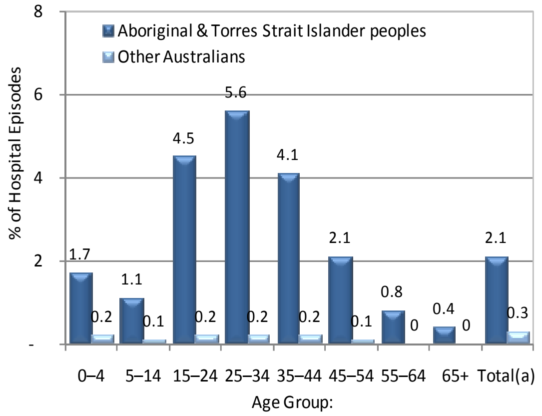
The *Cultural Respect Framework for Aboriginal and Torres Strait Islander Health* sets out the overarching commitments Australian jurisdictions have made to achieving the ‘recognition, protection and continued advancement of the inherent rights, cultures and traditions of Aboriginal and Torres Strait Islander peoples’. The Framework proposes that Cultural Respect will be achieved when the health system is a safe environment for Aboriginal and Torres Strait Islander peoples and where cultural differences are respected. Cultural Respect is a commitment to the principle that the provision of services offered by the Australian health care system will not wittingly compromise the legitimate cultural rights, practices, values and expectations of Aboriginal and Torres Strait Islander peoples. Practical examples of respectful practices offered in the Framework include:

- effective representation and cross-cultural input into governance structures and processes
- ensuring access to interpreter services
- where possible and culturally appropriate, Aboriginal and Torres Strait Islander patients are co-located with other individuals who speak the same traditional language
- hospitals have written protocols in place on maternal and birthing health, specific to Aboriginal and Torres Strait Islander women.

There are several questions that health service researchers and health service managers need to tackle in devising strategies to achieve more responsive and respectful service delivery. More needs to be known about the reasons for the high rates of discharge against medical advice across individual factors (such as psychosocial, personal circumstances, health and wellbeing, cultural issues) and community level factors (such as levels of trust or mistrust in system) and hospital level factors (such as staff attitudes, hospital policies and the environment).

The experience of Aboriginal and Torres Strait Islander peoples of health services needs to be routinely evaluated but the mechanisms for doing this need to be better researched. Hospitals and health services that have implemented successful programs to reduce discharge against medical advice need to be studied and lessons disseminated.

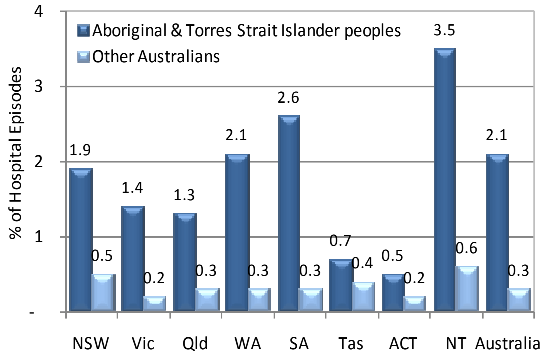
Figure 155 – Per cent of hospital episodes where patients were discharged against medical advice, by Indigenous status and age group (excluding Mental and Behavioural Disorders) in NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Total is age-standardised

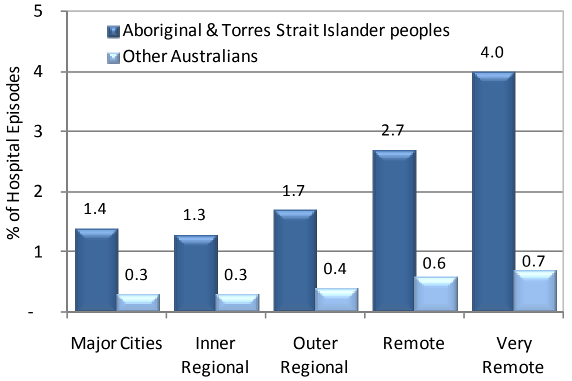
Source: AIHW analysis of National Hospital Morbidity Database

Figure 156 – Age-standardised per cent of hospital episodes where patients were discharged against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), July 2004 to June 2006



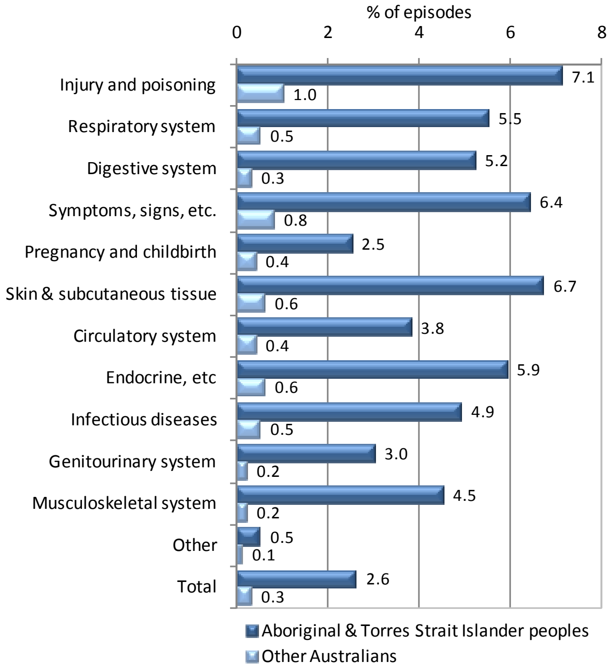
Source: AIHW analysis of National Hospital Morbidity Database

Figure 157 – Age-standardised proportion of hospitalisations ending in discharge against medical advice, by Indigenous status and remoteness, July 2004 to June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Figure 158 – Age-standardised proportion of hospitalisations in each principal diagnosis category ending in discharge against medical advice by Indigenous status (excluding Mental and Behavioural Disorders), NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Source: AIHW analysis of National Hospital Morbidity Database

3.09 Access to mental health services

WHY IS IT IMPORTANT? Mortality rates for mental health and behavioural disorders are 2 times higher for Aboriginal and Torres Strait Islander peoples than other Australians (2.1 times higher for men and 1.8 times higher for women). Aboriginal and Torres Strait Islander people are more than twice as likely to die from suicide. Hospital admissions rates for intentional self-harm are twice those of other Australians. For Indigenous Australians, recent history since European settlement and continuing social and economic disadvantage contributes to high rates of physical and mental health problems, high adult mortality, high suicide rates, child removals and incarceration rates which in turn lead to higher rates of grief, loss and trauma.

Most mental health services address mental health conditions once they have emerged rather than the underlying causes of that distress. Nevertheless, early access to effective services can help diminish the consequences of these problems and help restore people's emotional and social well-being. Therefore, the accessibility of mental health services for Aboriginal and Torres Strait Islander peoples is an important issue.

Mental health services include non-specialist services such as community-based health services, Aboriginal and Torres Strait Islander primary health care services and general practitioners and specialist services such as private psychiatrists, state mental health teams, and designated psychiatric services both in general hospitals and in specialist facilities.

Reforms for mental health services were agreed by the Council of Australian Governments in 2006 and Aboriginal and Torres Strait Islander peoples were identified as a priority group in those reforms.

FINDINGS: For the period 2002–03 to 2006–07, mental health problems were reported in an estimated 14% of GP encounters for Aboriginal and Torres Strait Islander people and 12% of GP encounters for other Australians.

In 2005–06, Aboriginal and Torres Strait Islander primary health care services reported 124,211 client contacts with emotional and social well-being staff or psychiatrists, representing 6% of the estimated total contacts. This is up from 97,570 client contacts in 2003–04.

In 2005–06, state/territory-based specialised community mental health services reported 247,263 service contacts for Aboriginal and Torres Strait Islander clients, representing 4% of all client contacts. Rates of community mental health care service contacts for Aboriginal and Torres Strait Islander peoples are nearly twice the rates for other Australians. Rates are higher across almost all age groups.

There are no national data on the use of specialist psychiatry by Aboriginal and Torres Strait Islander peoples. Access to specialist psychiatry in rural and remote Australia is particularly problematic. There are 3 full time equivalent psychiatrists per 100,000 persons in remote and very remote areas compared with 22 per 100,000 in major cities. The FTE rate of employed psychologists was highest in areas where less than 1% of the population was Indigenous (89 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (7 per 100,000).

In the 2 years to June 2006, hospitalisation rates for Aboriginal and Torres Strait Islander men for mental health issues were 2.4 times higher than the rates for other men, whilst rates for Aboriginal and Torres Strait Islander women were 1.6 times higher than for other women. Hospitalisation rates tend to be lower in the Northern Territory for both Aboriginal and Torres Strait Islander peoples and other people.

In the 4 jurisdiction for which there are reasonably reliable trend data (Queensland, Western Australia, South Australia and Northern Territory), hospitalisations of Aboriginal and Torres Strait Islander people for mental health issues increased significantly to 2000–01 but have remained relatively constant since.

Rates of ambulatory equivalent hospital separations for mental health-related conditions for Aboriginal and Torres Strait Islander peoples were lower than for other Australians, particularly for specialised psychiatric care (rate ratio of 0.3). Other hospitalisations for these conditions were more than twice those for other Australians (1.9 times higher with specialised psychiatric care and 2.4 times higher without specialised psychiatric care).

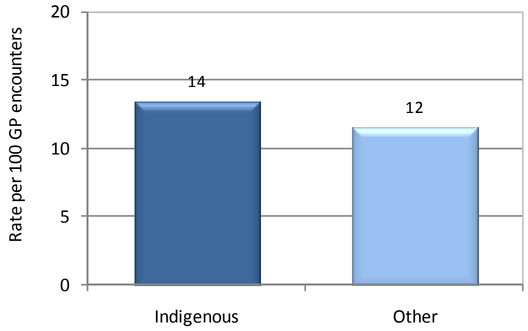
The average length of stay for non-ambulatory care equivalent hospitalisation is 8.6 days for Aboriginal and Torres Strait Islander patients compared with 11.1 days for other people.

In 2005–06, there were 2,345 clients of residential mental health care services, of which 64 service contacts (2.7%) were for Aboriginal and Torres Strait Islander people.

In 2005–06, 12% of clients of the Supported Accommodation Assistance Program with mental health-related closed support periods were identified as Aboriginal or Torres Strait Islander Australians. After adjusting for differences in age this was 5 times the rate for non-Indigenous Australians (AIHW 2008f).

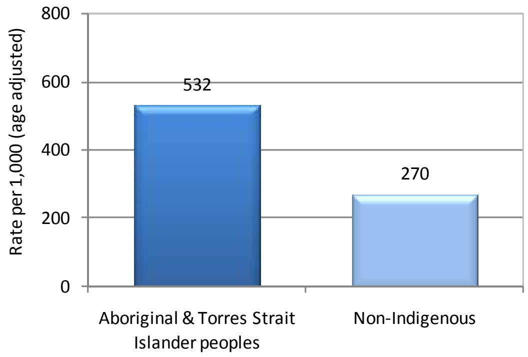
IMPLICATIONS: These findings show that access to primary care level and specialist mental health services is patchy. Initiatives by the Council of Australian Governments represent a major opportunity to address current deficiencies. Key issues to be considered in addressing gaps include ensuring services are culturally appropriate, services are well linked into the system of primary health care, that Aboriginal and Torres Strait Islander peoples are able to access effective treatment including specialist treatment through psychiatrists and psychologists.

Figure 159 – Age-standardised rate per 100 encounters, mental health-related problems managed by general practitioners, by Indigenous status of the patient, 2002–03 to 2006–07



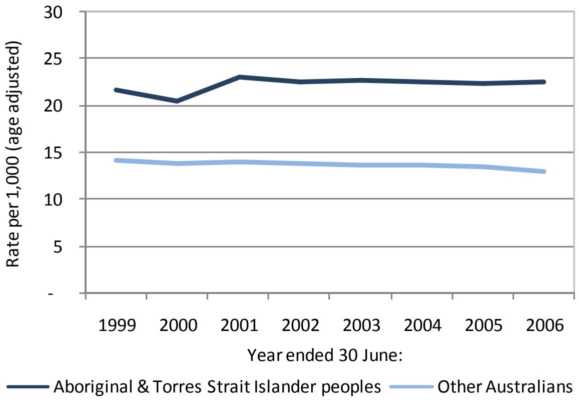
Source: AIHW analysis of BEACH survey of general practice, AGPSCC

Figure 160 – Community mental health care service contacts per 1,000 population, by Indigenous status, 2005–06



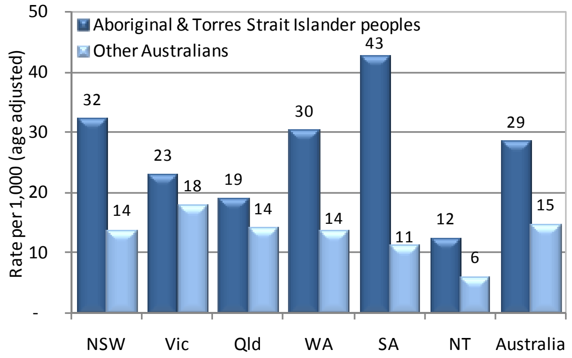
Source: AIHW analysis of National Community Mental Health Care Database

Figure 161 – Age-standardised hospitalisation rates from mental health-related conditions, Qld, WA, SA and NT, 1998–99 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 162 – Age-standardised hospitalisation rates for principal diagnosis of mental health–related conditions by Indigenous status by state/territory, NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Source: AIHW analysis of National Hospital Morbidity Database

3.10 Aboriginal and Torres Strait Islander people in the health workforce

WHY IS IT IMPORTANT? Compared with other Australians, Aboriginal and Torres Strait Islander peoples are significantly under-represented in the health workforce. This potentially contributes to reduced access to health services. International studies, mostly of Black and Hispanic Americans, suggest a preference for seeing health professionals from the same ethnic background (Powe & Cooper 2004). Patients were more likely to report more favourable ratings of patient care if the physician is of the same ethnic background. An Australian patient satisfaction survey found that the presence of an Aboriginal and Torres Strait Islander doctor at a community health centre was a key reason that Indigenous Australians attended the clinic (Hayman 1999). Patients reported that an Indigenous doctor was 'more understanding of their needs'. Numbers of Aboriginal and Torres Strait Islander patients attending the clinic increased markedly following the arrival of the Aboriginal and Torres Strait Islander doctor and other changes in the service designed to make it more welcoming.

FINDINGS: In 2006, there were 4,891 Aboriginal and Torres Strait Islander people aged 15 years and over employed in selected health-related occupations. Indigenous Australians accounted for 1% of the health workforce, but were 1.9% of the Australian population aged 15 years and over.

Aboriginal and Torres Strait Islander people comprised 96% of all Aboriginal and Torres Strait Islander Health Workers, 11% of health promotion officers, 2.5% of environmental health officers, 1.7% of nursing support and personal care workers, 1.1% of enrolled and mothercraft nurses, 0.6% of midwifery and nursing professionals, 0.7% of dental workers, 0.5% of allied health professionals, 0.2% of all medical practitioners. In 2006, there were 100 Aboriginal and Torres Strait Islander medical practitioners and 1,438 Aboriginal and Torres Strait Islander nurses (included enrolled and mothercraft nurses), 437 Indigenous health promotion officers. There were 965 Aboriginal and Torres Strait Islander Health workers, up from 844 in 2001.

In 2006, the Northern Territory had the highest proportion of health workers being of Aboriginal or Torres Strait Islander origin (9%), and Victoria had the lowest (0.3%). These are well below the Aboriginal and Torres Strait Islander proportion of the state/territory population.

For younger age groups, Aboriginal and Torres Strait Islander people make up a higher proportion of the health workforce - 1.4% of the workforce aged 15–24 years compared with 0.7% of the workforce aged 55–64 years. Aboriginal and Torres Strait Islander females were 75% of all Indigenous people in the health workforce. Aboriginal and Torres Strait Islander Australians made up 62% of the workforce in Aboriginal and Torres Strait Islander primary health care services as at June 2006.

IMPLICATIONS: Improving the Aboriginal and Torres Strait Islander health workforce is fundamental to closing the gap in Indigenous life expectancy. The recently released *Pathways into the health workforce for Aboriginal and Torres Strait Islander people: a blueprint for action* is designed to provide Australian governments with advice and strategies to maximise Aboriginal and Torres Strait Islander participation in the health workforce through promoting and improving pathways between school, vocational education and higher education; and retaining and building the capacity of the existing workforce by addressing the ongoing support and career development needs (NATSIHC 2008). Increasing the participation of Aboriginal and Torres Strait Islander peoples in the health workforce is a key element of the NSFATSIH and the *Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework* (SCATSIH 2002).

Reducing under-representation in the health workforce will require success across a range of fronts, many of which are identified in the strategies outlined above. Educational disadvantages faced by Aboriginal and Torres Strait Islander children can reduce options for further training (see measures 2.04 and 2.05). Strategies to address barriers to entry into health professional training, and strengthen support while in training, need to be implemented (see measure 3.18). Improved opportunities for employment and advancement, and retention of Aboriginal and Torres Strait Islander people in the workforce, also require attention (see measure 3.20).

There are some signs of improvement. The numbers of Indigenous Australians in the health workforce has increased in absolute numbers and as a proportion of the total workforce. Participation in the health workforce is higher for younger age groups, suggesting that participation rates may increase over time. There were no Aboriginal and Torres Strait Islander medical practitioners before the 1980s and by 2006 there were 100. However, these still represent only 0.2% of the medical workforce.

Aboriginal and Torres Strait Islander health professionals should have access to employment in a broad range of settings within the health sector, and not be limited to working in targeted services for Aboriginal and Torres Strait Islander peoples. Some health authorities and NGOs have set targets to increase the proportion of Aboriginal and Torres Strait Islander people employed in their workforce. These strategies have not been formally evaluated, but anecdotal evidence suggests the targets have had some success in focusing management on these issues. Attention to the type of occupation in which Indigenous Australians are employed is important to avoid targets leading to over-representation in less skilled positions and under-representation in better remunerated, more skilled and managerial positions.

Table 50 – Aboriginal and Torres Strait Islander people employed in selected health-related occupations, 1996, 2001 and 2006

	1996	2001	2006	Average Annual Increase
Aboriginal and Torres Strait Islander Health Worker	667	844	965	4.5%
Medical practitioners	60	87	100	6.7%
Registered nurse	608	782	1,107	8.2%
Nurse Manager	13	29	46	25.4%
Psychologists	14	23	39	17.9%
Medical Imaging Professionals	8	17	18	12.5%
Dental	146	155	209	4.3%
Ambulance Officers and Paramedics	48	82	153	21.9%
Other (a)	1,267	1,241	2,254	7.8%
Total	**2,831**	**3,260**	**4,891**	**7.3%**
As a percentage of the total health workforce	*0.8%*	*0.9%*	*1.0%*	

(a) Due to classification changes, the differences between years in the 'other' category should be treated with caution.

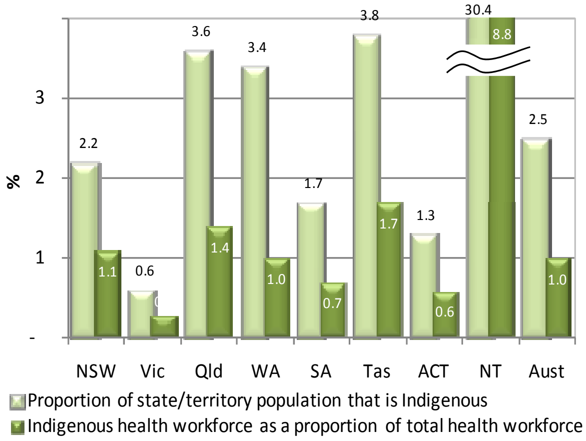
Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census of Population and Housing

Table 51 – Persons employed in selected health-related occupations by Indigenous status, 2006

	Aboriginal & Torres Strait Islander people	Total	Percentage Aboriginal & Torres Strait Islander
Aboriginal and Torres Strait Islander Health worker	965	1,010	95.5%
Health and welfare services managers	141	10,807	1.3%
Psychologists	39	13,437	0.3%
Environmental Health Officer	98	3,907	2.5%
Health Promotion Officer	437	3,898	11.2%
Other health diagnostic and promotion professionals	113	40,274	0.3%
Physiotherapists	54	12,286	0.4%
Dental workers	209	29,612	0.7%
Other health therapy professionals	58	22,699	0.3%
Medical practitioners:			
General medical practitioner	60	29,920	0.2%
Other medical practitioners	40	25,155	0.2%
Sub Total	100	55,075	0.2%
Midwifery and nursing professionals	1,223	200,400	0.6%
Enrolled and mothercraft nurses	215	19,397	1.1%
Nursing support and personal care workers	820	48,235	1.7%
Ambulance officers and paramedics	153	9,098	1.7%
Other	260	22,217	1.2%
Total	**4,891**	**492,342**	**1.0%**

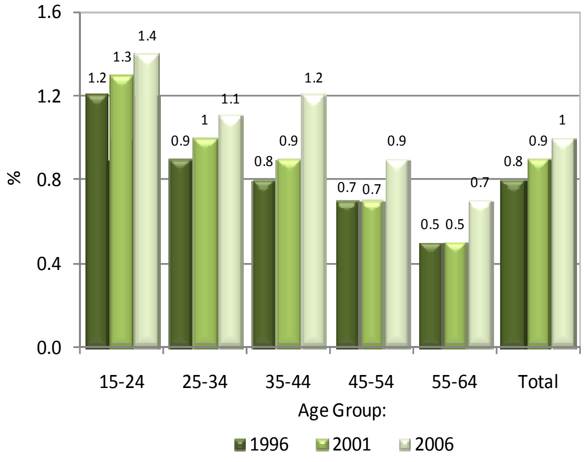
Source: ABS and AIHW analysis of 2006 Census of Population and Housing

Figure 163 – Aboriginal and Torres Strait Islander persons in health workforce as a proportion of total health workforce, by jurisdiction, 2006



Source: ABS and AIHW analysis of 2006 Census of Population and Housing

Figure 164 – Aboriginal and Torres Strait Islander persons in health workforce as a proportion of the total health workforce, by age group, 1996, 2001, 2006



Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census of Population and Housing

3.11 Competent governance

WHY IS IT IMPORTANT? 'Governance' is about having the processes and institutional capacity to be able to exercise control through sound decision-making. 'Competent governance' is all about the means to establish good governance arrangements with the ultimate aim of achieving the social, cultural, and economic developments sought by citizens (Dodson & Smith 2003).

Governance enables the representation of the welfare, rights and interests of constituents, the creation and enforcement of policies and laws, the administration and delivery of programs and services, the management of natural, social and cultural resources, and negotiation with governments and other groups (de Alcantara 1998; Hawkes 2001; Westbury 2002; Dodson & Smith 2003). The manner in which such governance functions are performed has a direct impact on the wellbeing of individuals and communities.

Aboriginal Community Controlled Health Services (ACCHSs) were first established in the 1970s and by the 1990s were an important provider of health services to Indigenous people in Australia. Self-determination was 'embedded' in the establishment of Aboriginal community controlled health services. They can offer comprehensive primary health care appropriate to Aboriginal and Torres Strait Islander peoples in ways that other services cannot (DoHA 2001; Larkins et al. 2006).

Competent governance in the context of Indigenous health must also address the cultural responsiveness of mainstream service delivery for Indigenous clients and effective participation of Indigenous people on decision-making boards, management committees and other bodies, as relevant. The stewardship role of governments in their efforts to improve Aboriginal and Torres Strait Islander health is also critical. Attention should be given to assessing not only the levels of access to appropriate care but the experiences of Aboriginal and Torres Strait Islander peoples in receiving care. Unfortunately very little data are available nationally on these issues.

FINDINGS: The Office of the Registrar of Indigenous Corporations (ORIC) helps to administer the Corporations (Aboriginal and Torres Strait Islander) Act 2006, which superseded the Aboriginal Councils and Associations Act (ACA) Act 1976 in 2007. In 2005–06, half of the 103 Indigenous health corporations incorporated under the ACA Act and registered with ORIC had been fully compliant with the required provision of documents. A further 13% provided some of the key documents required.

In 2003–04, of the 138 Aboriginal and Torres Strait Islander primary health care services funded by the Australian Government who provided data: 96% had a governing committee or board that met regularly; for 94% income and expenditure reports had been presented to the governing committee or board on at least 2 occasions through the year; for 94% all members of the governing committee or board were Aboriginal and/or Torres Strait Islander people, and for 56% governing committee/board members had received training related to governance issues.

In 2005–06, 57% of Aboriginal and Torres Strait Islander primary health care services had representatives on external Boards (e.g., hospitals); 64% participated in Regional Planning Forums and 84% were involved in committees on health (e.g., steering groups). Aboriginal and Torres Strait Islander representation on governing boards for mainstream public sector health varies considerable across the states and territories (SCATSIH & SIMC 2006).

