

AUSTRALIAN INSTITUTE OF HEALTH:  
ABORIGINAL AND TORRES STRAIT ISLANDER  
HEALTH SERIES NO. 2

# Overview of Aboriginal health status in the Northern Territory

Neil Thomson  
Norma Briscoe



AIH  
WA 300  
0964

## **Australian Institute of Health**

The Australian Institute of Health is an independent statistics and research agency within the Federal Community Services and Health portfolio. It comprises three major research divisions—Health Services, Health Technology and Health Monitoring.

### **Chairman of the Board**

Emeritus Professor Peter Karmel AC, CBE

### **Director**

Leonard R Smith PhD

AUSTRALIAN INSTITUTE OF HEALTH: ABORIGINAL AND  
TORRES STRAIT ISLANDER HEALTH SERIES NO 2

# Overview of Aboriginal health status in the Northern Territory

Neil Thomson  
Norma Briscoe

PRINTED BY THE AUSTRALIAN GOVERNMENT  
PRINTING SERVICE  
CANBERRA

Australian Government Publishing Service  
Canberra

COPY No.	313599
MASTER No.	716305



313599

A11  
AIR300  
0964

©Commonwealth of Australia 1991

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without written permission from the Australian Government Publishing Service. Requests and inquiries concerning reproduction and rights should be directed to the Manager, AGPS Press, Australian Government Publishing Service, GPO Box 84, Canberra ACT 2601.

This is No 2 of the Australian Institute of Health: Aboriginal and Torres Strait Islander health series. A description of AIH series will be found on the inside back cover of this book. Before September 1990, publications of the Institute were not issued in series. A complete list of publications is available from the Publications Section, Australian Institute of Health, GPO Box 570 Canberra ACT 2601.

### **National Library of Australia Cataloguing-in-Publication data**

Thomson, Neil, 1942—

Overview of Aboriginal health status in the Northern Territory

ISBN 0 644 14069 0

ISSN 1036-4838

1. Aborigines, Australian — health and hygiene — Northern Territory. I. Briscoe, Norma. II. Australian Institute of Health. III. Title. (Series: Australian Institute of Health: Aboriginal and Torres Strait Islander health series; No 2).

614.429429

### **Suggested citation**

Thomson N and Briscoe N (1991) *Overview of Aboriginal health status in the Northern Territory*. Australian Institute of Health: Aboriginal and Torres Strait Islander health series No 2. AGPS, Canberra.

# Contents

Background to the report .....	1
Acknowledgements .....	2
1 Introduction .....	3
2 The Aboriginal population .....	5
3 Selected social indicators .....	7
4 Fertility and pregnancy outcome .....	10
5 Mortality .....	13
6 Hospitalisation .....	21
7 Summary .....	23
Glossary .....	24
References .....	25

## Background to the report

This report has been prepared for the Royal Commission into Aboriginal Deaths in Custody as part of a consultancy arrangement, and the views presented are not necessarily those of the Royal Commission.

The report focuses on current State-wide social and health status indicators for Northern Territory Aborigines and, along with similar reports for New South Wales, Queensland, South Australia and Western Australia, supplements the information provided to the Commission in a general Australian overview (Thomson 1990). The production of similar reports for Victoria, Tasmania and the Australian Capital Territory was prevented by the limited availability of data for those places.

It was beyond the scope of this report to undertake an analysis of the time trends of these indicators, or to summarise the available disease-specific information, usually the results of special surveys or other research. Similarly, no attempt has been made to consider in detail the underlying causes of the poor health status, or the various programs and services aimed at redressing the health disadvantages experienced by Aborigines.

## Acknowledgements

The Australian Institute of Health is grateful to the Northern Territory Department of Health and Community Services for providing data on births, deaths and hospital admissions.

Thanks are extended also to the Department of Health New South Wales, the Queensland Department of Health, the South Australian Health Commission and the Health Department of Western Australia for the provision of data. The Institute acknowledges the cooperation of the South Australian Registry of Births, Deaths and Marriages in providing information on Aboriginal deaths in South Australia to the Royal Commission.

# 1 Introduction

In a major review of health status in the Northern Territory (Devanesen et al 1986), the Northern Territory Department of Health highlighted the many ways in which the health of Aborigines<sup>1</sup> falls well short of that of other Territorians<sup>2</sup>.

After summarising the range of data presented in the report, the then Secretary of the Department drew attention to the preventability of many of the leading causes of sickness and death, including the continuing substantial impact among Northern Territory Aborigines of infectious diseases.

The preventability of much sickness and death is characteristic of the health problems experienced by Aborigines throughout Australia, but the substantial impact of infectious diseases, as a cause of death at least, is one of a number of ways in which Aborigines in the Northern Territory differ from Aborigines in most other parts of Australia.

One of the most obvious differences between the Northern Territory and other parts of Australia is the proportion of Aborigines in the population. More than 15 per cent of Australia's Aborigines live in the Territory, where they comprise 22.4 per cent of the total population. In the States and the Australian Capital Territory, Aborigines comprise only a very small proportion of the total populations, the next highest proportion being for Western Australia, 2.7 per cent.

A much larger proportion of the Aboriginal population of the Northern Territory than in the States or the Australian Capital Territory live in rural environments. Partly because of the later impact of significant numbers of non-Aborigines in the Northern Territory, generally Aborigines there have managed to maintain much closer links with their homelands and aspects of their traditional lifestyles than have Aborigines in other parts of the country.