As discussed in measure 3.12 below, 15% of Indigenous Australians reported that they needed to but didn't visit a doctor in the previous 12 months, 8% didn't visit another health professional when needed and 7% didn't visit a hospital when they needed to. Some of the reasons people didn't access services reflect failures in health services to adequately address the needs of these patients. For example, 10–16% did not attend services because they disliked the service/professional, felt embarrassed or afraid, 5–6% felt the service would be inadequate and 1–2% were concerned about discrimination and cultural appropriateness. In addition, a range of other reasons people didn't access health care when they needed to reflect potential failures in the governance of the health system as a whole e.g., cost, transport/distance, service not available in the area etc.

IMPLICATIONS: Drawing on international research on governance in organisations serving indigenous communities, Dodson and Smith (2003) argue that good governance can be characterised as having 4 main attributes:

legitimacy – which concerns the way structures of governance are created and leaders chosen, and the extent of constituents' confidence in and support of them

power – the acknowledged legal and cultural capacity and authority to make and exercise laws, resolve disputes, and carry out public administration

resources – the economic, cultural, social and natural resources, and information technology needed for the establishment and implementation of governance arrangements

accountability – which concerns the extent to which those in power must justify, substantiate and make known their actions and decisions.

A key strength of ACCHSs is their ability to respond flexibly to local community needs. Anderson and Brady (1995) suggest that self-determination has formed health providers with complex functions that are often a loci for the community. There are great differences between ACCHSs: between services in urban and remote areas, between services which serve one community or a number of diverse communities, between large and small services, and also between services with differing histories (Sharma 2005). In addition, many ACCHSs are parts of larger community organisations which perform other social functions as well as health such as housing (Sullivan & Oliver 2007). The negotiation between a 'community controlled' organisational philosophy with the norms of central bureaucracies may at times give rise to 'conflicting ideas of accountability' (Anderson & Brady 1995).

Strengthening community controlled primary care services is one of the Key Result Areas for the NSFATSIH along with strengthening the capacity of communities to make decisions about and have input into the broader health system delivery system. Under the framework, Governments have committed to:

- Continue to fund Aboriginal Community Controlled Primary Health Care Services.
- Provide training and support for Aboriginal and Torres Strait Islander community members on boards of management and advisory groups.
- In negotiation with Aboriginal and Torres Strait Islander communities, develop frameworks that could assist in assessing readiness and capacity of communities to manage health resources, and include capacity building targets in funding agreements.
- Ensure the delivery, and continue the development and evaluation of the comprehensive primary health care in partnership with the full range of health services, that maximise community decision making, influence and control in line with development of community capacity to manage health services.
- Increase Aboriginal and Torres Strait Islander participation in mainstream service management and planning.

Table 52 – Number and proportion of health corporations incorporated under the Aboriginal Councils and Associations Act (1976) by compliance status

	Number	Proportion
Fully compliant	51	50
Partially compliant	13	13
Sub-total fully or partially compliant	64	62
Not fully or partially compliant	39	38
Total	**103**	**100**

Source: AIHW analysis of The Office of the Registrar of Indigenous Corporations unpublished data

Table 53 – Number and proportion of Aboriginal and Torres Strait Islander primary health care services participating[(a)] in mainstream processes, 2005–06

	No.	Per cent
Representation on external Boards (e.g. hospitals)	85	57
Participation in Regional Planning Forums (e.g. under the Framework Agreements)	96	64
Involvement in committees on health (e.g. steering groups)	126	84
Total number of services	**150**	**100**

A service is recorded as having conducted an activity if that activity was conducted by either the service itself or by one of its auspiced entities.

Source: AIHW analysis of Service Activity Reporting 2005–06

Table 54 – Number and proportion of governing committee/board use, Aboriginal and Torres Strait Islander primary health care services, 2003–04[(a)] and substance use specific services, 2005–06

	Primary health care services 2003-04 (a)		Substance use services 2005-06	
	No.	%	No.	%
Governing Committee or Board met regularly	132	96	34	92
Income and expenditure statements were presented to Committee or Board on at least 2 occasions	130	94	na	na
All of the Governing Committee or Board Members were Aboriginal and/or Torres Strait Islander	129	94	28	76
Governing Committee or Board received training	77	56	24	65
Total number of services	**138**	**100**	**37**	**100**

2003–04 is the latest year of data available. These questions were not included in the SAR questionnaire for 2004–05 and 2005–06, but was re-instated for 2006–07.

Source: AIHW analysis of Service Activity Reporting 2003–04 and Drug and Alcohol Service Activity Reporting 2005–06

3.12 Access to services by types of service compared to need

WHY IS IT IMPORTANT? Measures presented in this section examine the level of access to health care for Aboriginal and Torres Strait Islander peoples compared with their need for health care. Indigenous Australians have significantly poorer health status than non-Indigenous Australians. As discussed elsewhere in this report, life expectancy is 11.5 years less for males and 9.7 years less for females, infant mortality is almost twice the national rate and Indigenous Australians are twice as likely to rate their health as fair or poor compared with non-Indigenous Australians. Access to health care when needed is essential to closing the gap in Indigenous life expectancy.

FINDINGS: In 2004–05, 42% of Indigenous Australians reported accessing health care in the last 2 weeks or hospital in the last 12 months. After adjusting for age differences between the two populations, Indigenous Australians accessed health care at similar rates to non-Indigenous Australians (ratio 1.1). In the previous 2 weeks, 20% of Aboriginal and Torres Strait Islander people had visited a doctor or specialist, 5% casualty/outpatients, 17% other health professionals, and 4% dentists. In the previous 12 months, 16% had been admitted to hospital.

Indigenous Australians were more than twice as likely to visit casualty/outpatients and half as likely to see a dentist. For people reporting fair or poor health, 40% of Indigenous Australians and 42% of non-Indigenous Australians reported visiting a doctor in the last 2 weeks, 11% of Indigenous and 6% of non-Indigenous Australians reported visiting a casualty department or outpatient clinic and 30% of Indigenous and 27% of non-Indigenous Australians reported admission to hospital in the last 12 months. After adjusting for differences in age structure, 36% of Indigenous people reported that it had been 2 years or more since their last dental consultation, compared with 29% of non-Indigenous people. Reported use of these health services has not changed significantly since the last survey in 2001. Indigenous Australians were hospitalised for palliative care at twice the rate of other Australians. The overall rate of elective surgery for Indigenous Australians (49 per 1,000 persons) was markedly lower than for other Australians (86 per 1,000 persons) (AIHW 2008d).

In 2004–05, 15% of Aboriginal and Torres Strait Islander people reported that at some time in the last 12 months they did not go to a doctor when needed, 7% did not go to hospital when needed, 21% did not go to a dentist when needed and 8% did not go to another health professional when needed. A higher percentage of Indigenous Australians in non-remote areas reported not accessing doctors, dentists and other health professionals when needed compared with those living in remote areas. Reasons for not accessing services vary between regions. In non-remote areas, cost is a more important factor. In remote areas, transport/distance and the lack of availability of services are more important. Waiting times were also important factors for not accessing doctors, hospitals, dentists and other health professionals. In addition, barriers such as disliking the service/professional, feeling afraid or embarrassed were also mentioned. Many of these issues relate to the cultural appropriateness of the service. Cost was the main reason Aboriginal and Torres Strait Islander people did not visit a dentist (29%).

In 2004–05, around 15% of Indigenous Australians in non-remote areas required co-payment for their last visit to the doctor, 37% required co-payment for their last visit to a specialist and 17% required co-payment for their last visit to other health professionals. In non-remote areas, 17% of Indigenous Australians are covered by private health insurance compared with an estimated 51% for the rest of the population. The most common reason for Indigenous Australians did not have private health insurance was that they could not afford it (65%).

In 2005, there were 56,084 employed clinical medical practitioners in Australia. The FTE rate of employed primary health care practitioners was highest in areas where less than 1% of the population was Indigenous (108 per 100,000) and lowest in areas where more than 20% of the population was Indigenous (89 per 100,000). This pattern was similar for specialists, physiotherapists, podiatrists, psychologists and dentists. The FTE rate of nurse and midwives did not vary greatly across these areas.

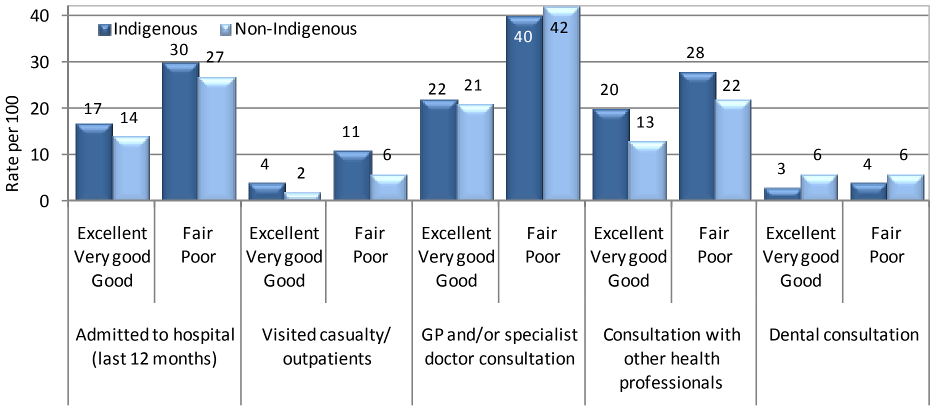
The Community Housing and Infrastructure Needs survey conducted in 2006 provided a profile of the many access issues for discrete Aboriginal communities, many of which are located in remote areas. Of the 1,068 discrete Indigenous communities that reported distance to the nearest health facility, 755 with 56% of the population were located 100 km or more from the nearest hospital. Community health centres were more likely to be located near or within Indigenous communities than were hospitals. Around 16% of Indigenous Australians living in these communities were located 10km or more from an Aboriginal primary health care centre or a community health centre. Around 14% of those who lived 250kms or more from a hospital had no access to emergency air services.

Over the last 5 years, there has been a steady rise in the number of Aboriginal and Torres Strait Islander primary health care services; from 120 services in 1999–2000 to 150 services in 2005–06. Between 1999–2000 and 2005–06 episodes of health care provided to clients of these services have increased by 28% from 1.22 million to 1.68 million.

IMPLICATIONS: Aboriginal and Torres Strait Islander peoples report similar rates of access to health care overall with differences evident by type of care. These differences are associated with factors such as cost, cultural appropriateness and access. Data in this report suggest that Aboriginal and Torres Strait Islander peoples have significantly poorer health and therefore we should expect to see access to health services 2–3 times higher rather than 1.1 times higher.

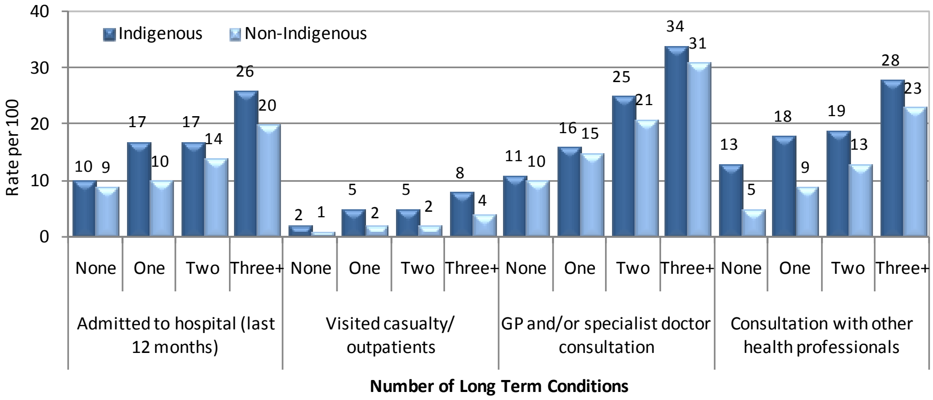
These findings and data on the growth in services delivered through Aboriginal and Torres Strait Islander primary health care services suggest there have been improvements in access to primary medical care services in recent years. However, other evidence, such as continuing lower levels of estimated access to MBS-funded services, suggest that significant gaps in access to primary and specialist health care persist. The priority, as identified in the NSFATSIH, must continue to be the creation of a strong and comprehensive primary health care sector. Less is known about disparities in access to specialist services and these also require attention. Gaps in access to dental services are clear from the national survey data. Indigenous Australians have much lower levels of private health insurance, rely on public hospital services to a greater degree and have lower rates of elective surgery. Barriers to accessing care when needed vary between remote and non-remote areas, suggesting that strategies need to be adapted for local circumstances.

Figure 165 – Proportion of people aged 15 years and over who accessed health care, by type of health care, within the last 12 months (hospital) or last 2 weeks (other health care), by Indigenous status, and self-reported health status, age-standardised, Australia 2004–05



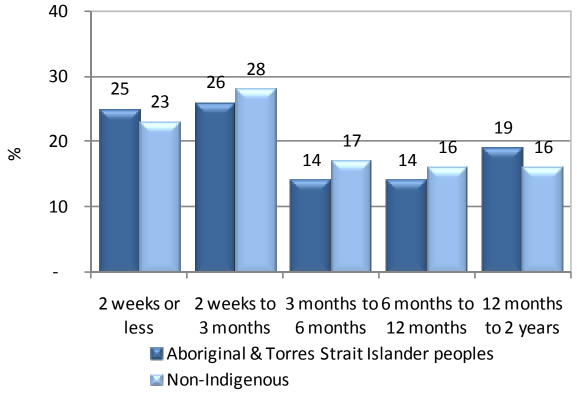
Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 166 – Proportion of people who accessed health care, by type of health care, within the last 12 months (hospital) or last 2 weeks (other health care), by Indigenous status, and number of self-reported number long-term health conditions, Australia 2004–05



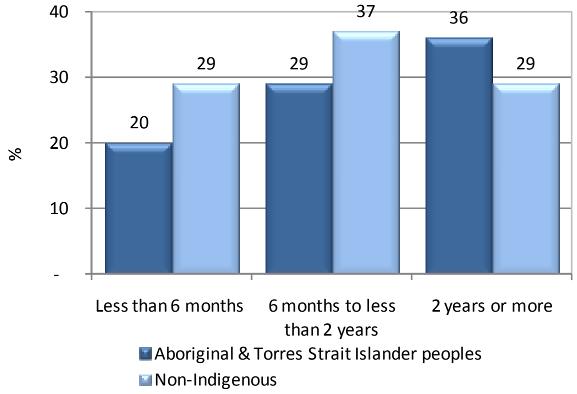
Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey

Figure 167 – Time since last consulted a doctor, by Indigenous status, 2004–05



Source: ABS 2006

Figure 168 – Time since last consulted a dentist, by Indigenous status, 2004–05



Source: ABS 2006

Table 55 – Whether needed to go to a Dentist, Doctor, Other health professional or hospital, reasons didn't go, by remoteness area, Aboriginal and Torres Strait Islander peoples, 2004–05

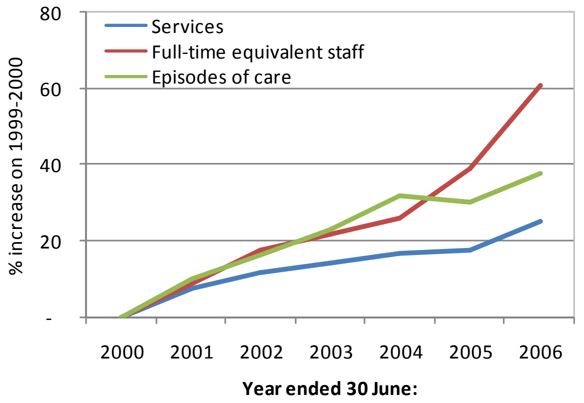
	Dentist			Doctor			Health Professional			Hospital		
	Non-remote	Remote	Total	Non-remote	Remote	Total	Non-remote	Remote	Total	Non-remote	Remote	Total
	%	%	%	%	%	%	%	%	%	%	%	%
Needed to go to service in the last 12 months but didn't	23	16	21	17	10	15	9	5	8	7	7	7
Reasons why didn't visit:												
Cost	32	15	29	14	4*	12	33	5#	28	5*	3*	4
Too busy	15	11	14	26	17	24	27	20	26	17	16	16
Dislikes	21	20	21	10	11	10	12	11*	12	18	9*	16
Waiting time too long or not available at time required	21	23	22	14	15	14	7*	19	9	18	10*	16
Decided not to seek care	14	8	13	27	22	26	18	16	17	25	26	25
Transport/distance	7	28	11	11	28*	14	7*	15*	8	13	34	19
Not available in area	3	28	8	2#	13*	4*	2*	30	7	2*	8*	4*
Felt it would be inadequate	2*	2#	2*	5	7*	5	5*	5#	5	6	7*	6
Discrimination/ not culturally appropriate/ language problems	—#	1#	—*	1	1#	1*	2#	2#	2*	2*	2#	2*
Other	9	7*	8	12	5	11	11	10*	11	15	9	14

* Estimate has a relative standard error between 25% and 50% and should be used with caution.

Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

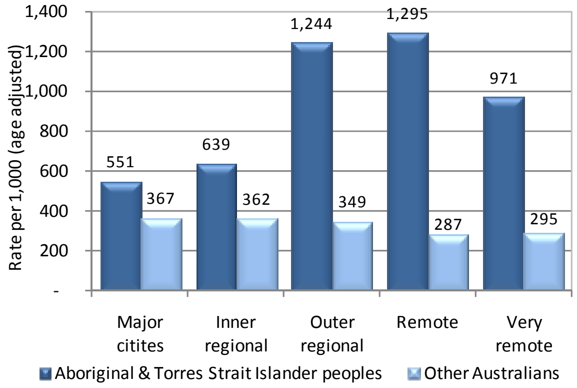
Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 169 – Cumulative per cent changes to Aboriginal and Torres Strait Islander primary health care services, 1999–2000 to 2005–06



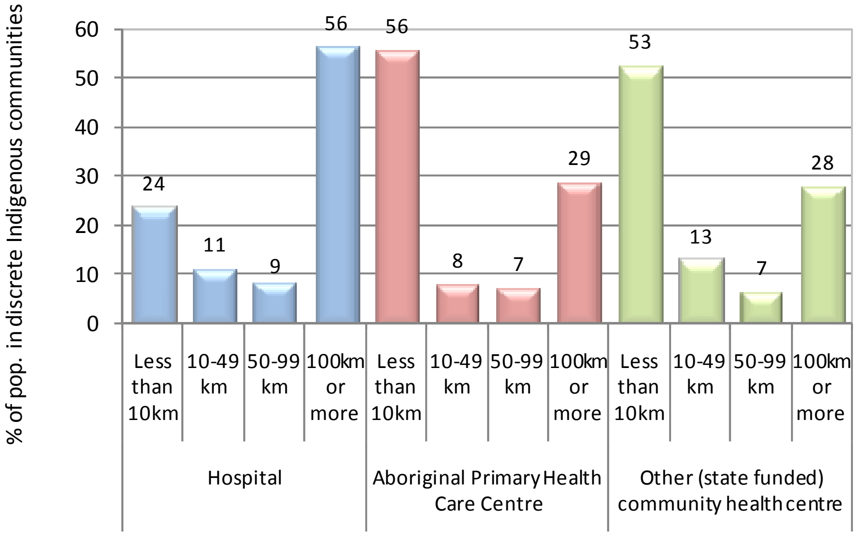
Source: Service Activity Reporting 2005–06

Figure 170 – Age-standardised hospitalisation rates, by Indigenous status and remoteness, NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Source: AIHW analysis of National Hospital Morbidity Database

Figure 171 – Discrete Indigenous communities access to medical facilities, by reported usual population, 2006



Source: ABS 2007—2006 Community Housing and Infrastructure Needs Survey

3.13 Access to prescription medicines

WHY IS IT IMPORTANT? Essential medicines save lives and improve health when they are available, affordable, quality assured and properly used (WHO 2004). Affordable access is important for many acute and chronic illnesses. For chronic illnesses such as diabetes, hypertension, heart disease and renal failure, multiple medications may be required for many years to avoid complications (WHO 2004). It is important to ensure that Aboriginal and Torres Strait Islander peoples, who experience high rates of acute and chronic illnesses, are able to access appropriate prescription medications when they are required. In Australia, the main mechanism for ensuring reliable, timely and affordable access to a wide range of prescription medications is the Australian Government's Pharmaceutical Benefits Scheme (PBS). This scheme subsidises the cost of an estimated 172 million prescriptions each year at a cost of around $6 billion. Access to pharmacies is particularly problematic for people living in rural and remote Australia, where many Aboriginal and Torres Strait Islander peoples live. Specific provisions under the PBS allow clients of around 167 approved remote area Aboriginal and Torres Strait Islander primary health care services to receive medicines directly from these services at the time of medical consultation without charge or the need for a normal prescription form. In 2005, the Expert Advisory Panel on Aboriginal and Torres Strait Islander medicines was formed to advise the Pharmaceutical Benefits Advisory Committee (PBAC) on medicines for the treatment of conditions usually specific to Indigenous Australians. The PBAC recommends medicines for listing on the PBS. To date the panel has assisted with the listing of 17 items which support treatment of conditions common in Indigenous health settings. These medicines have been listed to address the greater burden of disease experienced by Indigenous Australians and morbidity almost exclusively seen in this population.

FINDINGS: In 2004–05, expenditures on pharmaceuticals for Aboriginal and Torres Strait Islander peoples per person were estimated to be 40% of the per person expenditure for non-Indigenous Australians ($224 compared with $561). Benefits paid through the Pharmaceutical Benefits Scheme were estimated to be 51% of the level of expenditures for non-Indigenous Australians ($140 compared with $273). In 2001–02, per person Pharmaceutical Benefits Scheme expenditure was estimated to be 33% of spending for non-Indigenous people. This suggests that the gap in spending between Indigenous and non-Indigenous Australians is closing.

Mainstream arrangements account for 70% of payments for Aboriginal and Torres Strait Islander people and the special provisions for remote area Aboriginal health services account for 28% of payments. The gaps between expenditures for Aboriginal and Torres Strait Islander peoples appear to be greatest in non-remote areas. In remote and very remote areas, per person pharmaceutical expenditures for Aboriginal and Torres Strait Islander peoples are higher, largely due the impact of the special provisions for remote area Aboriginal health services. Pharmaceutical expenditures in these areas are almost twice the per person expenditures for Aboriginal and Torres Strait Islander peoples in other areas.

IMPLICATIONS: There is a large gap between pharmaceutical expenditures for Aboriginal and Torres Strait Islander peoples and other Australians, although this gap appears to have reduced between 2001–02 and 2004–05. Estimation of this gap is complicated by the absence of high quality data sources on Indigenous pharmaceutical usage and expenditures, the younger age profile for Aboriginal and Torres Strait Islander peoples and the problems in access to prescription medicines faced by all people living in remote and very remote Australia.

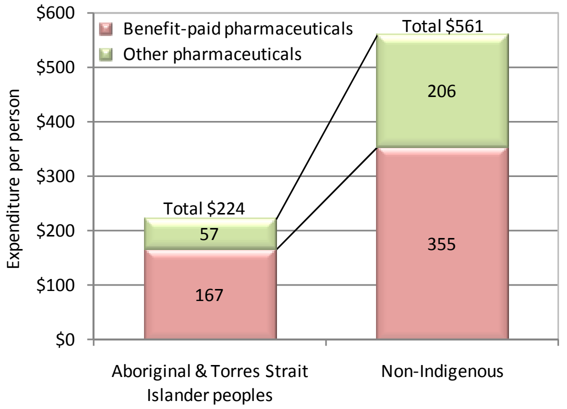
However, given the high prevalence of acute and chronic illnesses for Aboriginal and Torres Strait Islander peoples low levels of expenditure signal severe problems in access to medicines. These problems are evident across geographical regions. The special provisions under the Pharmaceutical Benefits Scheme for remote Aboriginal and Torres Strait Islander primary health care services have played an important role in addressing problems in remote areas.

Access needs to be addressed at multiple levels. Prescription medicines are prescribed by primary care and specialist practitioners, and barriers to accessing these services in the first place may result in under-use of medications. Appropriateness of prescribing may also be an issue. Once a prescription has been issued, access to pharmacies may be limited, particularly in rural and remote areas. Financial barriers, particularly for people on low incomes, can be important, despite safety nets. It is estimated that in 2001, around 19% of Australians did not fill a prescription because of cost (Blendon et al. 2003). Ongoing compliance is an issue for all patients with chronic illnesses, and these issues may be exacerbated for Indigenous Australians.

It is important to have a better understanding of how these barriers impact on Indigenous Australians, in order to better target strategies. As the data improve, better analysis of gaps in the PBS arrangements will be possible.

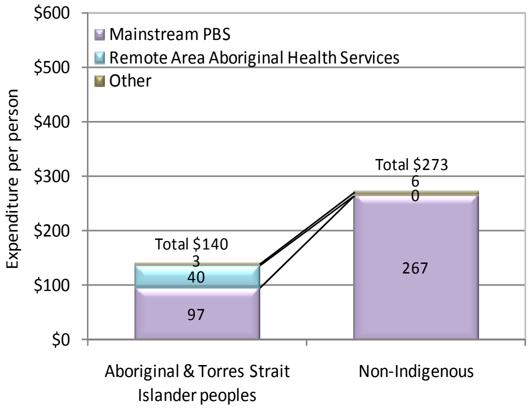
Under the Community Pharmacy Agreement funding is provided to assist pharmacies in rural and remote areas in recognition of the additional financial and personal costs of operating and starting up in these areas. Funding of up to $10.9 million has also been approved for implementation of the QUMAX Program over the life of the Fourth Community Pharmacy Agreement. The focus of the Program is medication compliance and quality use of medicines (QUM). The primary aim of the Program is to improve the health outcomes of Aboriginal and Torres Strait Islander peoples that attend participating Aboriginal Community Controlled Health Services (ACCHSs) in rural and urban areas of Australia. The Program, which will operate until June 2010, provides structured support for QUM in ACCHSs, via community pharmacy, through the implementation of service-level QUM work plans over a 2-year period.