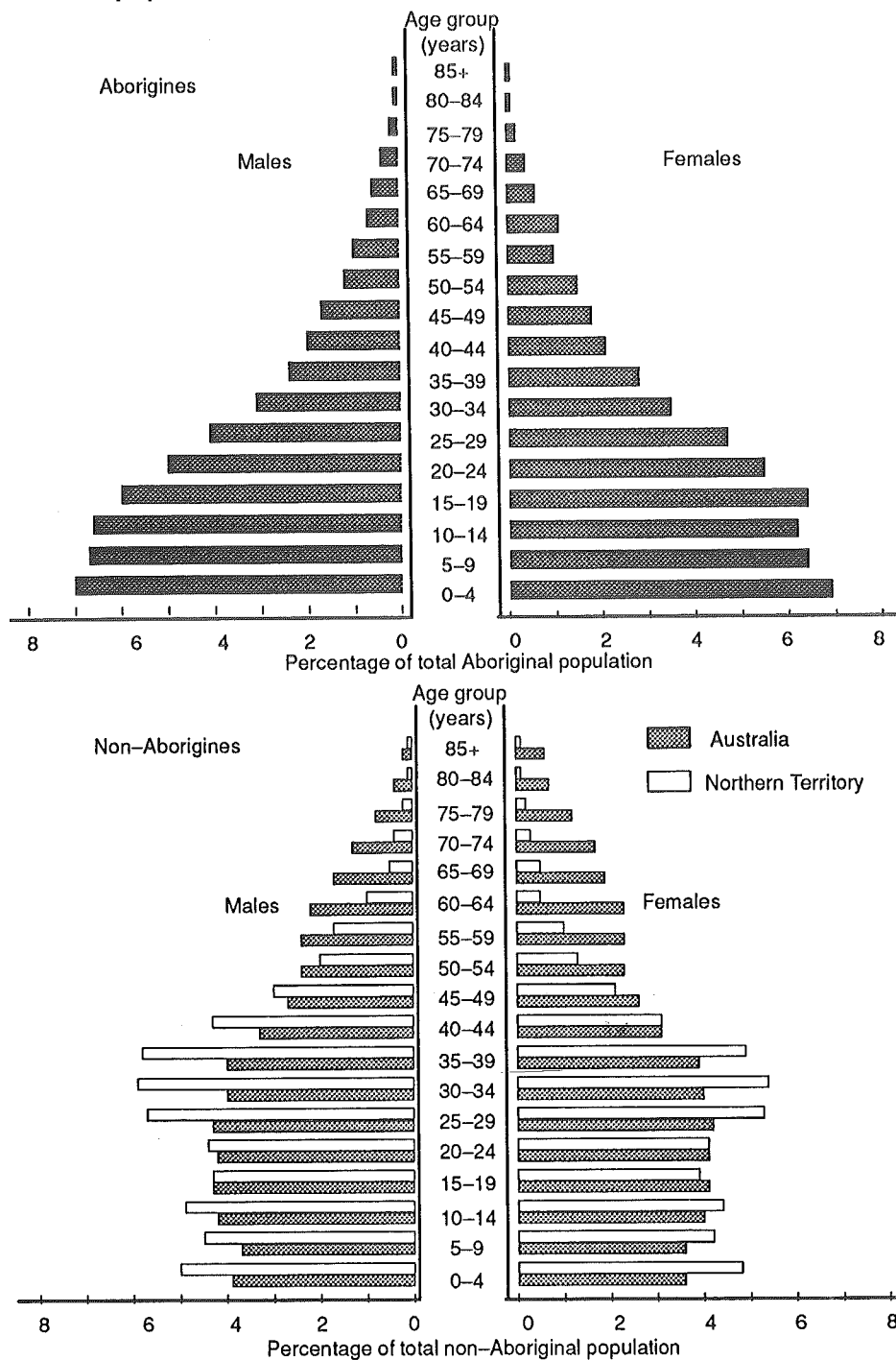
The nature of the non-Aboriginal population of the Territory is also different, at least in terms of age and sex structure (see Figure 1). Because of these differences, a number of the comparisons of Aboriginal health indicators have been made with the total Australian population, rather than with the non-Aboriginal population of the Territory.

1. In this paper, the term 'Aborigines' generally will be used to mean both Australian Aborigines and Torres Strait Islanders. Aboriginal identification is in accordance with the accepted 'working definition': an Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he (she) lives (Department of Aboriginal Affairs 1981).

2. Attention is drawn to differences in the populations used for comparison purposes. Wherever possible, comparisons have been made between Northern Territory Aborigines and non-Aborigines. In these instances, the comparative data are described as relating to Northern Territory non-Aborigines or to other (Northern) Territorians. In some cases, it has not been possible to derive separate data for non-Aborigines in the Northern Territory or the data have not been suitable for comparison, in which cases the comparative data are described as relating to the total Northern Territory population or to all Territorians. In those cases where the comparative data are for the total Australian population, they have been described as relating to the total Australian population or to all Australians.



**Figure 1: Age structure: Northern Territory, Aboriginal and non-Aboriginal populations and Australian non-Aboriginal populations, 30 June 1986**



Source: Australian Bureau of Statistics, Census of population and housing 1986

## 2 The Aboriginal population

According to the 1986 Australian Census of Population and Housing, for Australia the Aboriginal population was 227,645: 206,104 Australian Aborigines and 21,541 Torres Strait Islanders (Table 1). Of these, 34,739 (16.6 per cent) lived in the Northern Territory. Within the Territory, the largest numbers are in the Central Northern Territory, East Arnhem, Lower Top End and Darwin City statistical subdivisions (see Table 2). Of all Aborigines in the Northern Territory, 29 per cent lived in the Central Northern Territory statistical subdivision, where they comprised 31 per cent of the total population.

The Aboriginal population of the Northern Territory is relatively young compared with the total Australian population. Almost 40 per cent of Aborigines are less than 15 years of age, compared with 24 per cent of the total population (Figure 1). Less than five per cent of Aboriginal Territorians are aged 60 years or over, compared with more than 13 per cent of the total Australian population. The age structure of the non-Aboriginal population of the Northern Territory is quite different to the overall Australian pattern, having a greater proportion of young adults than does the total Australian population. Of non-Aboriginal Territorians, 28 per cent are less than 15 years of age, and less than four per cent are aged 60 years or more (Figure 1).

In the Northern Territory, there are no cities classified as major urban areas (centres with a total population of 100,000 or more). Only 31 per cent of Aborigines live in 'other urban' centres (those with a total population of 1,000 or more), compared with 84 per cent of other Territorians. More than 38 per cent of Aborigines live in rural localities (population centres of between 200 and 999 persons), compared with only three per cent of non-Aborigines. According to the census, 31 per cent of Aborigines live in 'other rural' locations: an increasing number in small groups in their traditional homelands, and the rest in Aboriginal towns and settlements on Aboriginal lands and reserves.

**Table 1: Australian Aboriginal and Torres Strait Islander population, by States and Territories, 1986**

<i>State/Territory</i>	<i>Total</i>	<i>Australian Aborigines</i>	<i>Torres Strait Islanders</i>	<i>Proportion of total population (%)</i>
Northern Territory	34,739	34,197	542	22.4
New South Wales	59,011	55,672	3,339	1.1
Victoria	12,611	10,740	1,871	0.3
Queensland	61,268	48,098	13,170	2.4
Western Australia	37,789	37,110	679	2.7
South Australia	14,291	13,298	993	1.1
Tasmania	6,716	5,829	887	1.5
Australian Capital Territory	1,220	1,160	60	0.5
<b>Australia</b>	<b>227,645</b>	<b>206,104</b>	<b>21,541</b>	<b>1.5</b>

Source: Australian Bureau of Statistics, Census of population and housing 1986

**Table 2: Aboriginal and total populations, Northern Territory, by statistical division and subdivision, 1986**

<i>Statistical division/ subdivision</i>	<i>Aborigines</i>	<i>Total population</i>	<i>Proportion Aboriginal (%)</i>
Darwin	5,536	72,939	7.6
Darwin City	4,788	66,132	7.2
Outer Darwin	178	1,097	16.2
Palmerston	570	5,710	10.0
Northern Territory - balance	29,196	81,033	36.0
Bathurst-Melville Islands	1,650	1,806	91.4
Vernon	945	8,166	11.6
Alligator	2,614	5,659	46.2
East Arnhem	5,155	10,381	49.7
Daly	1,479	2,494	59.3
Lower Top End	5,114	13,832	37.0
Barkly	2,256	6,396	35.3
Central Northern Territory	9,983	32,299	30.9
Northern Territory	34,738	154,848	22.4

Note: The totals includes six Aborigines and 876 other persons classified under 'Migratory and off-shore'.