Figure 172 – Average pharmaceutical expenditure per person, Australia, 2004–05



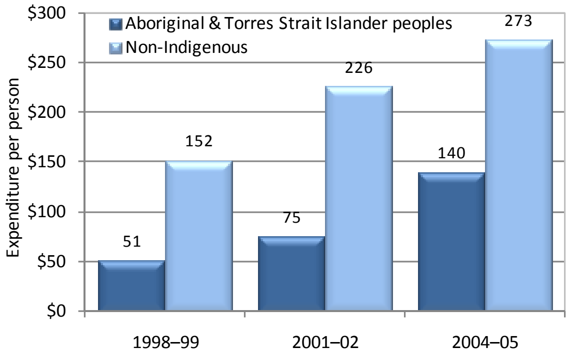
Source: AIHW 2008

Figure 173 – Average health expenditure per person by the Australian Government on the Pharmaceutical Benefits Scheme, by Indigenous status, Australia, 2004–05



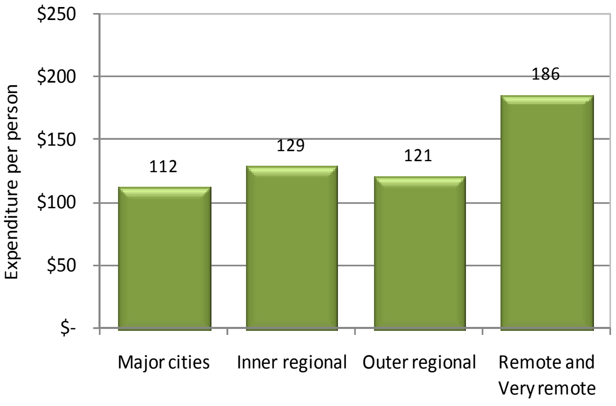
Source: AIHW 2008

Figure 174 – Average health expenditure per person by the Australian Government on the Pharmaceutical Benefits Scheme, constant prices, 1998–99, 2001–02 and 2004–05



Source: AIHW 2008

Figure 175 – Average health expenditure per person by the Australian Government on the Pharmaceutical Benefits Scheme, Indigenous Australians, by remoteness, 2004–05



Source: AIHW 2008

3.14 Access to after-hours primary care

WHY IS IT IMPORTANT? 'After hours' is usually taken to mean services provided on Sunday, before 8am or after 1pm on a Saturday, or at any time other than 8am to 8pm on a weekday. An important component of comprehensive primary care services is the capacity for patients to access services after hours. In the absence of after-hours primary health care, patients with more urgent needs may delay seeking care. In many circumstances, it is preferred that the primary health care doctor is consulted first. For example, for people with chronic conditions, the primary health care doctor will know about the patient's condition and history, and be able to make an informed judgement about the treatment required. For some patients work and school commitments make it difficult to access primary care during normal working hours. These patients are increasingly looking for more convenient arrangements.

All these issues apply to Aboriginal and Torres Strait Islander peoples. Indeed, several factors suggest that after-hours services may be more important for Indigenous Australians, e.g., the higher prevalence of chronic conditions and higher incidence of injury.

GPs employ various after-hours arrangements (which are not mutually exclusive) including: practice-based services (GPs within a practice looking after their own patients after hours); deputising services (commercial companies employing doctors to provide an after-hours service); emergency departments (primary care patients are referred to emergency department after hours); co-operatives (GPs from different practices forming a non-profit making organisation to provide care for their own patients after hours); primary care centres (patients attending a centre rather than being seen in their own home or in the emergency department after hours); telephone triage and advice services (the use of telephone consultations for primary care patients seeking medical help after hours) (Leibowitz et al. 2003). A review these arrangements found little evidence about the advantages of one service model compared with another in relation to clinical outcome. However, studies consistently showed patient dissatisfaction with telephone consultations (Leibowitz et al. 2003).

Over recent years the need to provided additional support for general practitioners in the provision of after-hours services has been recognised. There are special Medicare items for the provision of after-hours consultations, with increased benefit rates. However, these have been insufficient to ensure after-hours GP services are comprehensive. The Australian Government has provided funding through several programs to improve provision, including financial through Practice Incentive Payments, trials of alternative arrangements (Dunt et al. 2002), the After Hours Primary Medical Care Program and the Round the Clock Medicare Program. The establishment of GP Super Clinics will also partially address issues concerning the adequacy of after-hours coverage in some regions.

FINDINGS: In 2006–07, GPs provided an estimated 5 million after-hours services to patients which represents around 5% of the total 103 million services provided by GPs. Currently the number of after-hours GP services provided to Indigenous Australians cannot be identified. What is known is that provision of after-hours services tends to be lower in regions where Indigenous Australians are a higher proportion of the population. After-hours services were provided at a rate of 320 per 1,000 population in areas where Indigenous Australians make up less than 1% of the population, compared with around 39 per 1,000 where they make up more than 50%.

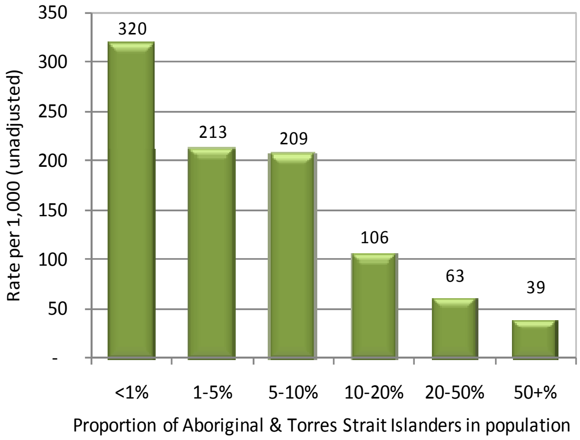
Over the period 2002–03 to 2006–07, GP practices used by Indigenous patients adopted various after-hours arrangements, the most common of which were: practices that covered after hours with their own GPs; patients referred to another service; a deputising service; and cooperative arrangements with other practices.

In 2005–06, approximately 77% of Aboriginal and Torres Strait Islander Primary health care services provided care outside of normal operating hours. The most common services provided outside of normal operating hours were transport (61%) and emotional and social wellbeing/mental health (61%). Approximately 47% of services provided transfer/admission to hospital; 38% provided diagnosis and treatment of illness/disease; 37% provided treatment of injury; 31% provided hospital inpatient/outpatient care and antenatal/maternal care; and 17% provided care in police station/lock-up/prison.

Data on services provided by emergency departments are limited to public hospitals mainly located in major cities (those classified as principal referral, specialist women's and children's hospitals or large hospitals). Given that many Indigenous people do not live in the cities it is not possible to produce population rates using these data. In the periods 2004–05 and 2005–06, there were 405,721 episodes of care for Aboriginal or Torres Strait Islander patients in emergency departments located in these hospitals, representing 4% of all episodes of care. Around half (205,584) emergency department episodes of care for Indigenous patients occurred after hours. This is similar for non-Indigenous patients. Around one-quarter of all presentations to emergency departments by Indigenous patients were after hours on weekends, 14% were on Sundays and 11% were before 8am or after 1pm on Saturdays. For Indigenous patients there were 271,137 emergency department episodes of care in 2004–05 and 2005–06 that were classified as semi-urgent or non-urgent (triage category 4 and 5). Around 59% of Indigenous presentations to emergency departments after hours were for semi-urgent or non-urgent triage categories.

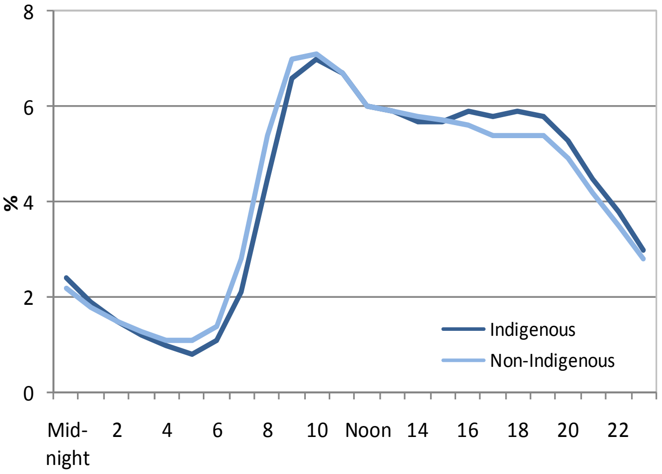
IMPLICATIONS: The provision of after-hours GP consultations is much lower in areas where Aboriginal and Torres Strait Islander peoples make up a higher proportion of the population. This may reflect geographic factors (such as poor access to after-hours GPs generally in rural and remote areas), but it does reflect generally poorer access to these services. While Indigenous Australians make up 2.5% of the population they represent 4% of emergency department episodes (in hospitals for which data on after hours care are collected). Around half of these episodes occurred after hours. A better understanding is required of the needs of Aboriginal and Torres Strait Islander peoples for medical and other health services after hours, and the best mechanisms for ensuring there is comprehensive coverage around the clock.

Figure 176 – Rate per 1,000 of after-hours services provided by FTE GPs in areas of low through to high proportions of Indigenous populations, 2006–07



Source: AIHW analysis of Medicare Database

Figure 177 – Non-admitted patient emergency care episodes for triage categories 4 (semi-urgent) and 5 (non-urgent) by time of day and Indigenous status, Australia, 2004–05 to 2005–06



Note: These data are limited to public hospitals mainly located in major cities classified as principal referral, specialist women's and children's hospitals or large hospitals.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database

Table 56 – Non-admitted patient emergency care episodes after hours, by Indigenous status, 2004–05 to 2005–06

Time of presentation	Number				Percent			
	Indigenous	Non-Indigenous	Not stated	Total	Indigenous	Non-Indigenous	Not stated	Total
				All emergency department episodes				
On Sundays	58,458	1,374,101	30,202	1,462,761	14	16	16	16
Before 8am or after 1pm on Saturday	45,427	971,104	22,336	1,038,867	11	11	12	11
Before 8am or after 8pm on a weekday	101,699	2,076,399	45,966	2,224,064	25	24	24	24
Total after hours	*205,584*	*4,421,604*	*98,504*	*4,725,692*	*51*	*50*	*52*	*50*
Not after hours	*200,272*	*4,428,405*	*89,939*	*4,718,616*	*49*	*50*	*48*	*50*
Total	**405,856**	**8,850,009**	**188,443**	**9,444,308**	**100**	**100**	**100**	**100**
				Semi-urgent or non-urgent (triage category 4 and 5) emergency department episodes				
On Sundays	39,266	847,814	17,233	904,313	15	16	17	16
Before 8am or after 1pm on Saturday	27,734	541,059	11,259	580,052	10	10	11	10
Before 8am or after 8pm on a weekday	54,898	1,042,966	21,105	1,118,969	20	20	21	20
Total after hours	*121,898*	*2,431,839*	*49,597*	*2,603,334*	*45*	*46*	*48*	*46*
Not after hours	*149,239*	*2,883,657*	*53,447*	*3,086,343*	*55*	*54*	*52*	*54*
Total	**271,137**	**5,315,496**	**103,044**	**5,689,677**	**100**	**100**	**100**	**100**

Note: These data are limited to public hospitals mainly located in major cities classified as principal referral, specialist women's and children's hospitals or large hospitals.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database

3.15 Regular GP or health service

WHY IS IT IMPORTANT? Having a usual primary care provider, sometimes known as the ‘medical home’, is associated with good communication between the patient and provider, greater trust in the health care provider (Mainous et al. 2001), improved preventive care and better health outcomes (Starfield 1998; Starfield & Shi 2004). Effective communication between the patient and provider is particularly relevant in the health of Aboriginal and Torres Strait Islander peoples where communication issues can lead to health care problems such as misdiagnosis and incorrect treatment. An ongoing relationship between the patient and provider assists in understanding long-term health needs and facilitates the coordination of care with other providers (e.g. specialists) to meet patient needs (Forrest & Starfield 1996). Having a usual primary care provider correlates with higher quality care (Christakis et al. 2002; Inkelas et al. 2004). The literature focuses on having a regular primary care doctor (GP). Given the different models of primary health care in Australia such as Aboriginal and Torres Strait Islander primary health care services and private GP practices, it may be difficult to draw clear conclusions about the relationships between having a regular health service and continuity of care.

One international survey found that 88% of Australians reported having a regular GP. Rates were higher in the UK and NZ at 91% and lower in Canada (86%) and the US (83%). In Australia, a further 6% reported they had no regular doctor but did have a usual place of care (Schoen et al. 2004).

FINDINGS: Statistics for this indicator come from the National Aboriginal and Torres Strait Islander Survey and have not been updated since the 2006 HPF Report. In 2004–05, 91% of all Aboriginal and Torres Strait Islander people reported that they usually went to the same GP or medical service. This proportion is similar across age groups (with slightly higher rates for people aged 0–14 years and 55 years and over) and other socio-economic dimensions including main language spoken at home, household income, remoteness region of residence and private health insurance status.

Sixty per cent of Aboriginal and Torres Strait Islander people went to a doctor if they had a problem with their health, and 30% reported they went to an ‘Aboriginal medical service’. ‘Aboriginal medical services’ were used as the regular source of health care for 15% of Aboriginal and Torres Strait Islander people in major cities but by 76% in very remote areas. The proportion of Aboriginal and Torres Strait Islander people using a doctor for their regular health care decreased with remoteness from 80% in major cities to 6% in very remote areas. In all states and territories, a higher proportion of Aboriginal and Torres Strait Islander people reported using a doctor for their regular health care rather than Aboriginal medical services, except the Northern Territory where 82% reported using Aboriginal medical service and only 14% reported using a doctor. A higher use of hospitals for regular health care was reported in Queensland and Western Australia compared with other jurisdictions at 12% and 14% respectively.

Seventy-eight per cent of Aboriginal and Torres Strait Islander people who usually went to the same GP or medical service reported that their treatment when seeking health care in the previous 12 months was the same as non-Indigenous people. Five per cent reported their treatment was better than non-Indigenous people and 4% that their treatment was worse than non-Indigenous people. However, 16% of Indigenous Australians reported that over the previous 12 months they felt treated badly by a health service provider because they were Indigenous. Up to a third of these people have tried to avoid the situation, which suggests they may not be seeking care when it is required.

IMPLICATIONS: A high proportion of Aboriginal and Torres Strait Islander peoples have a usual source of health care. This finding is encouraging as access for a usual source of care is one of the foundations for a good primary care system.

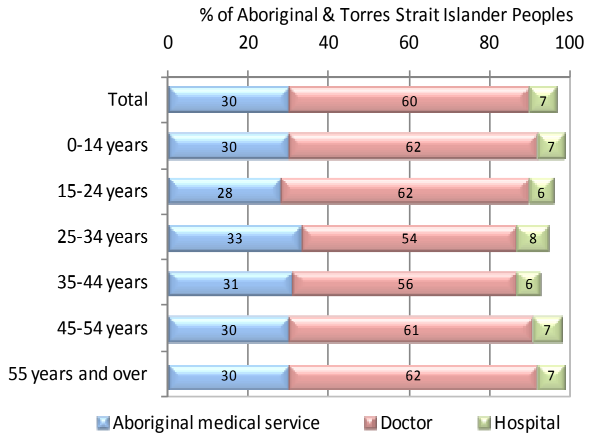
Mainstream GPs are the main source of usual care for Aboriginal and Torres Strait Islander peoples. Aboriginal medical services play an important role as the usual source of care for a third of Aboriginal and Torres Strait Islander peoples overall, and as the major provider in remote areas of Australia. The small number of services nationally limits their accessibility for Indigenous Australians. These services offer services in addition to primary medical care and remain the service of choice for many Aboriginal and Torres Strait Islander peoples. These services are controlled by the local community and have significant expertise in Aboriginal and Torres Strait Islander health. There is some evidence that Aboriginal medical services treat patients with more complex problems (Larkins et al. 2006). Strengthening these services is areas of potentially high demand should remain a priority.

While mainstream general practice is a significant source of care, anecdotal reports suggest a relatively small proportion of private GPs provide sensitive and appropriate services to their Indigenous patients and that these GPs tend to attract most Indigenous patients living locally. Unlike Aboriginal medical services, for most GPs, Indigenous clients will remain a small proportion of their clients. This makes developing expertise in Aboriginal and Torres Strait Islander health issues challenging. Strategies are required to address lack of expertise in Indigenous health issues, lack of awareness of Aboriginal and Torres Strait Islander primary health care initiatives, cultural insensitivity and discrimination by mainstream providers. There is some evidence that few mainstream general practitioners currently identify which of their patients are Aboriginal and Torres Strait

Islander. Therefore they are not in a position to offer the additional MBS, PBS and immunisation programs available (Norris et al. 2004; Riley et al. 2004). Divisions of General Practice can play an important role in assisting practices to improve Indigenous identification, their use of Indigenous specific MBS items and facilitating engagement between GPs and local Aboriginal and Torres Strait Islander communities.

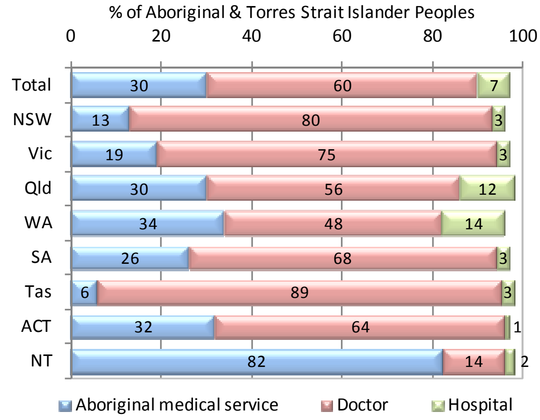
While Aboriginal and Torres Strait Islander peoples may have a usual source of care, it is not clear that health care is always sought or accessible when they are sick (see measure 3.12). Available data do not give a good indication as to whether, having sought care, Aboriginal and Torres Strait Islander peoples received appropriate follow-up care, are referred for specialist care, or are able to receive specialist care when this is required.

Figure 178 – Where usually go if problem with health, by age group, Aboriginal and Torres Strait Islander peoples 2004–05



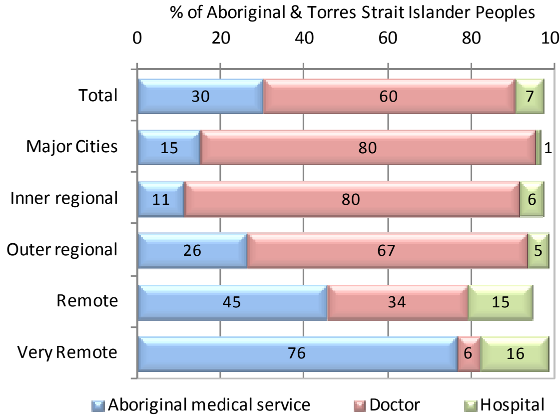
Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 179 – Where usually go if problem with health, by jurisdiction, Aboriginal and Torres Strait Islander peoples 2004–05



Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

Figure 180 – Where usually go if problem with health, by remoteness area, Aboriginal and Torres Strait Islander peoples 2004–05



Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey

3.16 Care planning for clients with chronic diseases

WHY IS IT IMPORTANT? Chronic diseases such as circulatory disease, diabetes, renal disease, chronic respiratory disease, cancers and chronic mental health conditions are a major cause of morbidity and mortality among Aboriginal and Torres Strait Islander peoples (see measure 3.04). Effective management of chronic disease can delay the progression of disease, decrease the need for high-cost interventions, improve quality of life, and increase life expectancy. As good quality care for people with chronic disease generally involves multiple health care providers across multiple settings, the development of care plans is one way in which the client and primary health care provider can ensure appropriate care is arranged and coordinated.

A care plan is a written action plan containing strategies for delivering care that address an individual's specific needs, particularly patients with chronic conditions and/or complex care needs. A care plan can be used to record comprehensive, accurate and up to date information about the patient's condition, actions the patient needs to take, the various services required and collaboration with other service providers to achieve management goals for the patient. Development of a care plan can also help encourage the patient to take some responsibility for their care, including the identification of any actions the patient might take to help achieve the goals of treatment. A care plan may involve one health professional (usually a GP or other primary health care doctor) and patient, or may be negotiated with several service providers (e.g., GP, nurse, Aboriginal health worker, allied health professionals, community services providers) in liaison with the patient.

A recent review of evidence concerning chronic disease management interventions in primary care settings in Australia found that interventions most likely to be effective in the Australian context were: engaging primary care in self-management support through education and training for general practitioners and practice nurses, and including self-management support in care plans linked to multidisciplinary team support (Dennis et al. 2008).

A recent study of general practice patients with Type 2 diabetes found that following implementation of a care plan the proportion of patients involved in multi-disciplinary care and in the adherence to diabetes care guidelines increased. There were also improvements in patients' metabolic control and cardiovascular risk factors (Zwar et al. 2007).

GPs have been encouraged to develop care plans through the introduction of a number of enhanced primary care items under the Medical Benefits Schedule. In July 2005, new Chronic Disease Management items were introduced specifically focused on patients with chronic or terminal conditions who will benefit from a structured approach to management of their care needs (DoHA 2008b). These include an item related to the development of General Practitioner Management Plans (GPMPs), an item for Team Care Arrangement (TCA) where planning involves a broader team and items for where GPs contribute to the care plans developed by another service provider.

Aboriginal and Torres Strait Islander primary health care services have been facilitating care planning for their patients across the health system and with other sectors since the inception of the first services (Central Australian Aboriginal Congress 2004).

FINDINGS: Aboriginal and Torres Strait Islander people with chronic conditions receive their care from both Aboriginal and Torres Strait Islander primary care services and mainstream general practitioners (see measure 3.15).

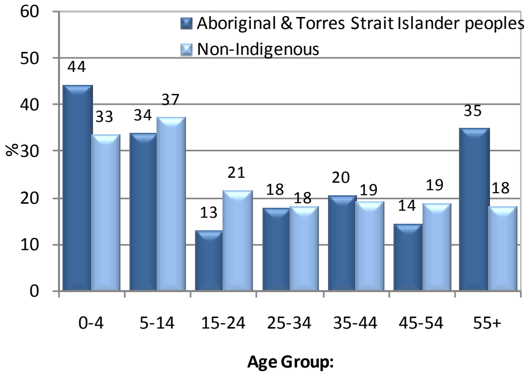
To date there is only limited information concerning the take up of the Chronic Disease Management items by GPs and Aboriginal and Torres Strait Islander primary care services. Some data from services funded under the *Healthy for Life* program provide a sense of the take up of the new MBS items in services funded specifically to improve chronic disease management. Sixty-four per cent of *Healthy for Life* services provided care planning services. Of the 3,415 Indigenous adults with Type 2 diabetes who are regular clients of *Healthy for Life* services, 419 (12%) had a GPMP. Of the 1,546 Indigenous adults with coronary heart disease who are regular clients of the *Healthy for Life* service, 165 (11%) had a GPMP. Take up of these items was higher for services located in regional (20–22%) and remote (14–17%) areas compared with services in urban areas (3%). Take up of items for TCAs was low (4% of regular clients with a chronic disease).

There is good evidence that the key elements of effective asthma management include the development of a written asthma action plan and regular use of medications that control the disease and prevent exacerbations of the condition (AIHW Australian Centre for Asthma Monitoring 2005). In 2006, it was estimated that 25% of Aboriginal and Torres Strait Islander people with asthma, living in non-remote areas, had a written asthma plan, compared with 22% of non-Indigenous Australians. However, for some age groups this pattern was reversed. The prevalence of asthma is higher for Indigenous people (18% of the population compared with 10% for non-Indigenous Australians).

Information on the management of chronic conditions by Aboriginal and Torres Strait Islander primary care services is available through the Service Activity Reporting system (see measure 3.04). In 2003–04, 93% of services provided care planning and 56% reported that discharge planning was well coordinated between the hospital and the service. In 2005–06, 61% of services provided shared care arrangement for the management of people with chronic conditions.

IMPLICATIONS: As discussed in relation to measure 3.04, the provision of organised chronic disease management in Aboriginal and Torres Strait Islander primary health care services has been demonstrated to result in improvement in various health outcomes (Hoy et al. 1999; Hoy et al. 2000; Rowley et al. 2000b; McDermott et al. 2003, Bailie et al. 2007). Care planning is one of the important elements in effective chronic disease management, although more research is required to understand the best ways to develop and structure care plans (Vagholkar et al. 2007). To date there is only limited information on the extent to which care planning services are being provided for Indigenous patients by both GPs and Aboriginal and Torres Strait Islander primary health care services. The data on asthma action plans are encouraging in that use of these plans is higher for Indigenous Australians, although the use of plans is still too low for both Indigenous and non-Indigenous Australians.

Figure 181 – Proportion of people with asthma reporting that they have a written asthma action plan by Indigenous status and age group, non-remote areas, 2004–05



Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey

Table 57 – Number and proportion of Indigenous regular clients of services funded through the Healthy For Life Program with a chronic disease who have a current MBS item 721 General Practitioner Management Plan, by type of chronic disease and remoteness, at 30 June 2007

	Urban	Regional	Remote	Total
	Number of Indigenous regular clients with a current GPMP			
Type 2 Diabetes	47	243	129	419
Coronary Heart Disease	21	100	44	165
	Total number of Indigenous regular clients with a chronic disease			
Type 2 Diabetes	1,454	1,221	740	3,415
Coronary Heart Disease	763	465	318	1,546
	Proportion of Indigenous regular clients with a chronic disease who have a current GPMP (%)			
Type 2 Diabetes	3	20	17	12
Coronary Heart Disease	3	22	14	11

Source: AIHW, Healthy for Life data collection

Table 58 – Number and proportion of Indigenous regular clients of services funded through the Healthy For Life program with a chronic disease who have a current MBS item 723 Team Care Arrangement, by type of chronic disease, at 30 June 2007

	Type 2 Diabetes	Coronary Heart Disease
Number of Indigenous regular clients with a current TCA	85	28
Total number of Indigenous regular clients with a chronic disease	2,252	956
Proportion of Indigenous regular clients with a chronic disease who have a current TCA (%)	4	3

Source: AIHW, Healthy for Life data collection

3.17 Accreditation

WHY IS IT IMPORTANT? Accreditation is a process, usually voluntary, through which a recognised external body assesses the extent to which a health care organisation meets applicable quality standards. Quality standards typically address issues such as: governance of the organisation, management of safety issues such as infection control, handling of care processes such as discharge planning, general management issues such as human resource management, quality of the physical infrastructure, and issues such as handling of patient complaints. Assessments often result in recommendations for action. The assessment outcome may also be made available publicly in a summarised form. The services accessed by Aboriginal and Torres Strait Islander peoples should be able to demonstrate a comparable level of quality when compared with other health services in Australia. While accreditation status is a broad measure, it provides one indicator of the capability of services, based on their skills and knowledge, to provide quality health services to Aboriginal and Torres Strait Islander peoples.

In Australia, there are well developed accreditation systems for hospitals and general practice. Most hospitals are accredited by the Australian Council of Healthcare Standards (ACHS) Evaluation and Quality Improvement Program (EQuIP), although other accreditation systems are used by hospitals such as the Quality Improvement Council (QIC). Overall 85% of hospitals accounting 93% of hospital beds have achieved some form of accreditation (AIHW 2008a). Most large hospitals are accredited. Accreditation is less common for small hospitals located in regional and remote areas. Achieving accreditation generally requires a considerable ongoing investment of time and resources which is not always easy for smaller hospitals. It is not possible to draw conclusions about the quality of care in hospitals that do not have accreditation.

Accreditation in general practice involves assessment against standards set by the Royal Australian College of General Practitioners (RACGP) in 5 key areas: practice services, rights and needs of patients, quality assurance and education, practice administration, and physical factors for workplace health and safety (Royal Australian College of General Practitioners 2006). There are two registered accreditation providers: Australian General Practice Accreditation Limited (AGPAL) and General Practice Accreditation Plus (GPA+). Most general practices are accredited by AGPAL. The RACGP standards indirectly address issues for Aboriginal and Torres Strait Islander peoples. For example, in assessing whether patient care is effective, accreditation assessors ask GPs if they 'can access guidelines for specific clinical care of patients who self-identify as Aboriginal and Torres Strait Islanders'.

FINDINGS: For the jurisdictions in which Indigenous identification in hospital patient data are considered adequate, 95% of episodes for Aboriginal and Torres Strait Islander people occurred in accredited hospitals, compared with 98% of episodes for other people. This difference mainly reflects the lower proportion of accredited hospitals in remote areas in which Aboriginal and Torres Strait Islander peoples make up a larger proportion of the population. The percentage of both Aboriginal and Torres Strait Islander patient episodes and other patient episodes treated in accredited hospitals is higher for hospitals located in remote (91% and 78% respectively) and very remote (80% and 79% respectively) areas.

An estimated 65% of general practices are accredited. Accreditation is lowest (49%) for practices in areas where Aboriginal and Torres Strait Islander peoples make up more than 10% of the population. In areas where Aboriginal and Torres Strait Islander peoples make up less than 1% of the population, accreditation for practices is similar (61%). Areas with a reasonably high proportion of Aboriginal and Torres Strait Islander peoples (3–4%) have the highest proportion of practices accredited (80%).

In 2005–06, of the 140 Aboriginal and Torres Strait Islander primary health care services that employed a general practitioner 59 (42%) were accredited. Of these services, 52 were accredited through AGPAL or GPA+, 5 were accredited through the Quality Improvement Council (QIC) and 2 through another body.

Of the 58 services that were included in the *Healthy For Life* program and reported information on accreditation, two-thirds (38) of services were accredited and around one-third (20) of services were undergoing accreditation.

IMPLICATIONS: Most accreditation processes do not specifically address the needs of Aboriginal and Torres Strait Islander peoples in either quality or safety of care. Accreditation processes do not address capacity to provide culturally specific skills and knowledge to address the health needs of Aboriginal and Torres Strait Islander peoples. Little research into the appropriateness of accreditation processes for the health needs of Aboriginal and Torres Strait Islander peoples has been undertaken (Otim et al. 2002).

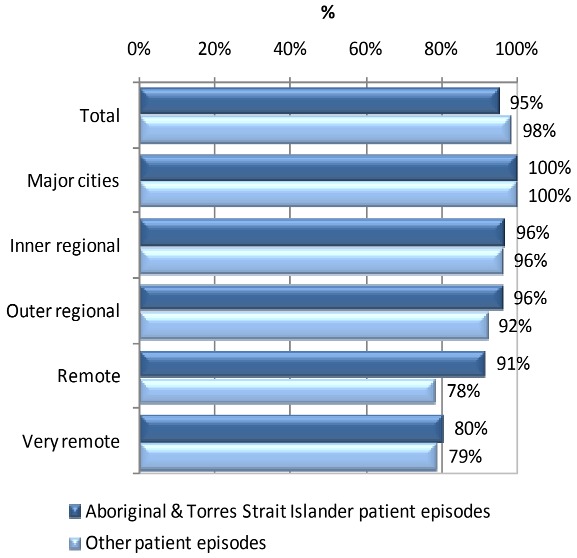
The Commonwealth has sought to progress the debate around the nature and value of accreditation of health service delivery to Indigenous Australians by establishing in 2007 the Indigenous Health Service Accreditation Advisory Committee and by funding accreditation-specific research and information projects throughout the Aboriginal and Torres Strait Islander community controlled health sector.

The Co-operative Research Centre for Aboriginal Health report, *Aboriginal and Torres Strait Islander Health*

Sector Accreditation and Quality Standards Project (2008) comments on the following aspects of accreditation: the nature of accreditation standards that could be applied to the Aboriginal and Torres Strait Islander community controlled health sector; the most feasible approach to implement accreditation against those standards; and the support needed in order to achieve such accreditation.

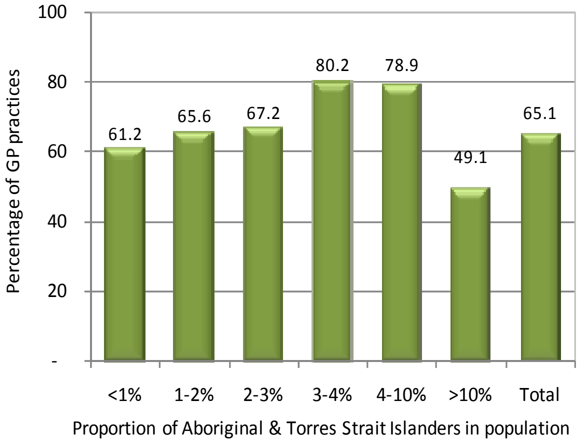
A related project being undertaken by the Quality Improvement Council is investigating the extent to which accreditation processes can be streamlined in order to minimise the administrative burden on health service providers, especially in cases where multiple accreditation might apply.

Figure 182 – Percentage of hospital admitted patient episodes in accredited hospitals, by Indigenous status, NSW, Vic., Qld, WA, SA and NT, July 2004 to June 2006



Source: AIHW analysis of National Public Hospitals Establishment Database

Figure 183 – Proportion of General Practices accredited, in Divisions of General Practice regions, by proportion of population that is Indigenous, 2005–06



Source: AIHW analysis of AGPAL and GPA+

3.18 Aboriginal and Torres Strait Islander people training for health-related disciplines

WHY IS IT IMPORTANT? Aboriginal and Torres Strait Islander peoples are significantly under-represented in the health workforce (see measure 3.09). Improving the participation of Aboriginal and Torres Strait Islander peoples in tertiary education for health-related disciplines is vital to increasing Aboriginal and Torres Strait Islander participation in the health workforce, and creating a workforce capable of addressing the significant challenges in Aboriginal and Torres Strait Islander health.

FINDINGS: In 2006, there were an estimated 1,016 Aboriginal and Torres Strait Islander undergraduate students enrolled in health-related courses and 152 who completed a health-related undergraduate degree. An estimated 1.6% of all undergraduate students enrolled in health-related courses in 2006 were Aboriginal or Torres Strait Islander. Indigenous students accounted for 1.2% of course completions. This is still lower than the overall Aboriginal and Torres Strait Islander proportion of the Australian population (2.5%). In 2006, the success rate for Indigenous students studying health-related courses was 65% compared with 91% for non-Indigenous students. There were 418 Indigenous students enrolled in health-related under-graduate degrees in 2001. This fell during 2002 to 2004, but increased to around 500 in 2005 and 2006. In 2001, 85 Indigenous students completed undergraduate degrees. There were fewer completions in 2002 to 2004, but in 2005 and 2006 completions increased to 105 and 106 respectively. Indigenous students were around 3% of university completions in health-related courses between 2002 to 2004, but increased to 5% in 2005 and 2006, a level similar to 2001.

The most common health-related course for Indigenous undergraduate students in 2006 was nursing (460 enrolled and 48 completed), although Indigenous students made up only 1.6% of all nursing students. There were 350 Indigenous students enrolled in public health courses, with 222 of these enrolled in a specific Indigenous health course. There were 78 completions for public health courses. Public health had the highest level of participation with Indigenous students accounting for 89% of students enrolled in specific Indigenous health courses and 3.7% of other public health courses. An estimated 116 students were enrolled in medicine, equivalent to 1.2% of all medical students. Twelve medical students completed their studies in 2006, compared with 13 in 2004, 10 in 2003, 9 in 1999 and 3 in 1997. Around 58% of Indigenous Australian medical students are enrolled at 3 medical schools: Newcastle, James Cook and Western Australia (Minniecon & Kong 2005). Participation rates remain very low in pharmacy, dental studies, radiography and rehabilitation therapies.

In 2006, an estimated 5,149 Indigenous students were enrolled in health-related courses in the vocational education and training (VET) sector and 431 Indigenous students completed a health-related course. Indigenous students accounted for 5% of the sector's students enrolled and 3% of those completing a health-related course. The most common type of health-related course in which Aboriginal and Torres Strait Islander VET students were enrolled or had completed was public health (2,856 enrolled and 201 completed) followed by nursing (357 enrolled and 43 completed). The category of 'public health' in these data include a broad range of disciplines such as Indigenous health, environmental worker, and occupational health and safety (ABS 2001). In 2006, the VET load pass rate for Indigenous students studying health–related courses was 67% compared with 80% for non-Indigenous students. In the same year, 202 VET sector students had completed a course aimed at Aboriginal and Torres Strait Islander Health Worker occupations in Australia. Women account for 80% of the students completing these courses.

IMPLICATIONS: In March 2008, the National Indigenous Health Workforce Training Plan was launched. This was followed by the launch of the Pathways into the workforce for Aboriginal and Torres Strait Islander people: a blueprint for action in July 2008 (NATSIHC 2008). This strategy aims to maximise Indigenous participation in the health workforce including improving pathways between school, VET and higher education. Increasing the participation of Indigenous Australians in the health workforce is an objective for both the NSFATSIH and the Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework (SCATSIH 2002). Strategies to improve participation in tertiary education for health-related disciplines are being pursued by the Aboriginal and Torres Strait Islander Health Workforce Working Group, the Medical Deans of Australia and New Zealand, the Australian Indigenous Doctors Association and the Congress of Aboriginal and Torres Strait Islander Nurses.

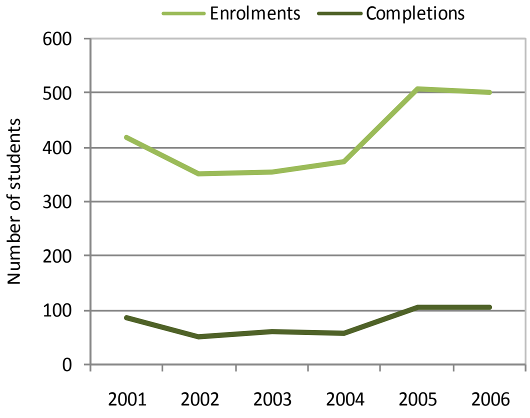
Some medical schools have been significantly more successful in attracting and retaining Indigenous medical students. These schools have adopted comprehensive approaches including: locally-based strategies involving personal contact and community engagement; building relationships with potential students and their families and communities through, e.g., school visits by Indigenous medical students and doctors; and Indigenous medical or health support units. Fifty-seven per cent of Indigenous Australian medical students reported the presence of a support unit was their main reason for choosing a university. The presence of Indigenous staff within the school was also important, along with mentoring, curriculum and cultural safety (Minniecon & Kong 2005). The Australian Indigenous Doctors Association proposes all medical schools have established pathways into medicine for Indigenous Australians by 2010. The availability of Indigenous health support units within universities and colleges, supporting Indigenous students across health disciplines is a key requirement. Improvements in school educational retention and attainment are also important (see measure 2.05). Strategies are required to increase enrollment in courses for the health disciplines in which Indigenous students are under-represented.

Table 59 – Undergraduate students enrolled and completed health-related courses in the Tertiary Education sector, 2006

	Enrolled			Completed		
	Aboriginal & Torres Strait Islander	Total	Per cent Indigenous	Aboriginal & Torres Strait Islander	Total	Per cent Indigenous
Nursing	460	29,293	1.6	48	5,965	0.8
Public health	350	3,751	9.3	78	768	10.2
Indigenous health	*222*	*250*	*88.8*	*50*	*52*	*96.2*
Other public health	*128*	*3,501*	*3.7*	*28*	*716*	*3.9*
Medical studies	116	9,736	1.2	12	1,390	0.9
Rehabilitation therapies	61	11,163	0.5	6	2,308	0.3
Dental studies	10	1,845	0.5	2	308	0.6
Pharmacy	9	4,088	0.2	2	858	0.2
Radiography	7	1,671	0.4	3	630	0.5
Optical science	3	494	0.6	1	87	1.1
Total	**1,016**	**61,815**	**1.6**	**152**	**12,268**	**1.2**

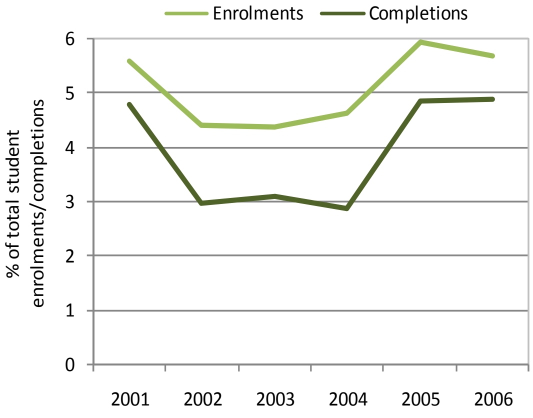
Source: AIHW analysis of DEST Higher Education Student Statistics Collection

Figure 184 – Indigenous university students enrolled in or completing health-related courses, 2001–2006



Source: AIHW analysis of Higher Education Student Statistics Collection

Figure 185 – Indigenous university students enrolled in or completing health-related courses as a proportion of all students in health-related courses, 2001–2006



Source: AIHW analysis of Higher Education Student Statistics Collection

Table 60 – Vocational education and training (VET) sector students enrolled and completed health-related courses, 2006

	Enrolled			Completed		
	Aboriginal & Torres Strait Islander	Total	Per cent Indigenous	Aboriginal & Torres Strait Islander	Total	Per cent Indigenous
Public health	2,856	39,957	7.1	201	1,917	10.5
Indigenous health	*145*	*153*	*94.8*	*38*	*38*	*100.0*
Other public health	*2,711*	*39,804*	*6.9*	*163*	*1,879*	*8.7*
Nursing	357	17,631	2.0	43	2,916	1.5
Medical studies(a)	130	586	22.2	104	109	95.4
Dental studies	46	3,662	1.3	9	1,203	0.7
Complementary therapies	26	3,204	0.8	5	948	0.5
Rehabilitation therapies	56	829	6.8	1	102	1.0
Optical science	5	1,068	0.5	—	118	—
Pharmacy	—	30	—	—	4	—
Other health	1,673	35,426	4.7	68	849	8.0
Total	**5,149**	**102,393**	**5.0**	**431**	**8,166**	**5.3**

(a) The high proportion of Indigenous students in medical studies is due to the fact that only 2 courses under this category had qualifications completed in 2006—Certificate III in Aboriginal Primary Health Care made up 104 of the 109 completions

Source: AIHW analysis of NCVER, National VET Provider Collection 2006, unpublished data

3.19 Expenditure on Aboriginal and Torres Strait Islander health compared to need

WHY IS IT IMPORTANT? A basic equity principle is that health expenditures should be targeted to reflect relative needs for health services. Health expenditures for population groups with higher levels of need should be proportionately higher. For Aboriginal and Torres Strait Islander peoples the principle means that the demonstrable higher levels of need should be accompanied by higher levels of health expenditure. If health expenditures are not sufficiently matched to need, then this fundamental principle of equity will not be met and services for Aboriginal and Torres Strait Islander peoples will struggle to be sustainable and effective. There are many challenges in working through how this principle can be defined and assessed (Commonwealth Grants Commission 2001; SCRGSP 2007). However, a broad assessment of how well the principle is given effect is provided by comparing broad differentials in health status with differences in per capita health expenditures.

FINDINGS: On a per person basis, average health expenditures for Aboriginal and Torres Strait Islander people in 2004–05 was estimated to be $4,718, which was 17% higher than the expenditure for other Australians ($4,019). In contrast, measures of health status show mortality rates (measures 1.14 and 1.24), infant mortality (measure 1.18) and the occurrence of a broad range of diseases (measures 1.04, 1.05, 1.06, 1.07, 1.08, 1.09, 1.10, 1.11 and 1.12) are 200%–300% times higher in Aboriginal and Torres Strait Islander people. Were expenditure commensurate with need, rates of expenditure on Aboriginal and Torres Strait Islander Australians should be significantly higher compared with the non-Indigenous population. For other Australians, use of health services rises with level of illness. For example, people with one significant medical condition have MBS and PBS usage 4 times the national average and for those with 5 conditions expenditure is up to 12 times higher (Dwyer et al. 2004).

Estimated health expenditures for Aboriginal and Torres Strait Islander peoples rose by about 23% between 1998–99 and 2004–05. Governments provided an estimated 93% of the funding used to pay for health goods and services for Aboriginal and Torres Strait Islander peoples during 2004–05 compared with 69% for other Australians. Per person funding provided by the Australian Government for Aboriginal and Torres Strait Islander peoples was $2,113 compared with $1,940 for other Australians, a ratio of 1.09:1. Per person funding provided by state and territory governments for Aboriginal and Torres Strait Islander peoples was $2,243 compared with $823 for other Australians, a ratio of 2.73:1 (AIHW 2008e).

Estimated expenditures per person by state and territory governments vary across jurisdictions, with the highest expenditures per person in the Northern Territory.

For the main programs, expenditures were an estimated $3,516 per Aboriginal and Torres Strait Islander person in remote and very remote areas compared with $2,029 per person in major cities. The costs of delivering health care services are higher in remote areas.

In 2004–05, expenditures for primary health care services were $2,223 per person for Aboriginal and Torres Strait Islander peoples compared with $1,747 for other people. Primary health care expenditures on medical services including those paid through the Medicare Benefits Schedule are $285 per Aboriginal and Torres Strait Islander person compared with $488 for other Australians. Per person expenditures on pharmaceuticals in the primary care sector are also much lower for Aboriginal and Torres Strait Islander peoples (see measure 3.13) – $203 per person compared with $465 per person for other Australians. Per person expenditures on community health services are higher for Indigenous Australians – $1,019 per person compared with $155 per person for other Australians. Community health expenditures accounted for $498 million in 2004-05 or 46% of total primary health care expenditures for Aboriginal and Torres Strait Islander peoples. Per person expenditures on dental services for Aboriginal and Torres Strait Islander peoples were less than half that for other Australians in 2004–05.

Australian Government Indigenous program outlays were $115 million in 1995–96 and have increased to $492 million in 2007–08, a growth in real terms of 245%.

In 2004–05, expenditures for secondary and tertiary health care services were $2,248 per person for Aboriginal and Torres Strait Islander peoples compared with $2,073 for other people. Hospital expenditure is the largest single expenditure item in secondary/tertiary accounting for $1,958 per Aboriginal and Torres Strait Islander person. Expenditures on secondary/tertiary care medical services (mainly specialist care) were estimated to be $52 per Aboriginal and Torres Strait Islander person compared with $246 per person for other Australians.

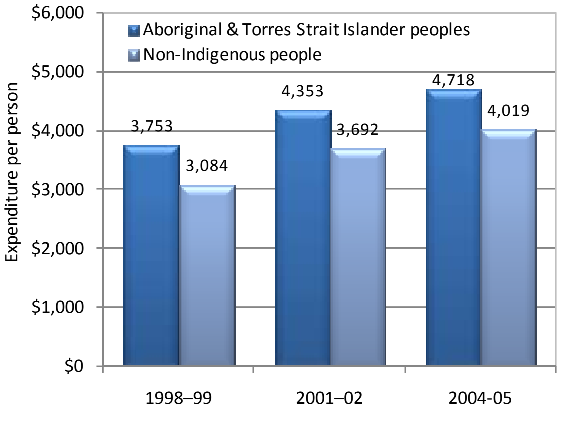
IMPLICATIONS: Overall, per person health expenditures for Aboriginal and Torres Strait Islander peoples are not sufficient to match needs. Expenditure is around 17% higher and mortality rates are 210% higher. Various estimates have been made of the level of expenditure that would be required to equitably address Aboriginal and Torres Strait Islander health needs. Dwyer et al. (2004, p. 71) reviewed a range of studies and concluded that 'total health spending on Indigenous populations would need to be increased to a level between 3 and 6 times the current national average per capita expenditure to achieve equitable access to effective care'. Current expenditures on primary care services fall well short of these benchmarks, although there have been some important successes in recent years, such as the Section 100 provisions to improve access to pharmaceuticals in remote areas. Experience over recent years has demonstrated increased funding can lead to significantly improved level of service provision in Aboriginal and Torres Strait Islander primary care services. Targeted government spending has increased significantly in recent years and there are further significant increases committed for the period to 2009–10. It is vital to ensure increased investments in services for Aboriginal and Torres Strait Islander peoples:

- are directed to effective interventions and approaches, including an effective system of primary health care
- enable Aboriginal and Torres Strait Islander peoples to access health services including Aboriginal and Torres Strait Islander, mainstream and specialist services
- are allocated appropriately to reflect need and costs of service delivery across regions and recognise costs of service delivery, particularly in remote areas
- are used efficiently and strategically to build capacity in the services and the workforce providing for the needs of Aboriginal and Torres Strait Islander peoples.

Increased investments are required across primary care and secondary/tertiary care, although the priority is to strengthen a system of comprehensive primary care. Other gaps notable in the analysis of expenditures and services include dental services and access to private specialist services.

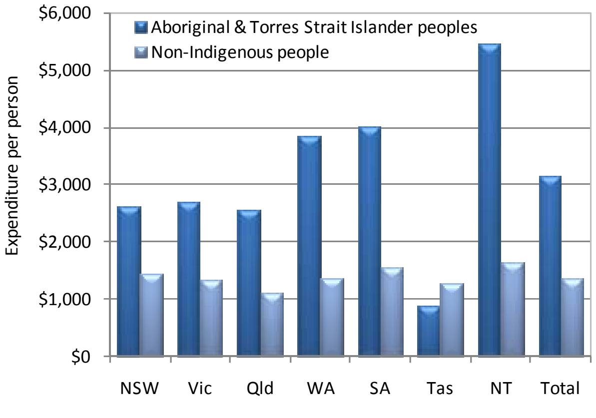
It seems that Aboriginal and Torres Strait Islander peoples have yet to reap the full benefits of primary health care that their Indigenous counterparts overseas have achieved. The evidence points to the need for further and sustained investment in primary health care, along with action on the social determinants, as a crucial strategy for 'closing the gap' in life expectancy between Indigenous and non-Indigenous Australians. A national approach to closing the health gap between Indigenous and non-Indigenous Australians should ensure that all Aboriginal and Torres Strait Islander Australians have access to a basic suite of comprehensive primary health care services (including for chronic disease and for maternal and child health) regardless of funding streams or administrative responsibility for the health service (Griew 2008).