Source: Australian Bureau of Statistics, Census of population and housing 1986

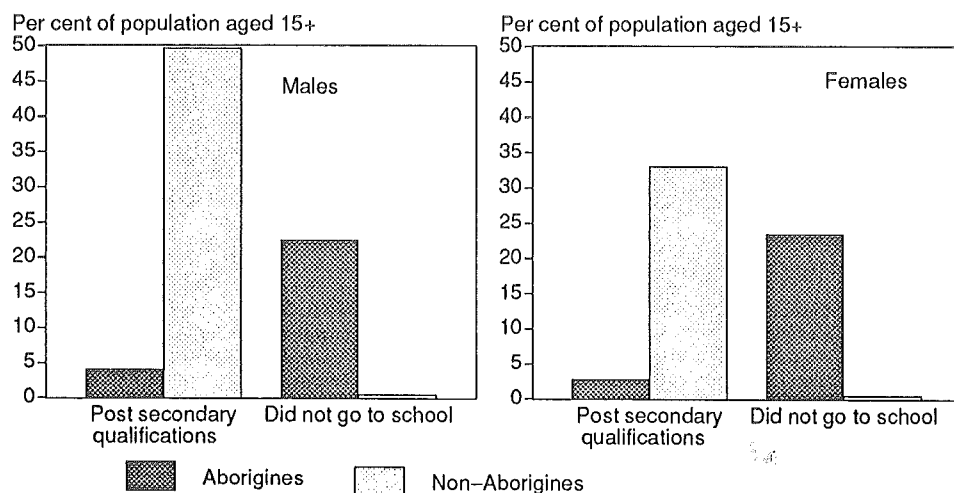
### 3 Selected social indicators

#### Education

The 1986 Australian Census revealed substantial improvements in educational attendance of Aborigines in the Northern Territory. More than 93 per cent of Aborigines aged 15-24 years had had some schooling, whereas 52.8 per cent of those aged 55 years or more had not attended school. Overall, for people aged 15 years or more, 23.1 per cent of Aborigines had never attended school, compared with 0.5 per cent of non-Aborigines (see Figure 2, which shows the proportions for males and females separately).

Despite these improvements, a lower proportion of Aborigines than of the total population participate in education beyond 15 years of age. In 1986, of 15-24 year old residents of the Northern Territory, 5.0 per cent of Aborigines were participating in post-secondary education, compared with 10.1 per cent of non-Aborigines. Only 3.4 per cent of Aborigines had achieved post-secondary qualifications, compared with 42.1 per cent of other Territorians (Figure 2). These proportions are quite different to those for the total Australian populations: 30.2 per cent of all Australians had achieved post-secondary qualifications, but only 9.0 per cent of Aborigines. For the Northern Territory, tertiary qualifications had been achieved by 0.8 per cent of Aborigines, and by 12.6 per cent of non-Aborigines.

Figure 2: Educational attainment: Northern Territory, Aborigines and non-Aborigines, 30 June 1986

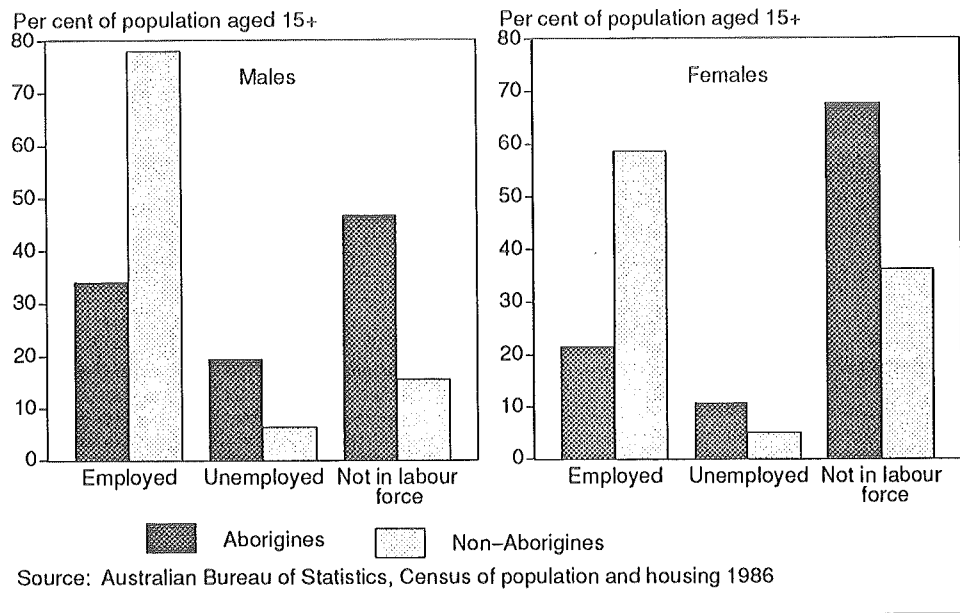


Source: Australian Bureau of Statistics, Census of population and housing 1986

#### Employment status

According to the Census, for males aged 15 years or more 46.7 per cent of Aborigines were not in the labour force, compared with 15.6 per cent of non-Aborigines. For females, 67.7 per cent of Aborigines were not in the labour force, compared with 36.2 per cent of other Northern Territory females. Of males in the labour force, 36.3 per cent of Aborigines were unemployed, compared with 7.6 per cent of other males in the Territory. Of females in the labour force, 33.1 per cent of Aborigines were unemployed, as were 8.0 per cent of non-Aborigines. Figure 3 shows the proportions not in the labour force and, of those in the labour force, the proportions employed and unemployed.

**Figure 3: Labour force status: Northern Territory, Aborigines and non-Aborigines, 30 June 1986**



Unemployment rates were particularly high for Aborigines in the 15-24 year age group, with 44.0 per cent of males and 41.5 per cent of females being unemployed.

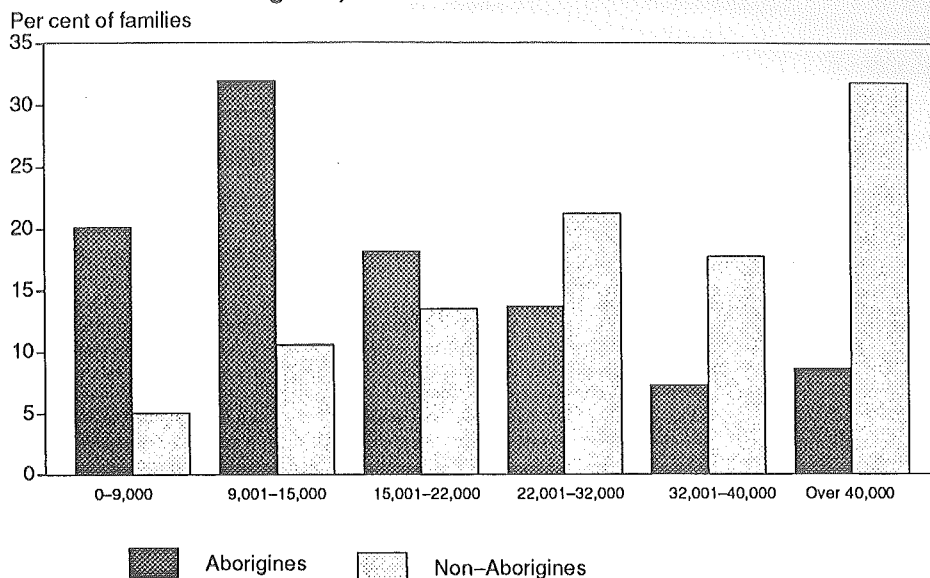
The occupational distribution of Aborigines is also atypical. Of employed Aboriginal males, 38.7 per cent were employed in labouring and related occupations, compared with 13.6 per cent of employed non-Aboriginal males in the Northern Territory. Of employed Aboriginal females, 21.5 per cent were employed in these occupations, compared with about 9.8 per cent of employed non-Aboriginal females. Of the Territory's employed Aborigines, 20.5 per cent were described as 'managers and administrators', 'professionals' or 'para-professionals', compared with 35.3 per cent of employed non-Aborigines.

### **Economic status**

The low levels of education and high rates of unemployment result in a substantially lower economic status for Aborigines. According to the 1986 Census, for those people aged 15 years or more providing details of income, only 11.5 per cent of Aborigines had an individual income of more than \$15,000, compared with 51 per cent of other Territorians. Only 29.6 per cent of Aboriginal families had an income of more than \$22,000, compared with 70.8 per cent of non-Aboriginal families in the Northern Territory (see Figure 4). While a small minority of Aborigines living in remote areas have the capacity to overcome some of the economic disadvantage through subsistence activities, the majority of Aborigines cannot do so.

The prospects for future improvements in economic status are limited by the extent to which current Aboriginal income comes from social security sources: a much greater proportion of Aboriginal than of non-Aboriginal income is derived from such sources.

**Figure 4: Annual family income: Northern Territory, Aborigines and non-Aborigines, 30 June 1986**



Source: Australian Bureau of Statistics, Census of population and housing 1986

## Housing

The level and standard of current housing is a clear expression of Aboriginal disadvantage, not only in remote areas, but also in long-settled parts of Australia. For Australia as a whole, it was estimated in 1987 that over 70,000 Aborigines (31 per cent of the Census population) were homeless or living in inadequate accommodation (Aboriginal Development Commission 1988). The sub-standard living conditions are generally characterised by overcrowding, inadequate water and washing facilities, poor sanitation and sewage disposal, limited food storage and sub-optimal food preparation facilities.

To adequately house Aboriginal Territorians living in sub-standard or overcrowded conditions, it was estimated that 3,515 additional dwellings were required (Aboriginal Development Commission 1988). The estimated number of dwellings had decreased from the number estimated in 1985, 4,119, but the cost of overcoming the continuing backlog, \$234 million, was higher.

Although the statistics collected need to be interpreted within the context of Aboriginal views of appropriate housing, the 1986 Australian Census confirmed that each Aboriginal dwelling housed a higher number of people than did other dwellings. For separate houses in the Northern Territory, the median number of occupants per dwelling was 5.4 for Aborigines and 3.3 for other Territorians.