Figure 186 – Average health expenditure per person, by Indigenous status, in constant prices, Australia, 1998–99, 2001–02, 2004–05



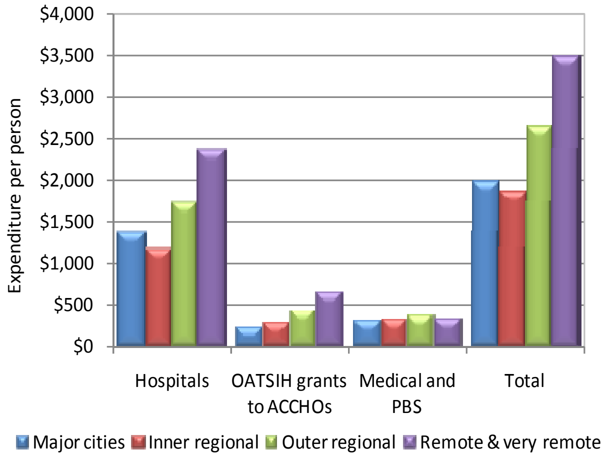
Source: AIHW 2005, AIHW 2008

Figure 187 – Estimated state and territory health expenditure per person, by Indigenous status, 2004–05



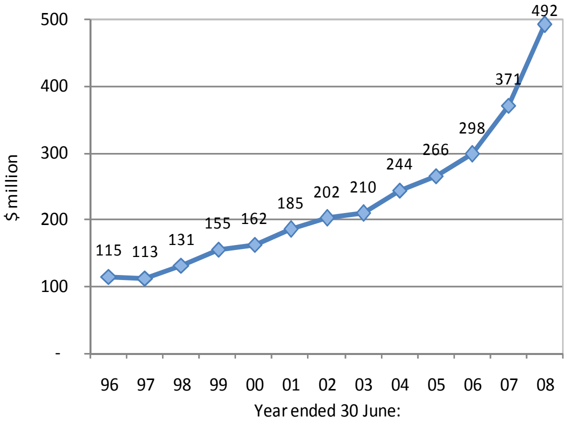
Source: AIHW 2008

Figure 188 – Estimated health expenditure on selected health services per person for Aboriginal and Torres Strait Islander, by remoteness, 2004–05



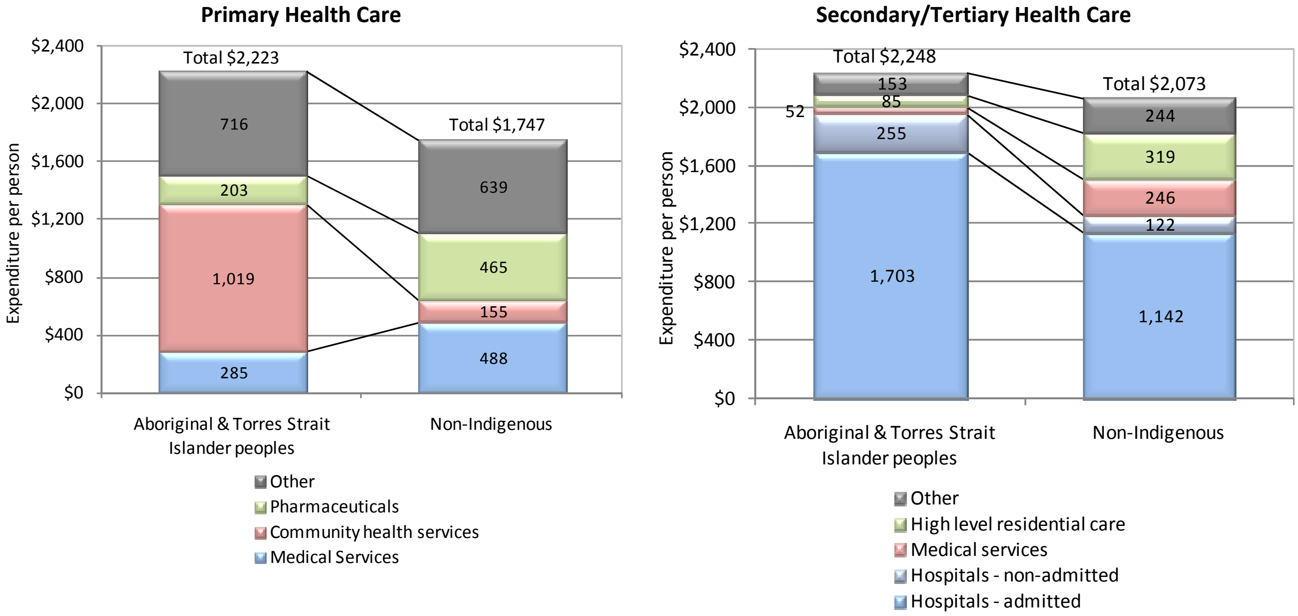
Source: AIHW 2008

Figure 189 – Expenditure by the Australian Government on Indigenous-specific health programs, 1995–96 to 2007–08



Source: Australian Government Department of Health and Ageing

Figure 190 – Average health expenditure per person for Primary health care and Secondary/Tertiary health care services, by Indigenous status, Australia, 2004–05



Source: AIHW 2008

3.20 Recruitment and retention of clinical and management staff (including GPs)

WHY IS IT IMPORTANT? The capacity to recruit and retain appropriate staff is critical to the sustainability of Aboriginal and Torres Strait Islander primary health care services, particularly in rural and remote areas. Recruitment and retention is also an important issue for mainstream services and general practitioners in rural and remote areas.

FINDINGS: In 2005, there were 67,890 registered medical practitioners in Australia of which 89% were employed in medicine, a rise of 13% from 2001. Many of those not working in medicine were working in medicine overseas or were retired. In 2005–06, 73% of full-time equivalent GPs worked in capital cities or other metropolitan areas and only 2% in remote areas. The supply of nurses was more evenly distributed across the regions and 86% were currently employed in nursing. For other health professionals, the proportion working in their field ranged from 80% of physiotherapists, 82% of dental technicians, 86% of occupational therapists, 87% of psychologists, to 92% for podiatrists, Most of those not working in their field were not looking for work in their field.

A survey of the rural workforce conducted in November 2007 found that of the 4,428 general practitioners working in rural Australia an estimated 34% had been in the current practice for 2 years or less. In remote areas, between 46% (remote centres) and 54% (other remote areas) had been in the current practice for 2 years or less.

As at June 2006, there were 2,097 full-time equivalent health (clinical) staff and 1,296 full-time equivalent administrative and support staff positions within Aboriginal and Torres Strait Islander primary health care services funded by the Australian Government. An estimated 11% of health positions and 4% of administrative and support staff positions were vacant.

In the 13 years from 1995–96, Australian Government funding to these services increased by 245% in real terms. In the 6 years from June 2000, there has been an increase of 61% in the workforce in Aboriginal and Torres Strait Islander primary health care services funded by the Australian Government. Full-time equivalent doctor positions and nurse positions have increased by 37% and 44% respectively. Over this period the vacancy rate for health positions has increased from 7% to 11%, and the vacancy rate for administrative and support positions has increased from around 3% to 4%.

The highest number of health staff vacancies in June 2006 were for Aboriginal Health Workers (99), followed by emotional and social wellbeing workers (46), and doctors and specialists (29).

For services located in major cities 8% of health positions were vacant, but for other areas around 10% of health positions were vacant. Vacancies for administrative and support positions ranged from 2% for services located in inner regional areas to 5% for services in very remote locations.

Of the 224 health staff positions that were vacant, 55% had been vacant for 26 weeks or more, while 33% of the 54 administrative and support staff vacancies had been vacant for 26 weeks or more.

A study of GPs conducted in 2001 found that important factors determining general practice retention in rural and remote areas were: professional considerations, particularly on-call arrangements; professional support; variety of rural practice; local availability of services; and regional attractiveness (Humphreys et al. 2002).

Another study found that doctors who were satisfied with their current medical practice intend to remain in rural practice for 40% longer than those who are not satisfied (11.5 years compared with 8.2 years) (Alexander & Fraser 2007). GPs content with their life as a rural doctor intend to remain in rural practice for 51% longer than those who are discontented (11.8 years compared with 7.8 years). Continuing professional development, training opportunities, professional support and networking as well as financial support were identified as priorities for GPs, and training in Indigenous health as a key information deficit.

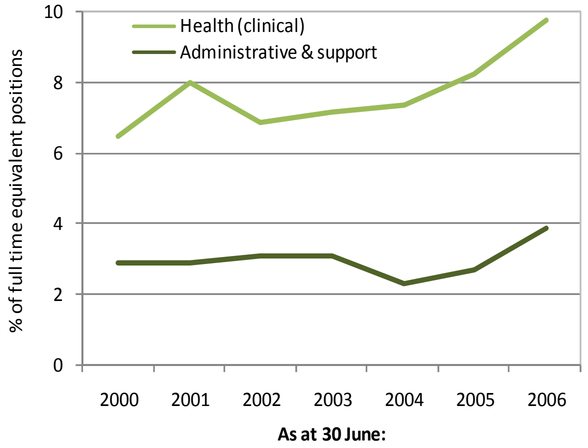
IMPLICATIONS: The recently released *Pathways into the health workforce for Aboriginal and Torres Strait Islander people: a blueprint for action* is designed to provide Australian governments with advice and strategies to maximise Aboriginal and Torres Strait Islander participation in the health workforce through promoting and improving pathways between school, vocational education and higher education; and retaining and building the capacity of the existing workforce by addressing the ongoing support and career development needs (NATSIHC 2008). The NSFATSIH identifies the development of a competent health workforce as a key result area, with strategies required to improve the training, supply, recruitment and retention of appropriately skilled health professionals, health service managers, and health policy officers in both mainstream and Aboriginal health services. Action areas identified include increasing numbers of Aboriginal and Torres Strait Islander people working across all health professions and improving the effectiveness of training, recruitment and retention of other health professionals in these services.

Recruitment and retention issues are most significant for Aboriginal and Torres Strait Islander health services and mainstream services located in rural and remote Australia. Various initiatives have been established to address workforce recruitment and retention for general practice, pharmacists and other professionals located in rural and remote areas. However, as one group has commented, '…the evidence base underpinning these [initiatives] remains small. The initiatives should be carefully prospectively examined to ascertain their effectiveness and to develop the relevant evidence base' (Glasgow et al. 2005).

Recognition of Aboriginal and Torres Strait Islander health as an identifiable specialty is considered by some to be important in improving services and retaining highly skilled clinicians.

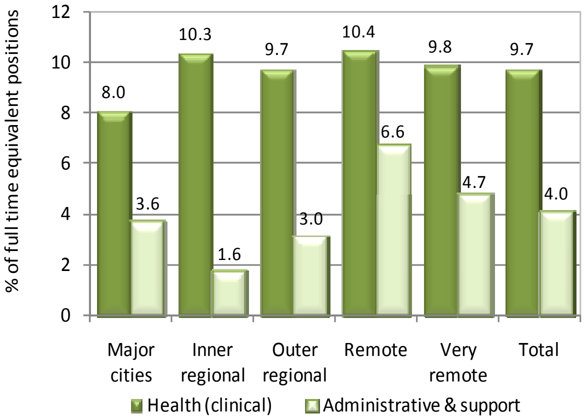
The measures reported here focus on a few aspects of a complex set of issues. They suggest there are challenges for Aboriginal and Torres Strait Islander primary health care services in recruiting particularly clinical staff to meet the growth in the sector. There are no data on state and territory health services in equivalent circumstances, although it is known they also face significant recruitment and retention issues. Little is known about the turn-over of staff in Aboriginal and Torres Strait Islander primary health care services and how this compares with mainstream services. Another issue is doctors' incomes and achieving rates that are competitive with metropolitan private practice.

Figure 191 – Vacancies as a percentage of total positions (FTE) in Aboriginal health care services, June 2000 to June 2006



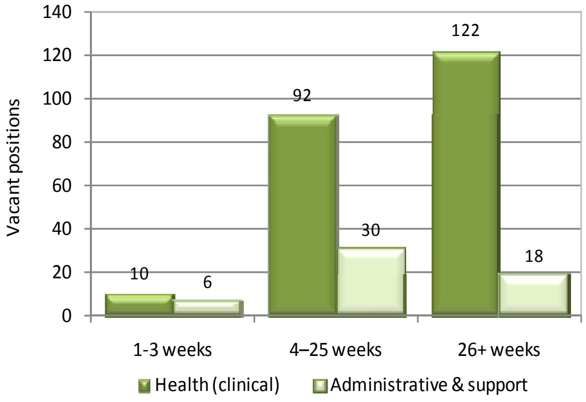
Source: AIHW analysis of Service Activity Reporting

Figure 192 – Vacancies as a percentage of total positions (FTE) in Aboriginal health care services, by remoteness area, 30 June 2006



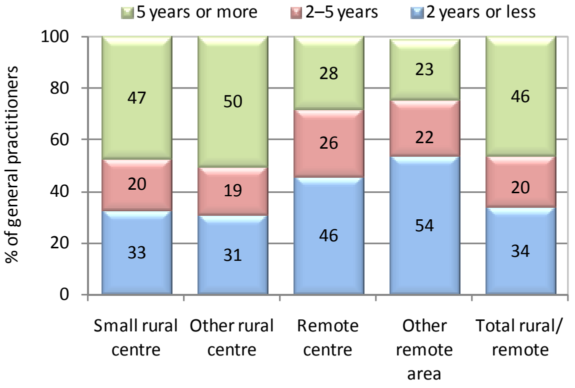
Source: AIHW analysis of Service Activity Reporting

Figure 193 – Full-time equivalent health staff and administrative and support staff vacancies, Aboriginal and Torres Strait Islander primary health care organisations, by length of time vacant, 30 June 2006



Source: AIHW analysis of Service Activity Reporting

Figure 194 – Proportion of GPs in practice by length of service and remoteness, November, 2007



Source: AIHW analysis of Rural Workforce Agency Annual Survey 2007

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Technical Appendix

This appendix provides more detailed information on data sources and methods.

Aboriginal and Torres Strait Islander peoples and non-Indigenous

'Aboriginal and Torres Strait Islander peoples' is the preferred term used throughout the report. 'People' is an acceptable alternative to 'peoples' depending on context, but in general the term 'peoples' is used. The term Indigenous Australian is inclusive of all groups and is used where it is impractical to use the preferred term 'Aboriginal and Torres Strait Islander peoples' (e.g., tables, charts, figures and where the text requires the term to be repeated a number of times).

The term 'non-Indigenous' is used where the data collection allows not stated responses on the Indigenous status question to be separately identified to non-Indigenous. Where the not stated responses are included with non-Indigenous, the term 'other Australians' is used to refer to the combined non-Indigenous and not stated data.

Age-standardisation

Age-standardisation controls for the effect of age, to allow comparisons of summary rates between two populations that have different age structures. Age-standardisation is used throughout this report when comparing Aboriginal and Torres Strait Islander Australians with non-Indigenous Australians for a range of variables where age is a factor in relation to the variable being examined. The main disadvantages with age-standardisation are that the resulting rates are estimates that are not the real rates for the population, the age-standardised rates are not meaningful themselves, only as a means for comparison, and they may hide important differences in distribution such as rates for particular ages. Lastly for age-standardisation to be effective the relationship between age and the variable needs to be approximately consistent between the two populations.

MAIN SOURCES

The data in this report are mainly drawn from a small number of national data collections and surveys. These include the following:

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS): The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. The NATSIHS also uses the standard Indigenous status question. Information recorded in this survey is essentially 'as reported' by respondents. Responses may be affected by imperfect recall or individual interpretation of survey questions. Any data that are self-reported are likely to underestimate circumstances of which the respondent is unaware e.g. certain health conditions, or where they may feel frightened or be unwilling to tell the interviewer e.g. weight, drug use. Selected non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities, regional and remote areas, but very remote areas were excluded from the sample. In remote communities, there were some modifications to the NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding the concepts. Some questions were excluded and some reworded. Also paper forms were used in remote areas and computer assisted interview (CAI) instruments were used in non-remote areas. Further information on NATSIHS data quality issues can be found in the national publication ABS Cat. No. 4715.0 (ABS 2006b).

The National Aboriginal and Torres Strait Islander Social Survey (NATSISS): The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problems inherent in most national surveys with small and unrepresentative Indigenous samples. The NATSISS uses the standard Indigenous status question. Information recorded in this survey is essentially 'as reported' by respondents, and hence may differ from that which might be obtained from other sources or by using other collection methodologies. Responses may be affected by imperfect recall or individual interpretation of survey questions. Selected non-Indigenous comparisons are available through the General Social Survey. Further details can be obtained from (ABS 2004). Time-series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

Census

The Census uses the standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to some data concerns relating to the unexplained growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and the limitations of Indigenous self-identification.

There are 4 principal sources of error in Census data: respondent error, processing error, partial response and undercount. Quality management of the Census program aims to reduce error as much as possible, and to provide a measure of the remaining error to data users, to allow them to use the data in an informed way.

The Census form may be completed by one household member on behalf of others. Incorrect answers can be introduced to the Census form if the respondent does not understand the question or does not know the correct information about other household members. Many of these errors remain in the final data.

The processing of information from Census forms is now mostly automated. Quality assurance procedures are used during Census processing to ensure processing errors are kept at an acceptable level. Sample checking is undertaken during coding operations, and corrections are made where necessary.

When completing their Census form, some people do not answer all the questions which apply to them. In these instances, a 'not stated' code is allocated during processing, with the exception of non-response to age, sex, marital status and place of usual residence. These variables are needed for population estimates, so they are imputed using other information on the Census form, as well as information from the previous Census.

Other Census data issues relate to the accuracy of the Census count itself, e.g., whether people are counted more than once, or are undercounted.

Community Housing and Infrastructure Needs Survey (CHINS): The CHINS collects data on discrete Indigenous communities, including approximately 92,960 Aboriginal and Torres Strait Islanders in 2006 or 18% of the total estimated Indigenous population. The survey is only conducted every 5 years. The data are collected from key personnel in Indigenous communities and housing organisations knowledgeable about housing and infrastructure issues. This collection is not a population survey.

National Perinatal Data Collection: Birth notification forms are completed for all births of 20 weeks or more gestation, or a birthweight of 400 grams or more. The Perinatal National Minimum Data Set includes all births in Australia in hospitals, birth centres and the community. The state/territory of birth is provided for all births in each state/territory. State-level data are based on place where birth occurred, not place of usual residence. Complicated pregnancies from surrounding New South Wales may be referred to the Australian Capital Territory and hence there may be poorer outcomes attributed to Australian Capital Territory births. Because of this and the small numbers involved, care should be taken in interpreting data from the Australian Capital Territory (Laws & Sullivan 2004a). A standard data item for Indigenous status is specified in the Perinatal National Minimum Data Set. However, at this stage not all states and territories use this standard wording for the Indigenous status question on their forms. This impacts on the quality and comparability of the data collected (ABS & AIHW 2005). All jurisdictions collect Indigenous status of the mother for each baby. However, this statistic does not necessarily indicate the Indigenous status of the baby. Studies linking perinatal data with birth registration data and hospital admissions show that Indigenous data are under-reported (Human Resources Development Canada & Health Canada 2003). In 2007, the AIHW completed an assessment of the quality of Indigenous status information in perinatal data in each state and territory. This involved a survey which was sent to the midwifery managers across Australia to determine how many hospitals in each jurisdiction obtain Indigenous status information of mothers giving birth from admission records and how many collect this information independently. The assessment also involved analysis of the variability in the number and proportion of mothers recorded as Indigenous in the perinatal data collection over time and across jurisdictions for the period 1991–2004. The outcomes of this assessment showed that Indigenous status data from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory are suitable for trends analysis. Perinatal data from Tasmania, although improving, were deemed to be of insufficient quality. Although the most recent data in the Australian Capital Territory were of publishable quality, the data were not yet of sufficient stability to support trends analysis (AIHW: Leeds KL et al. 2007). All jurisdictions are working towards improving the quality of the Indigenous status data. Data on Indigenous status are not reported for Tasmania prior to 2005 as the not stated category for Indigenous status was included with the non-Indigenous category. The not stated category for Indigenous status is high for Tasmania (around 75%) and low for the other jurisdictions, not more than 0.5% (Laws & Sullivan 2004b). The 'not stated' category for birthweight was found to be small nationally in the evaluation of the Perinatal National Minimum Data Set. Therefore, the exclusion of not stated for birthweight will not have a significant impact on these data.

National Hospital Morbidity Data: This is a data collection including all completed admitted patient episodes in public and private hospitals across Australia. The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery. Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The not stated category is missing from several collections. The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). However, the AIHW has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data. It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these 6 jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005).

Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in Western Australia and the Northern Territory and relatively marked Indigenous under-identification in South Australia and Victoria data).

Hospitalisation data for these 6 jurisdictions should not be assumed to represent the hospitalisation experience in the Australian Capital Territory and Tasmania.

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

National Mortality Database: The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Due to the small size of the Indigenous population these factors can significantly impact on trends over time and between jurisdictions.

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording to the national standard for the instruction on those with both Aboriginal and Torres Strait

Islander origin (ABS & AIHW 2005). While the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded/recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

While the identification of Indigenous deaths is incomplete in all state and territory registration systems, 4 jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to 3 jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time-series data is also influenced by the late inclusion of a not stated category for Indigenous status in 1998. Prior to this time, the not stated responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales – 45%, Victoria – 32%, Queensland – 51%, South Australia – 62%, Western Australia – 72%, the Northern Territory – 90%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 55% (ABS 2007b).

General practice: Effective processes for identification of Aboriginal and Torres Strait Islander patients are not in place in the majority of general practices. This has consequences for:

- Data collection: Poor identification of Aboriginal and or Torres Strait Islander status negatively affects the quality of data provided.
- Service delivery: there are a range of GP-mediated health interventions specific for Aboriginal and Torres Strait Islander patients. These cannot be offered to patients unless valid identification processes are in place.

There have been no national processes to support the collection of Aboriginal and Torres Strait Islander identification in general practice. The need for identification of Aboriginal and Torres Strait Islander users of general practice services is not well known or understood and implementation is poor. Quantitative evidence indicates that a very low proportion of GPs have routine identification processes in place.

The Communicable Diseases Network of Australia has previously investigated issues of poor GP identification and considered recommendations for action to improve reporting of Indigenous status by Doctors for all notifiable communicable diseases.

More recently, a qualitative study undertaken in the Australian Capital Territory has investigated reasons underlying poor identification. This evidence has been corroborated by less formal assessments of GP processes. All available assessments point to low levels (not more than a third) of effective GP identification processes, and significant barriers to improving the situation, such as:

- perceptions that Aboriginal and Torres Strait Islander people can be identified by appearance;
- low awareness of Aboriginal and Torres Strait Islander specific GP-mediated interventions, which results in lack of awareness of the patient-care rationale for identification;
- perceptions that Aboriginal and Torres Strait Islander health issues do not require a unique or specific response at the practice level and that ‘everyone should be treated the same’; and
- concerns with the introduction of identification processes applied to all patients, on both feasibility grounds and views that patients may be offended by the process.

These investigations have recommended a range of strategies to improve GP identification. Change has also been recommended by the Royal Australian College of General Practice (RACGP) standards for general practice accreditation (Jan 2007). The current edition, for the first time, encourages practices to work towards recording self-identified cultural background including Aboriginal and Torres Strait Islander patients.

Despite this, little improvement in GP identification processes is evident. Likely contributing factors include:

- change in GP processes requires changing knowledge, skills and attitudes (e.g., cultural safety training) which has not been implemented on a national basis. The identification of Aboriginal and Torres Strait Islander patients has had little promotion with GPs;
- recommendations for change have required change across a range of areas beyond a particular health issue (e.g., immunisation or mandatory reporting of specified diseases), and the necessary cross-agency coordination has not been available;
- Divisions of General Practice, while in some cases addressing Aboriginal and Torres Strait Islander health issues effectively at a local or state level, have not been resourced or required to take coordinated action to improve identification processes;
- there was a national focus on promotion of the Voluntary Indigenous Identifier (VII) in the Medicare database rather than on identification at the point of service delivery and confusion about the VII and its role in both data collection and service delivery continues to be widespread.

BEACH. The Bettering the Evaluation And Care of Health (BEACH) survey collects information about consultations with GPs, including GP and patient characteristics, patient reasons for the visit, problems managed and treatments provided. The survey has been conducted annually since April 1998. Information is collected from a random sample of approximately 1,000 GPs from across Australia each year. Each GP provides details of 100 consecutive consultations. Although the questionnaire contains an Indigenous identifier, it is unknown whether all GPs ask their patients this question. In a sub-study Supplementary Analysis of Nominated Data of approximately 9,000 patients, it was found that if the question on Indigenous status was asked within the context of a series of questions about origin and cultural background, 2.2 per cent identified as Indigenous. This is twice the rate routinely recorded in BEACH, indicating that BEACH may under-estimate the number of Indigenous consultations.