## 4 Fertility and pregnancy outcome

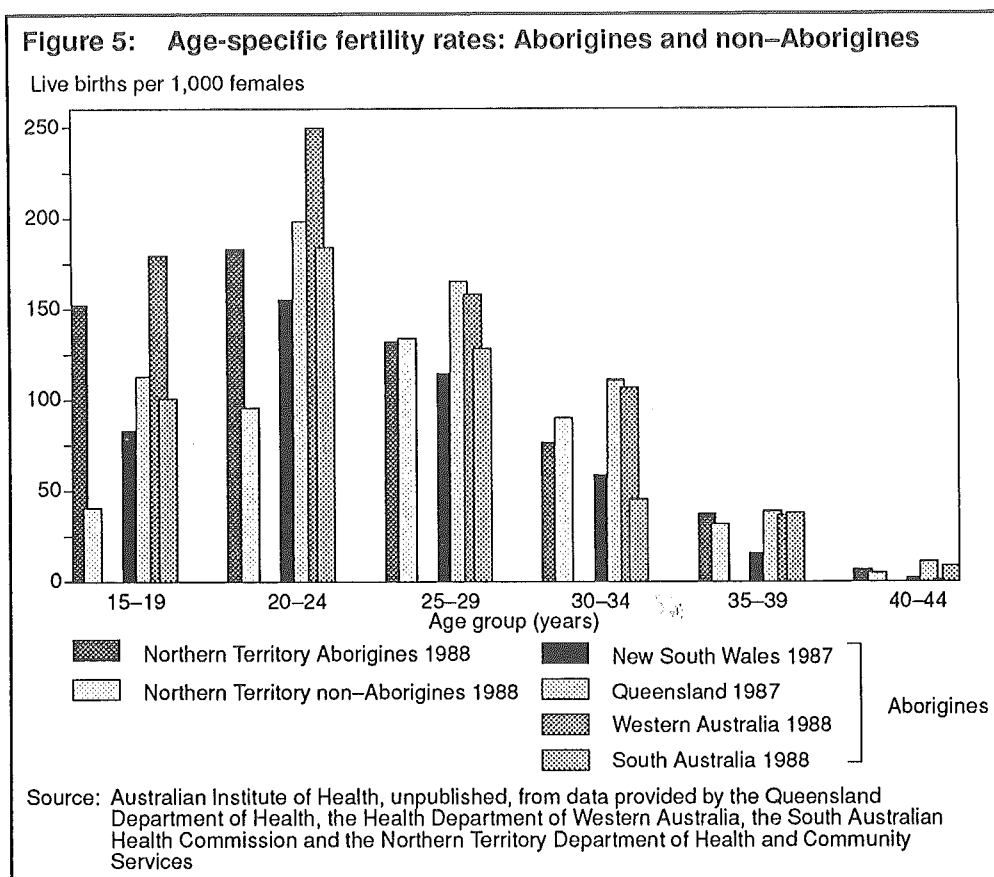
### Fertility

The fertility<sup>3</sup> of Aboriginal women in the Northern Territory remains much higher than that of non-Aboriginal women. This is despite the fact that Aboriginal fertility in the Northern Territory, and in other parts of Australia, has declined substantially since the late 1960s, largely in parallel with the decline in fertility in the total population (Gray 1983; Gray 1990a).

The higher present-day fertility of Aboriginal women is largely due to the great excess of births occurring at young ages, particularly in the teenage years (see Figure 5).

The great differences in maternal age mean that 33 per cent of Aboriginal women having babies are aged 19 years or younger, compared with less than eight per cent for other Northern Territory women.

Compared with the total fertility rate of 1,984 children per 1,000 non-Aboriginal women in the Northern Territory in 1988, the rate for Aboriginal women was 2,936 per 1,000.



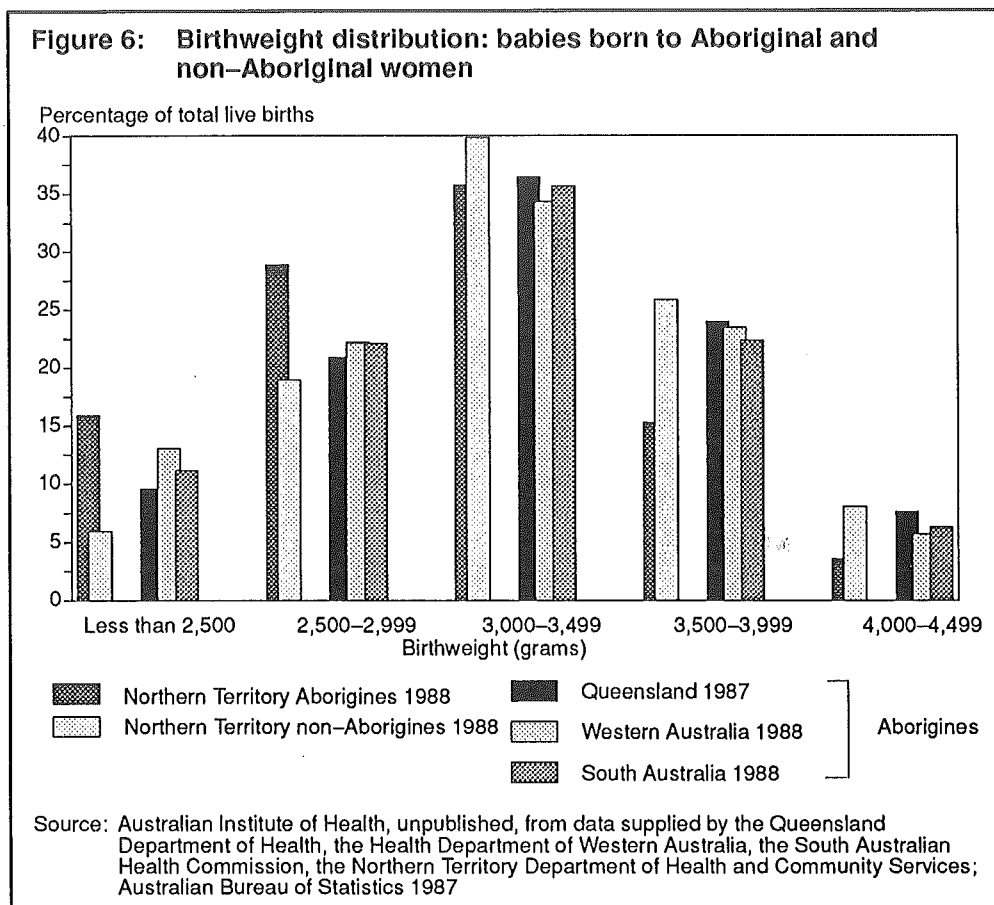
3. Fertility is used in the technical sense, denoting actual, rather than potential, reproductive performance. See Glossary for further detail.

## Birthweight

Babies born to Aboriginal women were around 250 grams lighter than those born to non-Aboriginal women. In 1988, the mean birthweight of babies born to Aboriginal women was 3,030 grams, and the median weight was 3,070 grams. For babies born to non-Aboriginal women, the mean weight was 3,310 grams and the median 3,310 grams.

Of particular significance is the proportion of babies of low birthweight, that is, less than 2,500 grams. In 1988, 15.9 per cent of babies born to Aboriginal women were of low birthweight, compared with 6.0 per cent of babies born to non-Aboriginal women (see Figure 6).

Within the Territory, there are considerable regional variations in the birthweights of babies born to Aboriginal women (see Table 3). Overall in 1988, Aboriginal women in the East Arnhem region gave birth to babies of lower birthweights than in the other regions, with 21.1 per cent of babies being of low birthweight. For Aboriginal women, mean and median birthweights were highest in the Alice Springs/Barkly region. Interestingly, the proportion of babies of low birthweight in the Alice Springs/Barkly region (14.6 per cent) was higher than the proportion in the Darwin region (12.6 per cent), for which region the mean and median birthweights of babies born to Aboriginal women were slightly lower.





**Table 3: Birthweights: babies born to Aboriginal and non-Aboriginal women, Northern Territory, 1988, by region.**

Region	Aborigines			Non-Aborigines		
	Mean	Median	LBW proportion (%)	Mean	Median	LBW proportion (%)
Darwin	3,060	3,085	12.6	3,255	3,270	6.5
Alice Springs/Barkly	3,095	3,140	14.6	3,370	3,365	5.1
Katherine	3,070	3,095	16.3	3,335	3,340	6.9
East Arnhem	2,865	2,915	21.1	3,440	3,425	3.6

Source: Australian Institute of Health, unpublished, from data provided by the Northern Territory Department of Health and Community Services

# 5 Mortality

## Expectation of life

The extent of Aboriginal health disadvantage is reflected in their expectation of life at birth, markedly lower than that of other residents of the Northern Territory, and poor even by international standards.

In 1985, for Aboriginal males in the Northern Territory, the estimated expectation of life at birth was 53.2 years (see Table 4 and Figure 7), about 19 years less than that of non-Aboriginal males in the Northern Territory, 72.3 years. For Aboriginal females, the estimated expectation of life at birth was 61.6 years, almost 16 years less than that of non-Aboriginal females in the Northern Territory, 77.4 years.

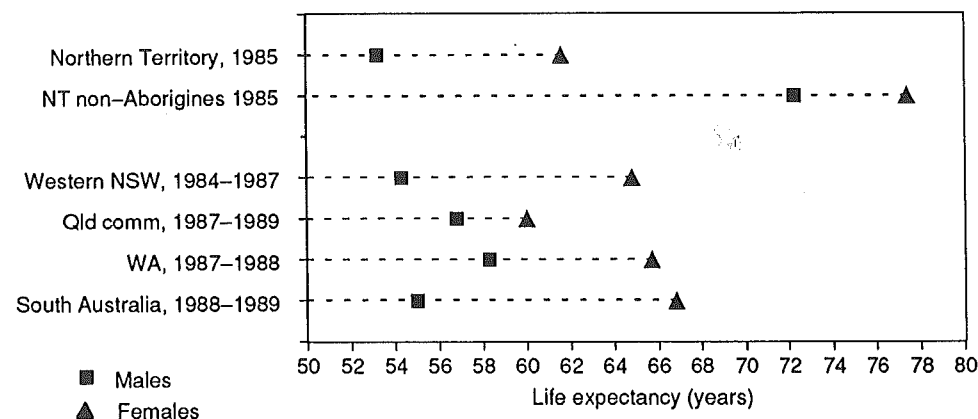
A detailed study of Aboriginal deaths occurring in the central Australian area of the Northern Territory in the period 1984-1986 has provided a similar estimate of expectation of life at birth for Aboriginal males, 52.4 years (Khalidi 1989). The expectation of life at birth for Aboriginal females was estimated as 65.1 years, slightly higher than the estimate for the Territory as a whole.

**Table 4: Expectation of life at birth: Aborigines for selected regions, by sex**

	Male	Female
Northern Territory, 1985	53.2	61.6
Central NT, 1984-1986	52.4	65.1
Western New South Wales, 1984-1987	54.3	64.8
Queensland communities, 1987-1989	56.8	60.0
Western Australia, 1987-1988	58.3	65.7
South Australia, 1988-1989	55.0	66.8

Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Registry of Births, Deaths and Marriages and the Northern Territory Department of Health and Community Services; Gray and Hogg 1989; Holman and Quadros 1986; Khalidi 1989

**Figure 7: Expectation of life at birth: Aborigines and non-Aborigines by selected region**



Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Registry of Births Deaths and Marriages and the Northern Territory Department of Health and Community Services; Gray and Hogg 1989

These estimates are broadly consistent with those for Aborigines living in other parts of Australia<sup>4</sup>, and with an intercensus survival analysis applied to population figures from the 1981 and 1986 Australian Censuses (see Table 5).

**Table 5: Expectation of life at birth: Aborigines for States and Territories, based on intercensal survival estimates (years)**

	Male	Female
Northern Territory	53.7	61.8
New South Wales/Australian Capital Territory	56.9	65.0
Victoria/Tasmania	57.2	66.6
Queensland	55.6	63.9
Western Australia	55.3	63.2
South Australia	56.2	65.1
Australia	55.7	63.9

Source: Gray 1990b

### Standardised mortality

After adjustment for differences in the age structures of the Aboriginal and non-Aboriginal populations<sup>5</sup>, the death rates of Aboriginal males and females in the Northern Territory in 1985 were 4.0 times those of the total Australian male and female populations. Table 6 shows the number of observed and expected deaths for Aborigines in the Northern Territory, along with the standardised mortality ratios (including 95 per cent confidence intervals) (see also Figure 8). Data from a number of other regions are shown for comparison.

**Table 6: Aboriginal observed and expected number of deaths, and standardised mortality ratios**

Male	Observed No	Expected No	SMR
Northern Territory, 1985	209	52.2	4.0 (3.5-4.6)
Central Northern Territory, 1984-1986	113	38.3	3.0 (2.4-3.5)
Western New South Wales, 1984-1987	205	56.8	3.6 (3.1-4.1)
Queensland communities, 1987-1989	226	73.8	3.1 (2.7-3.5)
Western Australia, 1987-1988	387	156.9	2.5 (2.2-2.7)
South Australia, 1988-1989	155	45.4	3.4 (2.9-4.0)
Female	Observed No	Expected No	SMR
Northern Territory, 1985	151	37.4	4.0 (3.4-4.7)
Central Northern Territory 1984-1986	76	29.9	2.5 (2.0-3.1)
Western New South Wales, 1984-1987	110	34.6	3.2 (2.6-3.8)
Queensland communities, 1987-1989	168	38.4	4.4 (3.7-5.0)
Western Australia, 1987-1988	240	93.3	2.6 (2.2-2.9)
South Australia, 1988-1989	90	34.0	2.6 (2.1-3.2)

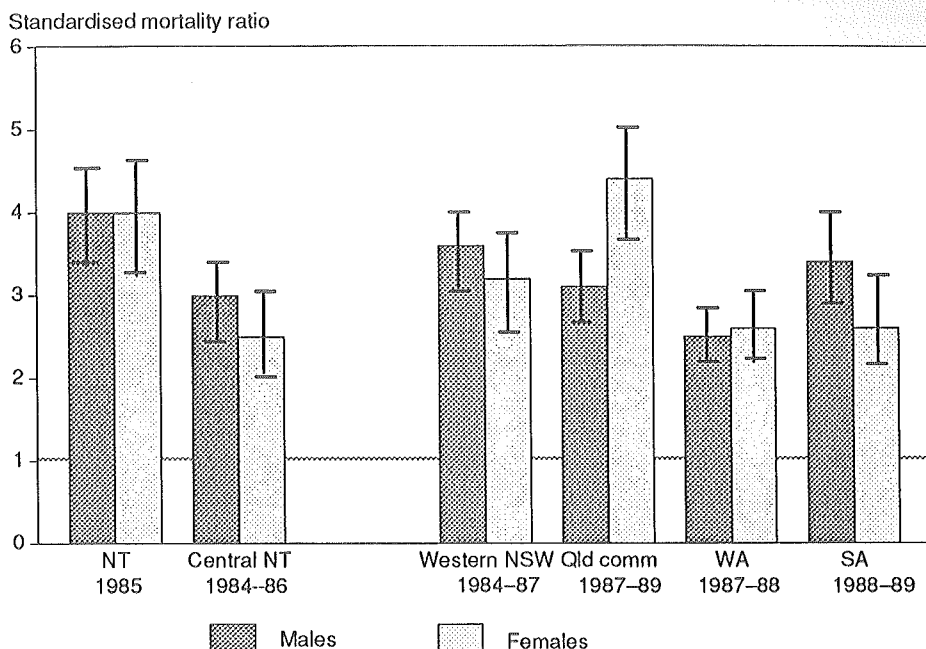
Note: The estimated number of deaths and the SMRs may differ slightly from those provided in the sources, as they have been recalculated using the 1986 age-specific death rates of the total Australian male and female populations.

Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Registry of Births, Deaths and Marriages and the Northern Territory Department of Health and Community Services; Gray and Hogg 1989

4. The Queensland data apply to the Aboriginal reserve communities.

5. A technique known as indirect standardisation is used to provide an estimate of the number of deaths expected by the various Aboriginal sub-populations if they experienced the same age-specific death rates as the non-Aboriginal population. The ratio of the number of deaths observed to the number expected is known as the standardised mortality ratio (SMR).

**Figure 8: Standardised mortality ratios: Northern Territory Aborigines compared with other Aborigines**



Note: The vertical lines indicate the 95% confidence range for each SMR. The SMRs have been estimated using the age-specific death rates for the 1986 Australian populations.

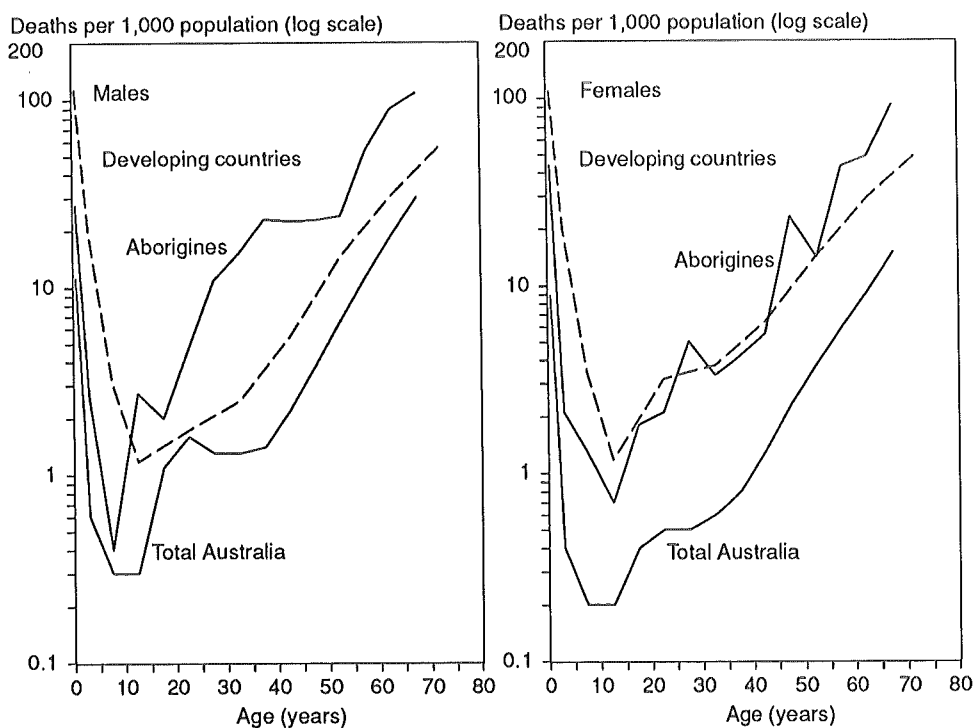
Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Registry of Births Deaths and Marriages and the Northern Territory Department of Health and Community Services; Gray and Hogg 1989; Australian Bureau of Statistics, Deaths Australia 1985, Cat.No.3302.0; Khalidi 1989

### Age-specific death rates

The most striking aspect of Aboriginal mortality is the much higher death rates experienced by young adults, with the Aboriginal:total Australian population ratios of age-specific death rates being highest for young and middle aged adults. The age-specific death rates for Aborigines in the Northern Territory, for 1985, are shown in Figure 9, along with the rates for the total Australian population.

The pattern of Aboriginal age-specific death rates is highly unusual, even compared with the rates typical of a developing country, also shown in the Figure. While Aboriginal death rates in infancy and early childhood are much lower than those reported for developing countries, beyond the teenage years the position for Aboriginal males is reversed, with death rates for young and middle aged being higher. For Aboriginal adult females, the reported age-specific death rates are similar to those reported for developing countries.

**Figure 9: Age-specific death rates: Northern Territory Aborigines and total Australian population, 1985, and developing countries**



Source: Australian Institute of Health, unpublished, from data provided by the Northern Territory Department of Health and Community Services

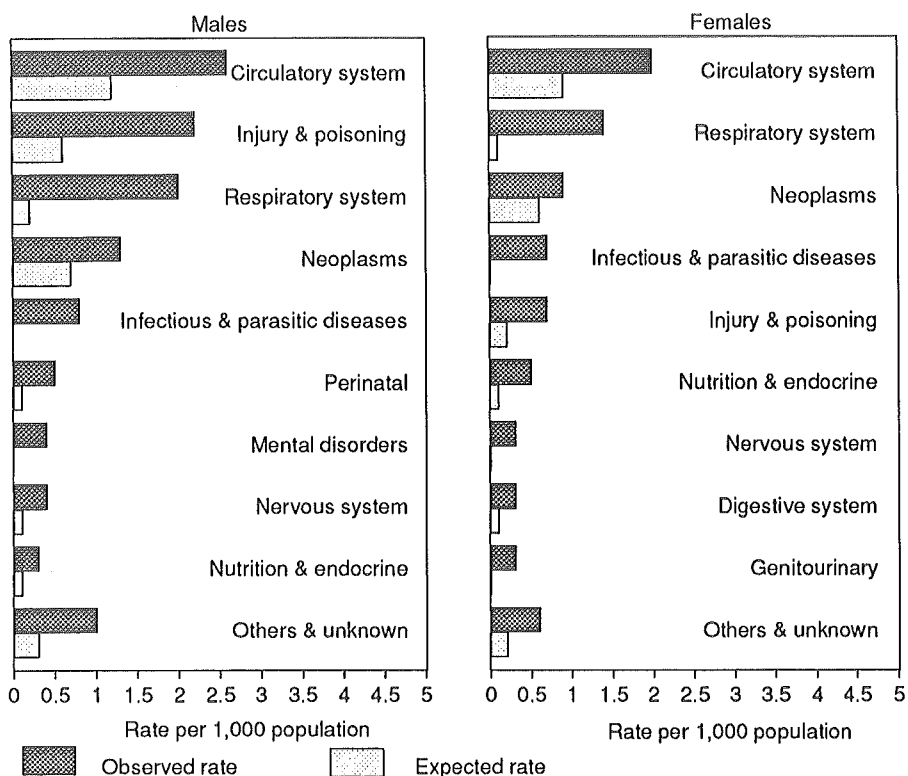
### Causes of death

In 1985, the major cause of Aboriginal deaths in the Northern Territory, was disease of the circulatory system, for both males and females (see Figure 10). Overall, death rates from these diseases, including ischemic and other heart disease, were more than twice those of the total Australian populations. Disease of the circulatory system accounted for 16 per cent of the excess mortality experienced by Aboriginal males, and for 18 per cent of that experienced by Aboriginal females.