DATA DEVELOPMENT

There are well documented problems with the quality and availability of data about Aboriginal and Torres Strait Islander health issues. These limitations include the quality of data on all key health indicators including mortality and morbidity, uncertainty about the size and composition of the Indigenous population and a paucity of available data on other health-related issues such as access to health services.

The following information has been provided by the jurisdictions to provide information on action being undertaken in relation to data collection.

Australian Government

The Australian Government is committed to improving the availability of good quality Indigenous health data. Through the National Advisory Group on Aboriginal and Torres Strait Islander Health Information Development (NAGATSIHID), the Australian Government is actively engaged with State and Territory Governments, the ABS and the AIHW to improve Indigenous health statistics. NAGATSIHID has guided data development through the implementation of the 1997 Aboriginal and Torres Strait Islander Health Information Plan. The Health Performance Framework has established priorities for data development linked to policy objectives.

There are several current projects aimed at improving Indigenous identification in administrative data collections. These include:

- A project jointly funded by the Office for Aboriginal and Torres Strait Islander Health and the National Health and Medical Research Council to improve the identification of Indigenous Australians in 5 key administrative datasets including mortality, births, perinatal, hospital and GP datasets such as Medicare and Bettering the Evaluation and Care of Health (BEACH). This project is being undertaken by the Australian Institute of Health and Welfare and at this stage involves the development and dissemination of guidelines to improve the collection of Indigenous status data in these data collections.
- A project being undertaken by the AIHW in collaboration with staff from the Research School of Social Sciences at the Australian National University to produce an enhanced Indigenous mortality data set through the linkage of death, perinatal, hospital and aged care data. It is anticipated that the enhanced mortality data set will be used to produce improved Indigenous mortality rates and life expectancy estimates for the Indigenous population.
- A project funded by the Australian Health Ministers Advisory Committee which examines differentials in health status of Indigenous Australians by remoteness classification using a number of administrative data sets. This work involves sensitivity analyses of the estimated differences in order to assess the robustness of the observed differences. This project is being undertaken by the Australian Institute of Health and Welfare.
- The AIHW is also in the process of finalising reports on the assessment of the quality of Indigenous identification in labour force data collections, the National Cancer Registry, and the National Diabetes Register.
- Since the previous report the AIHW has undertaken an assessment of the quality of Indigenous identification in the perinatal data collection.
- A Voluntary Indigenous Identifier was introduced into the Medicare database from November 2002. By 1 July 2008, 206,804 people had identified as Aboriginal, Torres Strait Islander or both. Work is underway to further encourage Indigenous identification in Medicare data and to make use of this potentially very valuable data source.

The ABS has developed an ongoing 6-yearly Indigenous health survey program (with additional funding from the Department of Health and Ageing). They have also funded an ongoing 6-yearly Indigenous social survey program. The Community Housing and Infrastructure Needs Survey has been run every 5 years with funding from the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs and OATSIH.

The ABS is running a quality study which links data from the 2006 Census of Population and Housing to death registrations to assess the match between Indigenous status identification. Expected outcomes of the CDE Indigenous mortality quality study include: gaining an understanding of differences in Indigenous status recording between death registration and census data; identifying factors contributing to undercoverage of Indigenous deaths; and investigating the feasibility of calculating and applying adjustment factors for Indigenous deaths output data. An information paper with the results of this study are due for release in early 2009.

The ABS has been working on the Indigenous Administrative Data Project for the last decade. This project aimed to improve the level and quality of Indigenous identification in key administrative data sets held and managed by Australian governments. In this capacity the ABS has been conducting various engagement and education activities; liaising with government departments about best practice in Indigenous data collection, and conducting data linkage programs to asses and improve Indigenous status.

The ABS has also developed an Indigenous Community Engagement Strategy aimed at improving the collection and dissemination of statistics in partnership with Indigenous communities. Through the use of Indigenous Engagement Managers in ABS offices across Australia, the ABS is building relationships with communities to improve the quality and relevance of Aboriginal and Torres Strait Islander statistics. The Indigenous Engagement Managers engage with Indigenous communities and organisations to gain knowledge of community protocols and needs and to return information to Indigenous communities.

As part of the Healthy for Life program, the AIHW is leading the development of indicators, data standards and analyses and reporting back to all services involved in the Healthy for Life program (about 70 services). While the main areas covered by the current indicators and reports are maternal and child health and chronic disease management, additional work is being undertaken for an expanded set of indicators that will help in streamlining service reporting.

As part of the Northern Territory Emergency Response, the AIHW is managing the data collection to assess the extent of coverage of the child health checks, the range of conditions the children have and the extent to which the children have received the required referrals and treatments recommended during the child health checks.

The AIHW has undertaken work on validating the social and emotional wellbeing module published in the 2004–05 National Aboriginal and Torres Strait Islander health Survey. Preliminary feedback to the ABS resulted in enhancements to some relevant items in the 2008 National Aboriginal and Torres Strait Islander Social Survey.

A project undertaken by the AIHW in collaboration with the Centre for Health Research in Criminal Justice (CHRCJ), located within NSW Justice Health, as well as other stakeholders, to develop a national prisoner health data set to enable the monitoring of the health of prisoners. The project has involved an audit of current data collection on prisoner health in prisons; the development of a range of policy-relevant draft indicators for prisoners mapped to the National Health Performance Framework; and the development of detailed specifications for the data supporting these indicators. Further AHMAC funding has been provided to support the work program for 2008–09, including a trial national data collection.

Australian Capital Territory

The ACT Department of Health continue to work towards improving Australian Capital Territory data collections. Data enhancement projects for consideration include:

- A review of ACT Health key performance indicators for Aboriginal health
- An Aboriginal and/or Torres Strait Islander identifier on pathology forms to capture information on chronic disease and cancer; and
- Repeating a matching exercise between the local Aboriginal community-controlled health organisation and public hospital data to determine the level of under-identification of Aboriginal and Torres Strait Islander status.

New South Wales

In New South Wales, Aboriginal status is collected in a range of health datasets, including the Midwives Data Collection, the Admitted Patients Data Collection, the Emergency Department Information System, the Non-admitted Patient Data Collection, the Notifiable Diseases Data collection, the NSW Health Survey Program, and the Central Cancer Registry data collection.

The asking of, and recording of, Indigenous status is mandatory for the core data collections listed above. The NSW Health 2005 policy (PD2005_547), which is a reissue of a 2002 Policy, on identifying Indigenous status is mandatory in all facilities and Area Health Services.

Until the identification of Aboriginality in New South Wales mortality data is quantified, concern has centered on the assumed under-identification of Aboriginality and the representativeness of deaths that are identified as being for Aboriginal people. Mortality data are collected by the Registry of Births, Deaths and Marriages. They are predominantly supplied by funeral directors. Work is currently underway involving the Registry of Births, Deaths and Marriages, NSW Health and the Australian Bureau of Statistics (ABS) to improve the completeness of Indigenous status in the mortality data collection.

NSW Health has also implemented the Collecting Patient Registration Information Training Program in New South Wales public hospitals to facilitate the identification and recording of Indigenous status. This program has been reviewed for community health.

NSW Health has undertaken collaborative work with AIHW and OATSIH to audit the level of identification of Aboriginality in New South Wales hospital data. This project involved:

- AIHW developing a methodology for conducting surveys of the Indigenous status of hospital patients. AIHW will also develop a sampling technique for States.
- Surveys were undertaken by NSW Health in early 2007 of nearly 3,000 admitted patients, in 20 hospitals drawn from metropolitan, inner regional, outer regional and remote locations.
- AIHW analysed the survey data to determine the under/over identification estimates for hospitals.
- The AIHW analysis showed that New South Wales admitted patient data were complete in relation to Indigenous background, to a high level. Only the Northern Territory and Western Australia have more complete admitted patient data than New South Wales, in relation to Indigenous background. New South Wales admitted patient data are 89% complete in relation to Indigenous background across the State, ranging from 82% in metropolitan hospitals to 100% in remote hospitals.

Northern Territory

The Department of Health and Community Services is in the process of rolling out a number of e-health initiatives across the Northern Territory that will have major implications for the use and collection of data. These improvements will assist in the provision of seamless care for health consumers. Short outlines for current initiatives are as follows:

Health Connect, the ability to share electronic summaries of patient records will be rolled out across the Northern Territory focusing on Aboriginal populations in remote communities and urban townships. It is expected that this will be of major benefit in terms of mobile populations, or those from rural and remote accessing services in regional towns or cities.

Secure provider-to-provider information communications network, will ensure that specific information regarding prescriptions and clinical referral information can be communicated electronically amongst service providers. This will assist in a seamless care in relation to managing transition from GPs/Clinics to appointments with specialists. The system will also allow for consumers' medication prescriptions to be sent ahead of time to appropriate services.

Electronic medications and discharge summary information will be forwarded to communities of residence, so that information will be locally available for consumers on their return to country.

Primary Care Information System. This new initiative will automatically alert service providers about patients to be recalled for follow-up treatments/services, providing a technological advantage to making service delivery easier. It will involve the implementation of a whole of life electronic health record across all DHCS operated Remote Health Clinics, replace paper-based records and facilitate extensive coded clinical data collection for each service episode. This system has the capacity to capture all required national Aboriginal and Torres Strait Islander health performance indicator data.

All these programs are expected to be rolled out over the next 2–3 financial years.

Aboriginal Health Key Performance Indicator (AHKPI) project, the Northern Territory was initiated by the Aboriginal Health Forum (AHF) to develop to structure a collection and reporting of 19 agreed Key Performance Indicators that cover both DHCS Remote Health Centres and Aboriginal community controlled health services.

The project is managed cooperatively by the NTG, the Department of Health and Ageing and AMSANT under the auspices of the AHF Banner.

Queensland

The collection of Indigenous status is mandatory in core Queensland Health data collections such as the Perinatal Data Collection and admitted and non-admitted patient data collections. In the past 12 months, a significant amount of work has been undertaken to ascertain the level of accuracy of Indigenous identification in these collections and to develop strategies to improve it. A method to synthetically estimate levels of accuracy of Indigenous identification at the facility and other administratively significant geographic areas was developed. These estimates were successfully tested against those ascertained during the AIHW-sponsored audit of admitted patients' demographic details including Indigenous status in 2007.

In 2007, Queensland Health undertook to improve performance monitoring and accountability in Aboriginal and Torres Strait Islander health outcomes and subsequently developed a series of key performance indicators (KPIs). One of the KPIs measures the quality of Aboriginal and Torres Strait Islander identification in all Queensland Health administrative data collections and uses the synthetic estimates recently developed. Other KPIs relate to levels of Aboriginal and Torres Strait Islander patients Discharging Against Medical Advice and the key areas of chronic disease and maternal and child health. These KPIs are regarded as valid and robust measures indicative of whether core health services are being delivered effectively to Aboriginal and Torres Strait Islander peoples. Data are drawn principally from routine hospital administrative data and from the Queensland Perinatal Data Collection. In 2008 Queensland Health will develop best practice strategies to improve Indigenous identification and to reduce the proportion of patients discharging against medical advice.

Work has commenced on improving community access to local data, with the development and dissemination of a series of information sheets each showing local observed and expected counts for a specific indicator over time together with background information. An evaluation of this package will be undertaken in late 2008. Subsequent to this it is envisaged that other indicators of social wellbeing will be included. Development of a framework for the collection and dissemination of meaningful health data and information to communities and their health services to facilitate community engagement and participation in health service planning and delivery has commenced. In the short-term, the aim is to build a strong consultative data and information framework to be evaluated. The longer term aim is to build a consistent information sharing cycle with our partners and on-going routine reporting function with Aboriginal and Torres Strait Islander communities into the current health information systems.

The systematic collection of quality data describing the dental health status of both Indigenous and non-Indigenous children is an area that has been identified for improvement in a number of state and national publications in recent years. The Information System for Oral Health (ISOH) will be implemented into 121 school dental clinics and 200 mobile vans, which cover 1791 public and private schools across Queensland. This eHealth initiative will contribute to healthier outcomes, improved efficiencies across health care providers, better patient access to dental services and improved capacity to measure dental health status.

The assessment of data quantity for Indigenous people in regional areas for the risk factors of smoking, under consumption of fruit and vegetables, alcohol consumption, use of other drugs and physical inactivity is presently being assessed by a meta-analysis of existing CATI surveys. Upon completion, these reports will be made available to stakeholders in remote communities and policy makers.

A suite of reports detailing the burden of disease of Indigenous Queenslanders, their health adjusted life expectancy and the diseases which contribute to the difference in life expectancy between Indigenous and all Queenslanders have been developed and made widely available.

Queensland Health is committed to improving Indigenous identification in communicable disease reporting. Queensland Health routinely monitors Indigenous identification completeness for notifications and is participating in national efforts through the Communicable Disease Network Australia (CDNA) aimed at prioritising and implementing co-ordinated initiatives in this area.

Queensland hospital separations data is known to have more complete Indigenous identification than the Queensland Notifiable Conditions System (NOCS). In 2007 a large data linkage exercise which matched records from disease notifications with an extract of records from hospitalisations within Queensland was completed. Notifications on NOCS with no Indigenous status were updated with the Indigenous status from the hospital record. This resulted in a 7% improvement in Indigenous status completion within NOCS. This process will now be implemented on a routine basis.

A whole-of-Queensland Government working group has been developed to address the Aboriginal and Torres Strait Islander data quality, quantity and availability issues identified in the 2005 Partnerships Queensland Baseline Report (developed by the former Department of Aboriginal and Torres Strait Islander Policy, Queensland). The working group meets monthly and will also collaborate to examine best practice data collection and dissemination protocols and analytical and reporting methods for both time-series data and small area data.

Accurate population data are critical to measuring health outcomes. Queensland's Office of Economic and Statistical Research recently developed an Indigenous and non-Indigenous estimated resident population data series for the period 2000–2006 at the statistical local area level to assist with the development of accurate rates and time-series analysis.

As a result of advocacy from Queensland a question asking Indigenous identification is being included in the application forms for the First Home Owners Grant in all states and territories. The new Queensland application forms will be in use from January 2009. These data will enable the rate of Indigenous first home purchases to be monitored.

The ABS, as part of the Indigenous Administrative Data Project, has been working with the Queensland Registry of Births, Deaths and Marriages to improve the quality of mortality data. In Queensland, whilst most Aboriginal and Torres Strait Islander deaths are registered, according to the ABS implied coverage estimates only 51% of Aboriginal and Torres Strait Islander deaths are registered as Indigenous. The ABS is currently in negotiations with the Registrar of Births Deaths and Marriages for the provision of Medical Cause of Death Indigenous status information.

South Australia

In 2007, South Australia participated in a national Audit of Indigenous Identification in Public Hospitals project, coordinated by the Australian Institute of Health and Welfare. Surveys were conducted in metropolitan and regional hospitals across South Australia.

Results of this survey have contributed to reports from other jurisdictions to calculate adjustment factors to be applied to hospital separations data for Expenditure on Health reporting. It is also intended to use this methodology to monitor changes in the reporting of Indigenous status following implementation of specific improvement strategies.

Following a review of departmental data collections The South Australian Department of Health has implemented a plan for enhancing computer systems and data collection forms in line with the national standard for identification and developing improved reference material for staff involved in data collection.

The South Australian Department of Health runs training courses for hospital staff that collect inpatient data. The latest course included training on the importance of asking the Indigenous Status question, and the correct way to ask the question and to record the answer.

The Department is in the process of developing best practice guidelines for the correct implementation of the national identification standard in computer systems and data collections forms.

Having identified the need for improvements in the way that the health sector describes and measures primary health care activities, the Department of Health has established an Out-of-Hospital Services Minimum Data Set. The data set, which includes the National Data Dictionary definition of Indigenous status, represents the agreed core elements that are collected for describing out-of-hospital care services in South Australia.

Outcomes of this project will contribute to:

- Development of a standard approach for classifying services provided within the out-of-hospital services sector.
- The determination of substitution of services between the acute and primary sectors.
- Development of mechanisms to provide a data linkage service across out-of-hospital services agency data to support statistical analyses.
- Provide access to a consolidated and centrally-managed data set for out-of-hospitals service data.

The release of the Knowing the Business—SA Aboriginal Health Indicators 2005 report enabled analysis of the Aboriginal population in South Australia. The report demonstrated the benefits of reporting Aboriginal Health indicators by ABS defined Indigenous Areas and encouraging health services to consider 'other' factors that impact on health i.e. Education, Justice & Housing data.

It is proposed to replicate this data set as an Internet based resource, hosted by the Public Health Information Development Unit (PHIDU). It is intended that the data be updated on an annual basis with both Government and non-Government service providers providing data reflecting the physical, spiritual and mental health status of Aboriginal people in South Australia.

The Department continues to operate a casemix payment system which applies a 30% loading to Indigenous separations, and this provides an incentive for improved identification.

Tasmania

There are three aspects that Tasmania will be seeking to review/address.

Tasmania will be seeking to improve self-identification rates in Tasmanian data.

It has been recognised that information systems used need considerable work to bring relevant information together more coherently.

Tasmania needs to look at and improve the training that our data collectors receive to enable them to seek better participation by the providers of data.

The Department of Health and Human Services has employed an Aboriginal Health Development Officer. This position sits within the Aboriginal Health Unit in Population Health Priorities. One of the requirements of this position is to develop and deliver Cultural safety training. One component of this training package focuses on improving the collection of Indigenous data throughout the Agency.

This training package has been successfully delivered since June 2006.

The Department continues to participate in the Australian Bureau of Statistics Indigenous Working Group.

Victoria

Data collection

In Victoria, Aboriginal status is a mandatory field in all major health datasets. The Victorian Admitted Episodes Dataset (VAED), the Victorian Emergency Minimum Dataset (VEMD), the Perinatal Morbidity Statistics System (PMSS) and Maternal and Child Health Service (MCHS) contain good quality data on Aboriginal identification. Aboriginal identification is also collected through the Alcohol and Drug Information System (ADIS), the Notification of Infectious Diseases System (NIDS) and Community Health program Registered Client Database (SWITCH) but is of poorer quality.

Issues

The major issue with Victorian data is the difficulty in identifying a very small proportion within a large, mainly urban population.

The second issue is that many Aboriginal babies in Victoria have an Aboriginal father and non-Aboriginal mother and are not captured by standard identification procedures.

Measures to improve data

In July 2004, the Improving Care for Aboriginal and Torres Strait Islander Patients (ICAP) program was implemented. The program combined two previously separate funding streams: the Aboriginal Hospital Liaison Officer program and the Weighted Inlier Equivalent Separation (WIES) co-payment for admitted Aboriginal patients. At this time the WIES co-payment was increased from 10% to 30%. Amongst other objectives, ICAP encourages an outcome focus leading to improved identification and health care for Aboriginal patients.

Aboriginal Hospital Liaison Officers continue to provide a separate data collection, which validates the data submitted through the VAED and PMSS. Since the program's inception, more Aboriginal Hospital Liaison Officers and Planning/Policy Officers have been employed in the acute health environment and this has also contributed to improvements in data collection. Impacts of the ICAP program are evident in the increase in separations for Aboriginal patients from 2004/05 to 2007/08.

Changes in access to data systems have also meant that more frequent monitoring of Aboriginal hospital separations is possible, and errors can be discovered and rectified.

Two new fields were added to the standard Aboriginal status question from July 2005, in order to reduce the number of records defaulting to 'Not Aboriginal or Torres Strait Islander'. 'Question unable to be asked' is used in emergency situations and for unaccompanied patients unable to answer, particularly due to injury or mental health issues. 'Patient refused to answer' has been used as expected at hospitals with large Emergency Departments. Instances of misuse of either field can be identified and corrected rapidly.

A system error which allowed babies of Aboriginal mothers to be recorded as non-Aboriginal has also been corrected.

AIHW now accepts Victorian Aboriginal hospital separations data.

DHS and PapScreen Victoria have developed a voluntary system of recording and reporting the Aboriginal status of participating women, using participating Pap test providers (doctors and nurses), pathology laboratories and the Victorian Cervical Cytology Register (VCCR). Participating nurses will be trained first in the importance of collecting Aboriginal status. Data collected by nurses will be reported to the Victorian Cytology Services as Phase 1 of the data collection trial, which begins on 1 September 2008.

Deaths

The ABS, as part of the Indigenous Administrative Data Project, has been working with the Victorian Registry of Births, Deaths and Marriages to improve the quality of mortality data. In Victoria, whilst most Aboriginal and Torres Strait Islander deaths are registered, according to the ABS implied coverage estimates only 32% of Aboriginal and Torres Strait Islander deaths are registered as Indigenous. The ABS is currently in negotiations with the Registrar of Births Deaths and Marriages for the provision of Medical Cause of Death Indigenous status information. Victoria is also developing a plan to use information from other data collections to supplement registered deaths and improve coverage.

Western Australia

In Western Australia, Indigenous status is collected in a range of health data collections, including the admitted patient data collection, the emergency department data collection, the outpatient care data collection, the Notifiable Disease Data Collection, the WA Health and Well Being Surveillance System, the Midwives Data Collection, the Breast Screening Data Collection, the Mental Health Information System and the Cancer Registry. It is also stored on ABS mortality data held by the Department of Health.

Issues

The WA Health and Wellbeing Surveillance System ask respondents if they are of Aboriginal or Torres Strait origin. Less than 0.2% reply do not know or refuse to answer the question and the proportion who say that they are Indigenous ranged from between 4% in 2004 to 2% in 2006. The average proportion over the last 5 years was 3% which is about 0.5% less than the proportion of Indigenous people in the population. Reports from the HWSS do not break down results by Aboriginality as they are unlikely to be representative of the Indigenous population in Western Australia on a yearly basis, due to the method used to collect the data.

Over the last decade the number of death records with unknown Indigenous status registered by the Office of the WA Registrar General has represented a substantial proportion of cases. The reporting of additional Indigenous deaths through identification of Indigenous status of the unknown cases could have a substantial effect on mortality measures, such as life expectancy, considering the low number of deaths and small population size.

Reporting of Aboriginality in Midwives Notification System is based on the mothers Aboriginality; therefore the number of Aboriginal births recorded is likely to be underestimated.

Current Projects

Western Australia has agreed to undertake a project funded by the Australian Government Department of Health and Ageing to improve Indigenous identification entitled Estimating an under/over identification factor relating to Indigenous hospital patients.

The Information Management and Reporting Directorate have recently recruited a Coding Education officer who can run refresher training in collecting data on Indigenous identification. The Directorate is also planning an exercise to compare Indigenous status from the Midwives Notification System with indigenous status on associated hospital records.

A report on Adult Aboriginal Health and Wellbeing in Western Australia is planned. This report will be based on 5 years of data from the HWSS aggregated and weighted to the age and sex distribution of the Indigenous population within areas. This report is similar to ones already produced by New South Wales and South Australia. In line with these reports, analysis of the age and sex distribution of the survey as well as the regional distribution of the Indigenous population based on the survey shows that the discrepancies are within acceptable limits for weighting the data. It is probable that, even weighted, the data will produce conservative estimates of health and wellbeing. Where possible estimates will be compared with the National ATSIC Health Survey conducted in 2004.

A study on the effect of improved Indigenous identification on mortality measures has been undertaken by the Epidemiology Branch. For deaths of unknown status, Indigenous status was determined through data linkage by comparing the Indigenous status of the records of the same individuals in other data sources.

The performance indicator set for the new Australian Health Care Agreement will contain a number of indicators requiring separate reporting of Aboriginal and Torres Strait Islander data. The Department of Health will shortly commence work to determine what development of data sets will be required to meet this reporting need in Western Australia. Examples where Indigenous data may be required include: risk factor prevalence, selected potentially preventable hospitalisations and deferred treatment due to cost.

Western Australia is exploring measures to have indigenous status captured on it elective surgery waiting lists. At present Indigenous status is only discernable 'after the event' by linking to admitted patient records.

HEALTH STATUS AND HEALTH OUTCOMES (TIER 1)

1.01 Low birthweight infants

Data on birthweight is collected as part of the Perinatal National Minimum Data Set. It includes live births of 20 weeks gestation or more, or of 400 grams or more birthweight. Low birthweight is defined as less than 2,500 grams. Data relate to the Indigenous status of the mother only and therefore underestimates Indigenous births. Indigenous and non-Indigenous data excludes births where the mother's Indigenous status is not stated.

Figures 2, 3 and 4: Excludes Tasmania as the 'not stated' category for Indigenous status was unable to be distinguished form the 'non-Indigenous' category for 2003 and 2004.

Figure 2: Average annual change is estimated using linear regression analysis. Excludes Tasmania and the Australian Capital Territory. 'Babies of other mothers' includes non-Indigenous mothers and mothers for whom Indigenous status was 'not stated'.

Table 4: State level data are based on the place where the birth occurred, not place of usual residence. Cross-border issues need to be considered here e.g. a high proportion of births in Australian Capital Territory hospitals are to mothers usually resident in New South Wales. Data are presented in 3-year groupings due to small numbers each year. These groupings represent 3 calendar years. Australian Capital Territory percentages are influenced by both small numbers and high percentages of non- Australian Capital Territory residents who gave birth in the Australian Capital Territory and must be interpreted with caution. In 2003-2005, the Australian Capital Territory resident percentage was 14.0% for low birthweight Indigenous babies and 5.6% for non-Indigenous babies.

1.02 Top reasons for hospitalisation

Figures 4, 5, 6 and 7: Data for this measure come from the AIHW's National Hospital Morbidity Database. The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. Rates have been directly age-standardised using the 2001 Australian population. 'Other Australians' includes non-Indigenous hospitalisations and hospitalisations for which Indigenous status was not stated. Ratio is the Indigenous rate divided by rate for non-Indigenous. In data summarised at the state level, 'Australia' includes Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address). Data are from public and most private hospitals but exclude private hospitals in the Northern Territory. Categories are based on the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM), 4th Revision (National Centre for Classification in Health 2004). Data are reported by state of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions. Hospital data are presented in two year groupings. Australian figures are adjusted. Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Figures 6 and 7: 'Pregnancy and childbirth' rates and rate ratios are for females only. 'Other' includes: diseases of the musculoskeletal system and connective tissue, neoplasms, diseases of the nervous system, certain conditions originating in the perinatal period, diseases of the ear and mastoid process, diseases of the eye and adnexa, diseases of the blood and blood-forming organs and certain disorders involving the immune system, and congenital malformations, deformations and chromosomal abnormalities and factors influencing health status and contact with health services (except dialysis).

1.03 Hospitalisation for injury and poisoning

Refer to notes for measure 1.02 regarding hospitalisation data. ICD-10-AM codes S00–T98.

Table 5: ICD-10-AM codes V01–Y98. 'Other accidental exposures' includes accidental drowning and submersion (W65–W74), accidental threats to breathing (W75–W84), overexertion, travel and privation (X50–X57), and accidental exposure to other and unspecified factors (X58–X59). 'Exposure to electric current/smoke/fire/animals/nature' includes exposure to electrical current, radiation and extreme ambient air temperature and pressure (W85–W99), smoke, fire and flames (X00–X09), contact with heat and hot substances (X10–X19), contact with venomous animals and plants (X20–X29), and exposure to forces of nature (X30–X39). 'Other external causes' includes event of undetermined intent (Y10–Y34), legal intervention and operation of war (Y35–Y36), sequelae of external causes of morbidity and mortality (Y85–Y89), and supplementary factors classified elsewhere (Y90–Y98). 'Total' includes injuries where no external cause was reported.

1.04 Hospitalisation for pneumonia

Refer to notes for measure 1.02 regarding hospitalisation data. ICD-10-AM codes J12–J18.

1.05 Circulatory disease

Refer to notes for measure 1.02 regarding hospitalisation data. ICD-10-AM codes I00–I99.

Table 8: 'Other diseases of the circulatory disease' includes disease of arteries, arterioles and capillaries, diseases of veins, lymphatic vessels and lymph nodes and other unspecified disorders of the circulatory system.

1.06 Acute rheumatic fever and rheumatic heart disease

Data for this measure is based on the AIHW analysis of the Top End and Central Australian Rheumatic Heart Disease Registers.

Figure 16: Crude rates per 1,000 population calculated using the 1996 estimated resident Indigenous population for the Top End and Central Australia for 1995–1997 and 1998–2000 and the 2001 estimated resident Indigenous population for the Top End and Central Australia for 2001–2003 and 2004–2006.

Table 10: The data for Acute Rheumatic Fever incidence uses calender year reporting. Data are presented in four-year groupings due to small numbers each year. The 'rate per 1,000 population' are age-specific rates calculated using the average number of registrations for 2003–2006 divided by the 2001 estimated resident Indigenous population for the Top End and Central Australia. The 'rate per 1,000 population' for Rheumatic Heart Disease are age-specific rates calculated using the 2001 estimated resident Indigenous population for the Top End and Central Australia. Ratio is indigenous rate divided by the non-indigenous rate.

1.07 High blood pressure

Table 11: Remote data are not available for the NATSIHS 1995 data.

Figure 17: Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05 and the National Health Survey 2004–05 consisting of persons ever told has condition, still current and long-term and ever told has condition, current and not long-term. The female '25-34' age group estimate has a relative standard error of 25% to 50% and should be used with caution. 'Total' is age-standardised.

Figure 18: Refer to notes for measure 1.02 regarding hospitalisation data. ICD-10-AM codes I10–I15.

1.08 Diabetes

Figure 19: Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05. 'Total' is age-standardised.

Figures 20 and 21: Refer to notes for measure 1.02 regarding hospitalisation data. ICD-10-AM codes E10–E14.

Table 13: These survey results are likely to undercount the number of Indigenous Australians visiting doctors. Combined financial year data for five years. Data for Indigenous and other Australians have not been weighted. Rates are directly age-standardised rate per 100 encounters. Ratio is the Indigenous rate divided by rate for non-Indigenous. 'Gestational diabetes' rates and ratios are for females only. Diabetes problems are classified according to ICPC-2 chapter codes (Classification Committee of the World Organization of Family Doctors (WICC) 1998). ICPC-2 codes T90, T89, W85.

1.09 End stage renal disease

Data for this measure come from the Australian and New Zealand Dialysis and Transplant Registry. Uses calendar year reporting. Rates per 1,000 population. Total rates are directly age-standardised using the Australian 2001 Standard population. 'Other Australians' includes registrations for non-Indigenous people and those for whom Indigenous status was 'not stated'.

Figures 23 and 24, and Table 15: Data are presented in 3-year groupings due to small numbers in each year.

Figure 24: Australia total includes cases where remoteness category was not known.

Table 15: Ratio is the Indigenous rate divided by rate for non-Indigenous.

1.10 Decayed, missing, filled teeth

Data on children's dental health come from the Child Dental Health Survey (AIHW), a national survey which monitors the dental health of children enrolled in school dental services operated by health departments in all states and territories. The data on adult dental health come from the 2004–06 National Survey of Adult Oral Health, and is the second national oral examination survey of Australians which included telephone interviews with 14,123 people aged 15–97 years, 5,505 of which were also dentally examined.

Table 16: The estimate for '4-6 year olds' are estimated as the average of the mean for 4, 5 and 6 year olds and are not age standardised. Similar methodology are used to estimate the mean for '8-10 year olds' and '12-14 year olds'.

Figure 26: The estimate for the Aboriginal and Torres Strait Islander peoples '15-34' age group has a relative standard error of 25% to 50% and should be used with caution. Excludes those with no natural teeth.

1.11 HIV/AIDS, hepatitis C and sexually transmissible infections

Figures 29 and 31: Calender year reporting. Data are presented in three-year groupings due to small numbers each year. Data are reported for Western Australia, South Australia and the Northern Territory. These three jurisdictions are considered to have adequate levels of Indigenous identification in this data. They do not represent a quasi-Australian figure. 'Other Australians' includes notifications for non-Indigenous Australians and those for whom Indigenous status was 'not stated'.

Figures 28, 30, and 31: Directly age standardised using the Australian 2001 standard population.

Figure 29: Age-specific rates are calculated using the average Indigenous June population for the relevant years.

1.12 Children's hearing loss

Figure 32: Refer to notes for measure 1.02 regarding hospitalisation data. ICD-10-AM codes H60–H95

Figure 33: Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05 and National Health Survey 2004–05. Components may not add to total as persons may have reported more than one type of condition. Includes 'type of ear/hearing problem' not known.

Table 17: Data for the National Aboriginal and Torres Strait Islander Health Survey 1995 are available for non-remote regions only.

1.13 Disability

Table 18: Includes disability type not specified. Note that more than one disability type may be reported and thus the sum of the components may add to more than the total.

1.15 Perceived health status

Figures 36 to 39: Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05. Information for some persons aged 15 to 17 years was provided by a parent or guardian.

Figure 39: Includes chronic long-term conditions and injury only. The indigenous estimate for 0 and 1 'fair/poor' long term conditions and the non-indigenous estimate for 0 'fair/poor' long term condition has a relative standard error of between 25% and 50% and should be used with caution.

1.16 Social and emotional wellbeing

Figure 40: The rates for total persons were directly age standardised, while the rates for each age group are crude rates.

Figures 41, 43, 44, and Table 22: Refer to notes for measure 1.02 regarding hospitalisation data.

Figure 41: ICD-10-AM codes F00–F99 G30 G47.0 G47.1 G47.2 G47.8 G47.9 099.3 R44 R45.0 R45.1 R45.4 R48 Z00.4 Z03.2 Z04.6 Z09.3 Z13.3 Z50.2 Z50.3 Z54.3 Z61.9 Z63.1 Z63.8 Z63.9 Z65.8 Z65.9 Z71.4 Z71.5 Z76.0. Indigenous data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These 4 states and territories are considered to have the highest level of accuracy of Indigenous identification in mortality data. Data for these 4 jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Mortality data for 4 jurisdictions should not be assumed to represent the experience in the other jurisdictions. Data are presented in 5-year groupings due to small numbers each year. These data exclude 148 registered deaths where the Indigenous status is not stated. While most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates due to these data quality issues. Deaths are by year of registration and state/territory of usual residence. Age-specific death rates per 1,000 using the average December populations for the relevant years. Rate ratio-rate for Indigenous divided by rate for non-Indigenous. The completeness of identification of Indigenous deaths can vary by age.

Table 22: Total mental health related conditions include Mental & behavioural disorders due to psychoactive substance use (F10–F19), Schizophrenia, schizotypal and delusional disorders (F20–F29), Mood disorders (F30–F39), Neurotic, stress-related disorders (F40–F49), Disorders of adult personality and behaviour (F60–F69), Behavioural and emotional disorders (F90–F98), Organic, including symptomatic, mental disorders (F00–F09), Behavioural syndromes assoc. with physiological disturbances (F50–F59), Unspecified mental disorder (F99), Mental retardation (F70–F79), Disorders of psych. development (F80–F89) and other. Other includes ICD-10-AM codes relating to mental health: G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

1.17 Life expectancy at birth

Life expectancy estimates presented in this measure are from the ABS and are based on population estimates based on the 2006 *Census* of Population and Housing and mortality data for the period 2005–2007. Variations in life expectancies by Indigenous status, sex and jurisdiction should be interpreted with care as they are sensitive to differential data quality.

'Total Australia' in Figure 45 and 'Australia' in Table 23 includes all states and territories including those not represented on the graph and table.

1.18 Median age at death

Data for this measure come from the AIHW National Mortality Database. Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure. Queensland has only had adequate and reliable identification of Indigenous deaths in their recording systems since 1998 and may be excluded from time series figures. Data are by year of registration of death and state/territory of usual residence. The ABS calculated the completeness of identification of Indigenous deaths for the period 1999–2003 using population estimates as 54% for Queensland, 72% for Western Australia, 66% for South Australia and 95% for the Northern Territory, and the completeness of identification of Indigenous deaths for the period 2002–2006 using population estimates as 51% for Queensland, 72% for Western Australia, 62% for South Australia and 90% for the Northern Territory. While most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous infant deaths and depending on the under coverage in births may either underestimate or overestimate the rates. It should be noted that different causes of death may have different levels of completeness of identification of Indigenous deaths that differ from the 'all cause' under-identification (coverage) estimates. Due to changes in the level of accuracy of Indigenous identification in the births and deaths data over time, caution should be used in interpreting changes in Indigenous mortality rates. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates due to these data quality issues. Rate are per 1,000 live births unless otherwise stated. 'Non-indigenous' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated. The average of births over 1993–95 in Western Australia was used for births in Western Australia in 1991 and 1992 as there were errors in the number of births recorded in these years. Ratio is the Indigenous rate divided by rate for non-Indigenous.

The median age at death represents the age at which exactly half the deaths registered (or occurring) in a given time period were deaths of people above that age and half were deaths below that age. Care should also be exercised when analysing Indigenous median age at death, as differences in identification by age may lead to biased summary indicators such as median age at death.

Table 24: The incompleteness of Indigenous identification 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. Variations in median age at death by Indigenous status, sex and jurisdiction should be interpreted with care as they are sensitive to differential data quality.

1.19 Infant mortality rate

Refer to notes for measure 1.18 regarding mortality data.

Figures 51 and 52: Data exclude 90 registered infant deaths where Indigenous status was not stated over the period 1996–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

Figure 52: Data are presented in 3 and 2 year groupings due to small numbers each year.

Table 25: These data exclude 62 infant deaths where the Indigenous status is not stated. 'Other conditions' include: neoplasms, diseases of blood and blood-forming organs, endocrine, nutritional and metabolic diseases, mental and behavioural disorders, diseases of the nervous system, diseases of the eye and adnexa, diseases of the ear and mastoid process, diseases of the digestive system, diseases of the musculoskeletal system and connective tissues, diseases of the genitourinary system, and diseases of the skin and subcutaneous tissue.

1.20 Perinatal mortality

Data for this measure come from the ABS Deaths Registration Database. The ABS Deaths Registration Database contains details of all deaths registered in Australia including information on fetal (stillbirths) and neonatal deaths (deaths occurring in live births up to 28 days of age) by age of the baby, sex, state/territory of birth, Indigenous status and cause of death (ICD-10). Also refer to notes for measure 1.18 regarding mortality data.

Figure 53: 'Other Australians' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated. Perinatal deaths were not available in South Australia in 1996.

Figure 54: The Indigenous identification for Queensland in 1996-98 is likely to be less than 50% complete. These statistics are likely to underestimate the Indigenous perinatal mortality rate. There may also be under-identification of Indigenous babies in the denominator and the under-identification may be different for fetal deaths and live births, which would also affect the perinatal mortality rate.

Table 26: Includes all fetuses and babies delivered weighing at least 400 grams or, if birthweight is unavailable, at gestational age of 20 weeks or more. Data are presented in five-year groupings due to small numbers each year. Data based on state of usual residence of mother.

1.21 Sudden infant death syndrome

Refer to notes for measure 1.18 regarding mortality data.

Figure 55: There is a consistent time-series of population estimates from 1991. Due to changes in the classification and coding of causes of death from ICD–9 (used up until 1996) to ICD–10 (used from 1997 onwards) which affects the comparability of the data, the analysis reported for this measure has been done for 2 time periods, 1991–96 and 1997–2006. Data are presented in three-year and four-year groupings due to the small number of Indigenous deaths from SIDS each year. The completeness of identification of Indigenous deaths can vary by age.

Table 27: ICD10 code: R95. Data exclude 6 registered infant deaths where Indigenous status was not stated over the period 2002–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined. Data are presented in five-year groupings due to small numbers each year. Not published where numbers are less than 5.

1.22 All-causes age-standardised deaths rates

Refer to notes for measure 1.18 regarding mortality data.

Figure 57 and Table 28: Rates have been directly age-standardised using the 2001 Australian population.

Table 28: Data are presented in five-year groupings due to small numbers each year. These data exclude 3,313 registered deaths where the Indigenous status is not stated.

Leading causes of mortality

Refer to notes for measure 1.18 regarding mortality data.

Table 29 and Figure 60: Rates have been directly age-standardised using the 2001 Australian population.

Tables 29, 30 and 31: Data are presented in five-year groupings due to small numbers each year.

Tables 29 and 30: These data exclude 3,313 registered deaths where the Indigenous status is not stated. Rates for cervical cancer are for females only. 'Other causes' include: Disease of the blood and blood forming organs and certain disorders involving the immune system; mental and behavioural disorders; diseases of the eye and adnexa, diseases of the ear and mastoid process; diseases of the skin and subcutaneous tissue; diseases of the musculoskeletal system and connective tissue; diseases of the genitourinary system (excluding kidney diseases); pregnancy, childbirth and the puerperium; congenital malformations, deformations and chromosomal abnormalities; symptoms, signs and abnormal clinical findings not elsewhere classified.

Table 31: Circulatory disease data exclude 1,223 deaths where the Indigenous status was not stated. Injury and Poisoning data exclude 421 deaths where the Indigenous status was not stated. Cancers data exclude 603 deaths where the Indigenous status was not stated. Respiratory diseases data exclude 313 deaths where the Indigenous status was not stated. 'Other' for circulatory disease have ICD-codes I70-I99. 'Other' for injury and poisoning includes event of undetermined intent; legal intervention and operations of war; sequale of external cause of mortality; supplementary factors related to causes of mortality not classified elsewhere. 'Other' for cancer includes neoplasms of bone and articular cartilage, melanoma & other neoplasms of skin, neoplasms of mesothelial and soft tissue, neoplasms of eye, brain and other parts of central nervous system, neoplasms of thyroid and other endocrine glands. 'Other' for respiratory diseases have ICD-codes J00–06, J20–39, J60–99.

1.24 Maternal mortality

Maternal deaths of Aboriginal and Torres Strait Islander women expressed as a rate per 100,000 Indigenous confinements and rate ratio. Data for this measure come from the publications Maternal Deaths 1997–1999 and Maternal Deaths 2003–2005, published by the AIHW National Perinatal Statistics Unit (Slaytor et al. 2004; Sullivan et al. 2008).

In line with international conventions, the maternal mortality rate is calculated using direct and indirect deaths, excluding incidental deaths and uses the total number of confinements of at least 20 weeks gestation or 400 gram birthweight as the denominator.

Information identifying Indigenous status has been available since 1970 but only for cases classified as direct maternal deaths. Information identifying Indigenous status for indirect and incidental deaths has been collected only since 1991. It has therefore been possible to calculate the maternal mortality rate for Aboriginal and Torres Strait Islander women since 1991. Maternal deaths where Indigenous status was 'unknown' have been included in rates with non-Indigenous deaths prior to the 1997–99 triennium. All calculations of maternal mortality by Indigenous status from the 1997–99 triennium exclude deaths where Indigenous status is unknown. In 1997–99, Indigenous status was reported for 77 (89%) of the 87 maternal deaths.

Figure 61 and Table 32: Rates per 100,000 confinements calculated using direct and indirect deaths only. For 1991–93 and 1994–96, the non-Indigenous maternal mortality rate includes non-Indigenous deaths and deaths where Indigenous status is unknown. For subsequent years, deaths where Indigenous status is unknown have been excluded. Ratios are the Indigenous maternal mortality rate divided by non-Indigenous maternal mortality rate. Excludes incidental deaths.

1.25 Avoidable and preventable deaths

Refer to notes for measure 1.18 regarding mortality data.

Figure 62: There is a consistent time-series of population estimates from 1991. Due to changes in the classification and coding of causes of death from ICD–9 (used up until 1996) to ICD–10 (used from 1997 onwards) which affects the comparability of the data, the analysis reported for this measure has been done for 2 time periods, 1991–96 and 1997–2006. Rates have been directly age standardised using the 2001 Australian standard population.

Table 33: Data are presented in five year groupings due to small numbers each year. Other includes: Tuberculosis, Hepatitis, HIV/AIDS, viral pneumonia and influenza, thyroid disorders, illicit drug disorders, epilepsy, hypertensive heart disease, aortic aneurysm, obstructive uropathy and prostatic hyperplasia, DVT with pulmonary embolism, asthma, peptic ulcer disease, acute abdomen/ appendicitis/ intestinal obstruction/ cholecystits/ lithiasis/ pancreatis/hernia, chronic liver disease, complications of perinatal period, falls, fires/burns, accidental poisonings, drownings.

DETERMINANTS OF HEALTH (TIER 2)

2.01 Access to functional housing with utilities

Table 34: Victoria and Tasmania included in Australia for confidentiality reasons.

Figure 65: Most estimates have a standard error of between 25 and 50% and should be used with caution. 'Washing people' comprises households lacking a working bath or shower. 'Washing clothes/bedding' comprises households lacking washing machine and/or laundry tub. 'Storing/preparing food' comprises households with working stove/oven/cooking facilities and a kitchen sink and a working refrigerator. 'Sewerage facilities' comprises households with a working toilet.

2.02 Overcrowding in housing

Data are based on the 2001 and 2006 Census. Households are considered overcrowded if one or more additional bedroom is required to satisfy the Canadian National Occupancy Standard. Proportions have been calculated on all occupied private dwellings excluding those where number of bedrooms was not stated and includes not stated state/territory if the categorisation is not based on state/territory. Persons exclude visitors.

Figure 67: 'Australia' includes migratory.

Table 35: 'Australia' includes other territories. 'Private Renter' includes dwellings being rented from a real estate agent, parent/other relative or other person, dwellings being rented through a 'Residential park (includes caravan parks and marinas)', 'Employer-government (includes Defence Housing Authority)' and 'Employer-other employer' (private). 'Other tenure types' includes dwellings being purchased under a rent/buy scheme, occupied rent-free, occupied under a life tenure type and other tenure type nfd. 'Total' includes tenure type not stated.

2.03 Environmental tobacco smoke

Table 36: 'Other' category for 'Regular smokers in household' includes not applicable, not stated, not known. 'Other' category for 'Whether any regular smokers smoke at home indoors' includes not applicable, not asked (single-person household), not stated, not known. Data for households with non-Indigenous children are not available.

Figure 70: Data on non-Indigenous Australians by remoteness classification are not available from the 2001 National Health Survey (Indigenous supplement).

2.04 Year 3, 5 and 7 literacy and numeracy

Table 37, Figures 72 and 73: Students who were absent or withdrawn from testing are not classified as assessed students and are not included in the benchmark calculations. The proportion of absent and withdrawn students varies considerably across jurisdictions. Hence readers are urged to be cautious when comparing results. Revised definitions and standards for the collection and reporting of student socio-economic background information (sex, Indigenous status, socio-economic background and language background) were introduced in 2005 through the school enrolment processes for all schools to ensure greater national consistency in reporting against characteristics from 2006.

2.05 Years 10 and 12 retention and attainment

Data for this measure come from the AIHW analysis of ABS National Schools Statistics Collection. Retention rate = Year 10 or 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8). Attainment rate = proportion of Year 11 students who went on to achieve a Year 12 certificate.

Figure 75: Only full-time students were included in this analysis; part-time students were not included. Because of the small number of Indigenous students represented, care should be taken when comparing attainment outcomes for Indigenous students.

Table 38: While most students are recorded, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the number of Aboriginal and Torres Strait Islander students. In addition, the standard Indigenous status question has not yet been implemented in some jurisdictions. The following factors have not been taken into account in these statistics: students repeating a year of education, migration and other net changes to the school population, enrolment policies (including year starting high school which contributes to different age/grade structures between states and territories), inter-sector transfer and interstate movements of students. In small jurisdictions, relatively small changes in student numbers can create apparently large movements in retention rates. The inclusion or exclusion of part-time students can also have a significant effect on apparent retention rates, especially in South Australia, Tasmania and the Northern Territory which have relatively large proportions of part-time students. Data for Western Australia have been affected by changes in scope and coverage over time. Some Australian Capital Territory rates exceed 100%, largely reflecting the movement of students from non-government to government schools in Years 11 and 12, and of New South Wales residents from surrounding areas enrolling in Australian Capital Territory schools.

2.06 Educational participation and attainment of Aboriginal and Torres Strait Islander adults

Table 39: 'Technical or Further Education Institution' includes TAFE colleges. 'Total currently studying' includes other educational institution and type of educational institution not stated. 'Total' excludes attendance at educational institution unknown. 'Attendance unknown' is persons whose attendance at an educational institution was unknown as a proportion of total persons.

2.07 Employment status including CDEP participation

The following standard definitions apply to employment figures:

- Employed – Persons aged 15 years and over who worked for payment or profit, as an unpaid helper in a family business for a minimum of one hour per week, during the week prior to Census night. Also includes those who were absent from a job or business and Community Development Employment Projects (CDEP) participants.
- Full-time workers – Employed persons who reported working 35 hours or more in the week prior to Census night.
- Part-time workers – Employed persons who reported working less than 35 hours in the week prior to Census night.

- Unemployed – Persons aged 15 years who were not employed, but were actively looking for work and were available to start work, in the 4 weeks prior to Census night.
- Not in the labour force – persons who are not employed or unemployed as defined above, including persons who:
  - are retired
  - no longer work
  - do not intend to work in the future
  - are permanently unable to work
  - have never worked and never intend to work.

Figures 78 and 79: 'Participation rate' is the ratio of the total of persons who are employed and unemployed as defined above, to the civilian population in the same group. 'Employed as a proportion of total population' is the total of those persons who are employed (full time, part time or away from work) as a proportion of the civilian population in the same group. The unemployment rate is the ratio of those persons who are employed to the total of persons who are employed and unemployed. The category 'Employed, away from work' includes persons who stated they worked but who did not state the number of hours worked. Due to the large proportion of 'Not stated' labour force status for Indigenous respondents, all proportions calculated without including not stated in total.

2.08 Income

Figures 82 to 86: Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2006 Census are: lowest quintile less than $315; second quintile $315–$515; third quintile $516–$742; fourth quintile $743–$1,077; highest quintile $1,078 or more. These have been applied to both the Indigenous and non-Indigenous population. Note that equivalised gross weekly household income quintiles are calculated as a proportion of households with stated household income. Persons in households aged 18 years and over in which there were no temporary absent adults and all incomes were fully stated.

Figure 83: Residents of occupied private dwellings, excluding visitors. Mean weekly equivalised gross household income for 1996 and 2001 have been adjusted for inflation to approximate 2006 dollar value using CPI.

2.09 Housing tenure type

Table 40 and Figure 87: 'Private' renters include dwellings being rented from a parent/other relative or other person. 'Other' renters comprises dwellings being rented through a 'Residential park (includes caravan parks and marinas)', 'Employer-government (includes Defence Housing Authority)', 'Employer-other employer' (private) and 'Not stated'. 'Total renters' includes rental type status not stated. 'Other tenure types' includes being purchased under a rent/buy scheme; being occupied rent-free; being occupied under a life tenure scheme; Other tenure type nfd. 'Total' includes not stated.

Table 40: Persons aged 18 years and over. A household with Indigenous person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as having Aboriginal and/or Torres Strait Islander origins.

Figure 87: A household with Indigenous person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as having Aboriginal and/or Torres Strait Islander origins.

2.10 Index of disadvantage

Figure 89: The population of some states/territories was unable to be split into exact quintiles based on the SEIFA index of advantage/disadvantage, in all except one of these cases the best approximate quintiles were calculated.

2.12 Single-parent families

Figures 91, 92 and 93: Number of persons for family households excludes unrelated individuals living in the family household. Dependent children are children under 15 years of age and full-time dependent students aged 15–24 years.

2.13 Community safety

Refer to notes for measure 1.18 regarding mortality data for Figures 94 and 96.

2.14 Contact with the criminal justice system

Table 42: Numbers and rates for New South Wales exclude Australian Capital Territory prisoners held in New South Wales. Age-standardised rate per 100,000 adult population. The rate ratio of Indigenous to non-Indigenous imprisonment is calculated by dividing the Indigenous age-standardised rate by the non-Indigenous age-standardised rate. Rates for Australian Capital Territory include Australian Capital Territory prisoners held in New South Wales as well as Australian Capital Territory prisoners held in Australian Capital Territory. 'Other Persons' includes not stated sex.

Figure 99: Rates are per 1,000 prison population and have not been age-standardised.

2.15 Child protection

Figures 100, 101,, and Table 43: Due to new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable with previous years' data. (See AIHW 2008c for more information). 2006–07 data for Queensland are interim and will be revised in 2008.

Figures 100 and 101: The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system. 'Non-Indigenous children' includes non-Indigenous children and those children whose Indigenous status is unknown. This includes 1,229 children whose Indigenous status was recorded as 'unknown'.

Figure 100: Data relating to the substantiations in Tasmania for 2006–07 should be interpreted carefully due to the high proportion of investigations in process by 31 August 2007. The high number of children in substantiation with an unknown Indigenous status in Tasmania makes the counts for both Indigenous children and other children unreliable.

Due to the small number involved, children aged 17 years were not included in this table. However, children whose age was unknown are included. 'Other children' includes non-Indigenous children and those children whose Indigenous status is unknown. Data from Tasmania should be interpreted carefully due to a lower rate of recording Indigenous status at the time of the substantiation. Rates for other (Australian) children were calculated by subtracting the identified Aboriginal and Torres Strait Islander children from the number of children in the total population.

Figure 101: New South Wales data do not include supervisory order. New South Wales was unable to provide data for 2003–04 due to the ongoing implementation of the data system. 2006–07 data for Western Australia include 24 children who were placed on Enduring Parental Responsibility orders. For the Tasmania data, additional systems have been put in place to address the Indigenous status recording issues, including quarterly monitoring. During 2001–02, practices were introduced in ACT to improve the identification of Indigenous status that resulted in an increase in the number of Indigenous clients.

Table 43: In Western Australia, a small number of children are placed with externally managed foster carers who are also their relative and have been recorded in the foster care category. The number of children in out-of-home care at 30 June 2007 is not comparable to that reported for previous years for Tasmania because of exclusion of a cohort of children on orders who did not meet the definition of out-of-home care. In the Northern Territory, children placed with family members have all been included in the 'Indigenous relative/kin' category. This table does not include Indigenous children who were living independently or whose living arrangements were unknown. Percentages in tables may not add to 100 due to rounding. The relationship of the caregiver to children placed with other caregivers was not available and these children were placed in the 'other Indigenous caregiver' category.

2.16 Transport

Figures 102 and 103: Excluding motorbikes, scooters and tractors. Includes dwellings in Offshore and Migratory CDs.

Figure 103: 'Households' defined as all households in an occupied private dwelling, being Australian usual residents. Excludes 'Visitors only' and 'Other not classifiable' households. An Indigenous household is defined where a family within the household contains one or more persons of Aboriginal or Torres Strait Islander origin or where a lone person is of Aboriginal or Torres Strait Islander origin. 'Other households' includes households where Indigenous status was 'not stated'.

2.17 Indigenous people with access to their traditional lands

Figures 105, 106 and 107: Estimate for 'Recognises but not allowed to visit homelands/traditional country' has a relative standard error of 25% to 50% and should be used with caution.

2.18 Tobacco Use

Figure 110: The National Health Survey did not collect data in very remote Australia.

2.19 Tobacco smoking during pregnancy

Figures 111, 112 and Table 45: Excludes births where the mother's Indigenous status was not stated. State-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g., a high proportion of births in Australian Capital Territory hospitals are for mothers resident in New South Wales. For Queensland, smoking status data were collected from 1 July 2005, therefore, the numbers and proportions shown are for the July–December 2005 period only. For South Australia, 'smoked' includes women who quit before the first antenatal visit. For Northern Territory, smoking status was recorded at the first antenatal visit. Proportions are directly age-standardised using the Australian female population aged 15–44 years who gave birth in 2005. Data are not available for Victoria.

Figure 112: Excludes Victoria and the first 6 months of 2005 for Queensland.

Table 45: Rate ratio: proportion for Indigenous divided by proportion for non-Indigenous. Live births only for 'Low Birthweight', 'Apgar score'. Excludes Victoria and the first 6 months of 2005 for Queensland.

2.20 Risky and high risk alcohol consumption

Figures 113 to 115: Alcohol risk level based on Australian Alcohol Guidelines 2000. 'Abstainers' are defined as persons who consumed No alcohol in last 12 months. 'Short-term Risk' is based on responses to questions in 2004–05 National Health Survey/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females. 'Drank at risky/high risk levels in last 12 months' is defined as Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the last 12 months. 'Drank at risky/high risk levels at least once a week' is defined as Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months. Risk level based on consumption in week prior to interview.

Figure 116: Refer to notes for measure 1.18 regarding mortality data. Data are presented in five-year groupings due to small numbers each year. Excludes a total of 35 deaths for which Indigenous status was 'not stated'. Rates are directly age standardised using the Australian 2001 Standard population.

2.21 Drug and other substance use including inhalants

Table 46: 2002 Data from 2002 NATSISS. 'Analgesics and sedatives for non-medical use' Includes painkillers, tranquilisers and sleeping pills. 'Total used substances in last 12 months' includes heroin, cocaine, petrol, LSD/synthetic hallucinogens, naturally occurring hallucinogens, ecstasy/designer drugs, and other inhalants. Includes methadone in 2004–05. Sum of components in 'Total used substances in last 12 months' may be more than the total as persons may have reported more than one type of substance used in last 12 months. 'Total used substances' includes 'whether used substances in last 12 months' not known. 'Not stated' includes 'whether ever used substances' not known.

2.22 Level of physical activity

Figure 119: 'Age standardised' rates are directly age-standardised proportions.

2.23 Dietary behaviours

Figure 121: Recommended usual daily vegetable intake = 5 or more serves per day. Recommended usual daily fruit intake = 2 or more serves of fruit per day. Low usual daily vegetable intake = 1 or less serves per day including not eating vegetables at all. Low usual daily fruit intake = 1 or less serves per day including not eating fruit at all. Recommended usual daily vegetable intake not available for 2001 as there was no category for 5 serves or more.

Figure 122: Information for some persons aged 15–17 years was provided by a parent or guardian.

Table 47: 'Vegetable/fruit intake' total includes 'whether eats fruit/vegetables' not known. 'Usual type of milk consumed' total includes 'usual type of milk' not known. 'Salt added after cooking' total includes 'frequency salt is added after cooking' not known.

2.24 Breastfeeding practices

Figure 123: Estimate for 'Non-remote' in '6 to 12 months has a relative standard error of between 25% to 50% and should be used with caution.

Table 48: Non-Indigenous results are not provided as the non-Indigenous sample for Northern Territory was insufficient for purposes of estimation for these characteristics. '12 months or more' includes length of time child has been breastfed not known. 'Total' includes breastfeeding status not known.

2.26 Prevalence of overweight and obesity

Figures 128, 129 and 130: Proportions exclude those for whom BMI was unknown or not stated (39,583 or 15% for Indigenous and 1,175,132 or 8% for non-Indigenous).

HEALTH SYSTEM PERFORMANCE (TIER 3)

3.01: Antenatal care

Data for this measure come from the state/territory-based Perinatal Collections ('Midwives Collections').

Figures 131 to 134: Percentage of women who gave birth in the period, whether resulting in a live or still birth, if the birthweight is at least 400grams or the gestational age is 20 weeks or more.

Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated. Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Data were not available from Victoria, Western Australia and Tasmania.

Figure 132: A high proportion of births in Australian Capital Territory hospitals are for non-Australian Capital Territory mothers (10–15%). In the Northern Territory in 1998, 1999 and 2002 a system error occurred where a large number of women had birthing records created with no antenatal data attached.

Figure 133: Data for New South Wales and Northern Territory only. Data not collected in Queensland or South Australia. Cross-border issues need to be considered here, e.g. a high proportion of births in Australian Capital Territory hospitals are for New South Wales mothers.

Figure 134: Data for Queensland, South Australia and Northern Territory only. Data not collected in New South Wales. For Queensland, 1 session is determined by: number of visits category '<2 visits' and care type 'no antenatal care'.

3.02 Immunisation

Figure 135: Data not available for children at age 6 years for 2001.

Figure 137: Includes data from New South Wales, Victoria, Western Australia, South Australia and Northern Territory only. Three-month cohort used—cohort for 'aged one year' is born between 1 July and 30 September 2006, cohort for 'aged two years' is born between 1 July and 30 September 2005, and cohort for 'aged six years' is born between 1 July and 30 September 2001.

For the 'aged six years', data for Victoria contain an error in the number of Aboriginal children aged 72–75 months appearing on the register. Vaccination coverage rates presented here should therefore be interpreted with caution. Vaccination coverage rates for all vaccines were reported as 87.3% for Aboriginal children and 86.1% for non-Aboriginal children in 2004–05 in the report, Victorian Government Department of Human Services 2006, Aboriginal Services Plan key indicators 2004–05.

3.03 Early detection and early treatment

Figure 139: Child health checks commenced in May 2006. Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of 2006 and 2007 Indigenous population projections for those aged 0–14 years. Issues of take-up and administrative requirements will affect these data.

The adult health checks were introduced in May 2004 as a biennial assessment. Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of

2006 and 2007 Indigenous population projections for those aged
15–54 years. Monthly patterns of take-up for this item had become more stable by July 2005.

Figure 140: Health assessments for older patients were introduced in November 1999. Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of 2006 and 2007 Indigenous population projections for those aged 55 years and over and the total Australian population estimates for those aged 75 years and over.

Figure 142: Should exclude data from women who have had a hysterectomy, however this data was not collected in the NATSIHS.

3.04 Chronic disease management

Figure 144: Data on services providing patient information and recall systems were not available in 2004–05.

Figure 145: Indigenous adults aged 15 years and over who are regular clients of the HFL service. Data for clients with Type 2 diabetes who had an HbA1c test were provided by 25 services, data for clients with Type 2 diabetes who had a blood pressure test were provided by 22 services and data for clients with coronary heart disease who had a blood pressure test were provided by 27 services. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

3.05 Differential access to key hospital procedures

Figure 147: Proportions are directly age-standardised using the age and cause specific rates of other Australians.

Figure 148: Per cent refers to the proportion of hospitalisations with coronary heart disease as the principal diagnosis receiving either coronary angiography or coronary revascularisation.

3.06 Ambulatory care sensitive hospital admissions

Refer to notes for measure 1.02 regarding hospitalisation data.

Figures 149 and 150: For consistency with other published data ICD10-AM codes for non-vaccine preventable pneumonia (J13, J14, J153, J154, J157, J159, J168, J181) have been included in the vaccine-preventable conditions category. These codes were not included in this category in the 2006 edition of the Health Performance Framework.

3.07 Health promotion

Table 49: The 4 selected activities (Selected health promotion, Environmental health, Food standards and hygiene and prevention of hazardous and harmful drug use) are from the 9 core public health activities reported in AIHW's National public health expenditure reports. The expenditures are the total of Australian Government expenditures and state/territory government expenditures. Australian Government Indigenous expenditure estimates were derived from both Indigenous-specific expenditure and Indigenous population proportions. State and Territory jurisdictions used differing methods to estimate the Indigenous expenditure estimates see the online source. Detailed state and territory tables and methodology listed in the AIHW report. The State and Territory government selected health promotion figures excludes $ 1.2 million Indigenous health-related expenditure from Victoria.

Figure 152: These survey results are likely to undercount the number of Indigenous Australians visiting doctors. Combined financial year data for 5 years. Directly age-standardised rate using the total number of encounters for the period as the standard.

Figure 153: Communities with a population of 50 or more, or a reported usual population of fewer than 50 but which were not linked to a parent community or resource agency. The total communities includes ‘whether selected health promotion program conducted’ not stated and excludes communities where distance to nearest hospital not stated.

3.08 Discharge against medical advice

Figures 155, 156, 157 and 158: Refer to notes for measure 1.02 regarding hospitalisation data. Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2004–05 to 2005–06.

Figure 156: Proportions are age-standardised.

Figure 158: ‘Other’ includes: neoplasms, diseases of the nervous system, certain conditions originating in the perinatal period, diseases of the ear and mastoid process, diseases of the eye and adnexa, diseases of the blood and blood-forming organs and certain disorders involving the immune system, and congenital malformations, deformations and chromosomal abnormalities and factors influencing health status and contact with health services. ‘Total’ includes hospitalisations for which no principal diagnosis was recorded and excludes mental and behavioural disorders (F00–F99).

3.09 Access to mental health services

Figure 159: These survey results are likely to undercount the number of Indigenous Australians visiting doctors. Combined financial year data for five years. Data for Indigenous and other Australians have not been weighted. Rates were directly age-standardised using the Australian 2001 Standard population. ‘Other’ includes non-indigenous patients and patients for whom Indigenous status was not stated.

Figure 160: These data should be interpreted with caution due to likely under-identification of Indigenous Australians. ‘Non-Indigenous people’ includes service contacts for non-Indigenous clients and those for whom Indigenous status was not stated. Rate per 1,000 population based on estimated resident population as at 30 June 2005. ‘Total’ includes service contacts for clients for whom age or sex was not stated. Total rates have been directly age-standardised using the Australian 2001 Standard population.

Figure 161: Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory. ‘Other Australians’ includes hospitalisations for non-Indigenous Australians and those for whom Indigenous status was not stated. Rates have been directly age-standardised using the 2001 Australian standard population.

Figure 162: Refer to notes for measure 1.02 regarding hospitalisation data. Categories are based on the ICD-10-AM (National Centre for Classification in Health 2006); ICD-10-AM codes F00–F99, G30, G47.0, G47.1, G47.2, G47.8, G47,9, 099.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0. Rates include hospitalisations for which sex was not stated. ‘Australia’ includes Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

3.10 Aboriginal and Torres Strait Islander people in the health workforce

Table 50 and Figure 164: For 1996 and 2001 data, occupation as defined by the Australian Standard Classification of Occupation (ASCO). For 2006 data, occupation as defined by the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Table 51: People aged 15 years and over. 'Health and welfare services managers' comprises Health and Welfare Services Managers, nfd, Medical Administrator, Nursing Clinical Director, Primary Health Organisation Manager, Health and Welfare Services Managers, nec. 'Psychologists' comprises Psychologists, nfd, Clinical Psychologist, Educational Psychologist, Organisational Psychologist, Psychotherapist, Psychologists, nec. 'Other health diagnostic and promotion professionals' comprises Medical Imaging Professionals, nfd, Medical Diagnostic Radiographer, Medical Radiation Therapist, Nuclear Medicine Technologist, Sonographer; Occupational Health and Safety Adviser; Health Professionals, nfd, Health Diagnostic and Promotion Professionals, nfd, Dietician, Occupational and Environmental Health Professionals, nfd, Optometrists and Orthoptists, nfd, Optometrist, Orthoptist, Pharmacists, nfd, Hospital Pharmacist, Industrial Pharmacist, Retail Pharmacist, Other Health Diagnostic and Promotion Professionals, nfd, Orthotist or Prosthetist, Health Diagnostic and Promotion Professionals, nec. 'Dental workers' comprises Dental Practitioners, nfd, Dental Specialist, Dentist; Dental Hygienists, Technicians and Therapists, nfd, Dental Hygienist, Dental Prosthetist, Dental Technician, Dental Therapist; Dental Assistant. 'Other Health Therapy Professionals' comprises Health Therapy Professionals, nfd, Chiropractors and Osteopaths, nfd, Chiropractor, Osteopath, Complementary Health Therapists, nfd, Acupuncturist, Homeopath, Naturopath, Traditional Chinese Medicine Practitioner, Complementary Health Therapists, nec, Occupational Therapist, Podiatrist, Speech Professionals and Audiologists, nfd, Audiologist, Speech Pathologist. 'Other medical practitioners' Comprises Medical Practitioners, nfd, Generalist Medical Practitioners, nfd, Resident Medical Officer, Anaesthetist, Internal Medicine Specialists, nfd, Specialist Physician (General Medicine), Cardiologist, Clinical Haematologist, Clinical Oncologist, Endocrinologist, Gastroenterologist, Intensive Care Specialist, Neurologist, Paediatrician, Renal Medicine Specialist, Rheumatologist, Thoracic Medicine Specialist, Internal Medicine Specialists, nec, Psychiatrist, Surgeons, nfd, Surgeon (General), Cardiothoracic Surgeon, Neurosurgeon, Orthopaedic Surgeon, Otorhinolaryngologist, Paediatric Surgeon, Plastic and Reconstructive Surgeon, Urologist, Vascular Surgeon, Other Medical Practitioners, nfd, Dermatologist, Emergency Medicine Specialist, Obstetrician and Gynaecologist, Ophthalmologist, Pathologist, Radiologist, Medical Practitioners, nec. 'Midwifery and nursing professionals' comprises Midwifery and Nursing Professionals, nfd, Midwife; Nurse Educators and Researchers, nfd, Nurse Educator, Nurse Researcher; Nurse managers; Registered Nurse (Aged Care), Registered Nurse (Community Health), Registered Nurse (Critical Care and Emergency), Registered Nurse (Mental), Registered Nurse (Perioperative); Other Registered Nurses, nfd, Nurse Practitioner, Registered Nurse (Child and Family Health), Registered Nurse (Developmental Disability), Registered Nurse (Disability and Rehabilitation), Registered Nurse (Medical), Registered Nurse (Medical Practice), Registered Nurse (Surgical), Registered Nurses, nec. Nursing support and personal care workers' comprises Nursing Support Worker, Personal Care Assistant, Nursing Support and Personal Care Workers, nfd, Therapy Aide. 'Other' comprises Massage Therapist, Hospital Orderly and Diversional Therapist. Components may not add to total due to perturbation of component data.

Figure 163: Occupation as defined by the Australian Standard Classification of Occupation. New South Wales includes Territory of Jervis Bay. Western Australia includes Territories of Christmas Island and Cocos Islands.

3.11: Competent governance

Table 53: A service is recorded as having conducted an activity if that activity was conducted by either the service itself or by one of its auspiced entities.

Table 54: 2003–04 is the latest year of data available, This material was not included in the SAR questionnaire for 2004–05 and 2005–06, but was re-instated for 2006–07.

3.12 Access to services by types of service compared to need

Figure 165: Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks. The estimate for Indigenous Dental consultation (fair/poor) of 4% has a relative standard error of between 25% and 50% and should be used with caution.

Figure 166: Total who took at least one health-related action—those who were admitted to hospital in last 12 months, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks. 'Other health professionals' does not include dental consultation. Some estimates have a relative standard error of between 25% and 50% and should be used with caution. Data are age-standardised.

Figures 167 and 168: Data are age-standardised.

Table 55: Persons aged 2 years and over.

Figure 169: The method used to do this graph has changed from the previous version. This graph is now for all services that report in any year. The previous method limited to only those that reported for every year. The former method was only using about half of all services in the most recent years. The growth now reflects the growth in the Australian Government funded sector—not just growth in the services that have been reporting since 1999–00.

Figure 170: Refer to notes for measure 1.02 regarding hospitalisation data.

3.13 Access to prescription medicines

Figure 173: 'Mainstream PBS' excludes Repatiration Pharmaceutical Benefits Scheme benefits. 'Remote Area Aboriginal Health Services' (Section 100) excludes highly specialised drugs dispensed from public and private hospitals

Figure 174: Expenditure expressed in constant prices. Does not include Repatiration Pharmaceutical Benefits Scheme benefits for Veterans.

Figure 175: PBS drugs include $19.4 million of Section 100 Remote Area Health Services expenditure. Almost all of this

expenditure occurs in remote and very remote areas. Hobart is classified as Inner Regional under the ASGC. Darwin is classified as Outer Regional under the ASGC.

3.14 Access to after-hours primary care

Figure 177 and Table 56: The Non-admitted Patient Emergency Department Care data are required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore these data will only cover a sub-set of after-hours emergency episodes of care. The identification of Indigenous patients is not considered complete and varies among jurisdictions. It is considered acceptable only for Western Australia and the Northern Territory.

Table 56: After hours is defined by the MBS definition (excluding consideration of public holidays): on Sunday, before 8am or after 1pm on a Saturday, or at any time other than 8am to 8pm on a weekday. Excludes patients who were admitted or arrived at the hospital by ambulance.

3.15 Regular GP or health service

Figure 179: For the 'Hospital' category, estimates for New South Wales, Victoria, South Australia, Tasmania and Northern Territory has a relative standard error of between 25% and 50% and should be used with caution, and estimates for Australian Capital Territory has a relative standard error greater than 50% and is considered too unreliable for general use.

Figure 180: The 'very remote' estimates for the 'Doctor' category and 'outer regional' and 'remote' estimates for the 'Hospital' category has a relative standard error of between 25% and 50% and should be used with caution.

3.16 Care planning for clients with chronic diseases

Tables 57 and 58: Clients are Indigenous adults aged 15 years and over who are regular clients of the HFL service. Chronic diseases include Type 2 Diabetes and Coronary Heart Disease.

Data for Table 57 were provided by 19 services and data for Table 58 were provided by 12 services. In Table 57, remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

3.17 Accreditation

Figure 182: Data are from public hospitals only. Data are reported for New South Wales, Victoria, Queensland, Western Australia, South Australia and Northern Territory only. These 6 jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions. 'Other patient episodes' includes hospitalisations for non-Indigenous people and those for whom Indigenous status was 'not stated'. Remoteness category based on residence of patient.

Figure 183: Aboriginal and Torres Strait Islander proportions are based on ABS population estimates used in the Annual Survey of Divisions of General Practice. There is double counting of some services where general practices reside on the border of two divisions. In that case two divisions may service the same practice.

3.18 Aboriginal and Torres Strait Islander people training for health-related disciplines

Table 59: Undergraduate students refer to domestic students. Classification based on ABS narrow fields of education. The 'total' data take into account the coding of Combined Courses to two fields of education. As a consequence, counting both fields of education for Combined Courses means that the totals may be less than the sum of all fields of education.

Figures 184 and 185: University students refer to domestic students.

Table 60: Classification based on qualification field of education classification. Excludes course completions for statement of attainment, bridging and enabling courses for which there were 2,121 course completions for Indigenous students in 2006. The high proportion of Indigenous students in medical studies is due to the fact that only two courses under this category had qualifications completed in 2006—Certificate III in Aboriginal Primary Health Care made up 104 of the 109 completions.

3.19 Expenditure on Aboriginal and Torres Strait Islander health compared to need

Figure 186: Constant prices were calculated using the health price indexes from AIHW (AIHW 2004a, p68). There were substantial changes in estimating methods between the first (1995–96) and second (1998–99) reports.

Figure 187: Australian Capital Territory per person figures are not calculated, as the expenditure numbers for the Australian Capital Territory include substantial expenditures for New South Wales residents. Thus the Australian Capital Territory population is not the appropriate denominator.

Figure 188: 'Hospitals' are classified by ASGC remoteness area of patient residence. Hobart is classified as 'Inner Regional' and Darwin is classified as 'Outer Regional' under the ASGC. PBS drugs include $19.4 million of Section 100 Remote Area Health Services expenditure. Almost all of this expenditure occurs in remote and very remote areas.

Figure 189: Funding for Aboriginal and Torres Strait islander Health was transferred to the Department of Health and Ageing in 1994–95

Figure 190: Total excludes expenditure on health administration not elsewhere classified and research.

3.20 Recruitment and retention of clinical and management staff (including GPs)

Figure 191 and 192: Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

Figures

Tables