For Aborigines, the second most frequent cause of death for females, and third for males, was disease of the respiratory system, including acute infectious conditions (particularly pneumonia) and chronic airways disease. In terms of the excess Aboriginal mortality in the Northern Territory, disease of the respiratory system was the most important cause of death, being responsible for 19 per cent of the excess experienced by Aboriginal males, and for 21 per cent of that experienced by Aboriginal females.

In 1985, the ICD group 'External causes of injury and poisoning' (including motor vehicle and other accidents, suicide and self-inflicted injury, and homicide and injury purposely inflicted by others) was the second most frequent cause of death for Aboriginal males in the Northern Territory, but only sixth for females. These causes were responsible for 18 per cent of the excess mortality experienced by Aboriginal males, and for eight per cent of that experienced by Aboriginal females.

**Figure 10: Leading causes of death: Northern Territory, Aborigines, observed and expected rates**



Source: Australian Institute of Health, unpublished, from data provided by the Northern Territory Department of Health and Community Services

Neoplasms were the third leading cause of death for Aboriginal females, and fourth for Aboriginal males. They were responsible for six per cent of the excess mortality experienced by Aboriginal females, and for seven per cent of that experienced by Aboriginal males.

In 1985, the ICD group 'Infectious and parasitic' was the fourth leading cause of death for Aboriginal females, and fifth for males. However, diseases in this group (being largely preventable) are now responsible overall for very few deaths in Australia (in 1985, 136 male deaths and 124 female deaths). As a result, diseases within the group contribute disproportionately to the excess mortality experienced by Aborigines in the Northern Territory, 11 per cent of the female excess and nine per cent of the male excess.

While disease of the circulatory system was the leading cause of death, a striking feature of Aboriginal mortality in the Northern Territory is the proportion of the excess deaths caused by infectious diseases. In 1985, around a quarter of the excess deaths were caused by pneumonia and other infections of the respiratory tract or by conditions included in the 'Infectious and parasitic' group.

## Fetal and infant mortality<sup>6</sup>

For the Northern Territory, the Aboriginal infant mortality rate (deaths in the first year of life per 1,000 live births) has declined significantly since the early 1970s, from 83 infant deaths per 1,000 live births in 1972-1973 to 32 per 1,000 in 1986-1988 (see Table 7 and Figure 11).

For the Northern Territory, and for Queensland and Western Australia, the major decline occurred during the 1970s, and there was little further improvement in the 1980s. For 1986-1988, the infant mortality rate for Aborigines in the Northern Territory was 3.7 times that of the total Australian population.

The other useful indicator of fetal and infant survival is the perinatal mortality rate, which is the number of late fetal deaths (stillbirths) and neonatal deaths (deaths of live born infants within the first 28 days of life) per 1,000 total births (live births plus late fetal deaths). Some caution needs to be used in comparing the figures quoted here with international figures, some of which relate only to late fetal deaths and deaths of live born infants within the first seven days of life.

The available estimates reveal that the perinatal mortality rate for Aborigines in the Northern Territory has declined only slightly from 57 deaths per 1,000 in 1972-1973 to 46 per 1,000 in 1986-1988 (4.2 times the rate for the total Australian population) (see Table 8 and Figure 12). The improvements in the

**Table 7: Infant mortality rates<sup>(a-d)</sup>, Aboriginal and total Australian population, by triennium**

	Northern Territory		Queensland communities		Western Australia		South Australia		Total population Australia
1972-1973	83.4	(5.0)	82.6	(5.0)	na		na		16.6
1974-1976	52.8	(3.6)	63.4	(4.3)	na		na		14.8
1977-1979	55.9	(4.7)	42.0	(3.5)	25.8	(2.1)	na		12.0
1980-1982	34.9	(3.4)	27.2	(2.6)	25.1	(2.4)	na		10.3
1983-1985	33.5	(3.5)	28.1	(2.9)	25.1	(2.6)	na		9.6
1986-1988	32.2	(3.7)	20.7	(2.4)	24.1	(2.8)	20.4	(2.3)	8.7

(a) Rates are infant deaths per 1,000 live births.

(b) Numbers in parentheses are the Aboriginal:total population rate ratios.

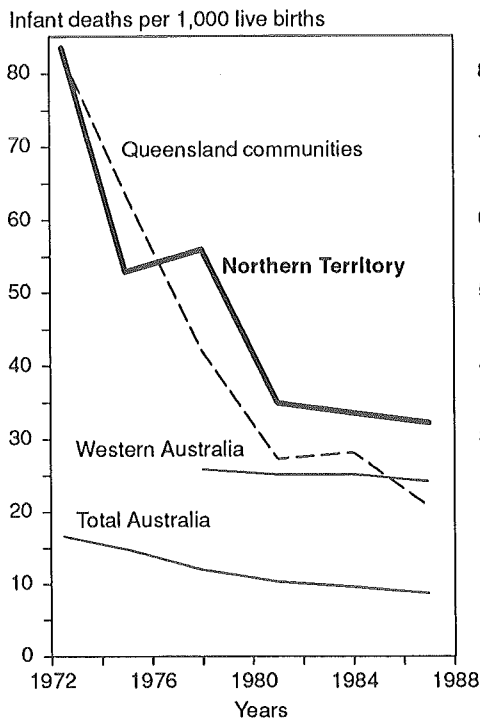
(c) Except for the first period (1972-1973) and the figures included under 1977-1979 for Western Australia, these estimates represent the grouped data for three-year periods. Reliable data are not available for 1971, nor for Western Australia for 1977.

(d) The data provided for 1988 by the South Australian Health Commission have been updated with figures from Hampton and Rogers (1990).

Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Health Commission and the Northern Territory Department of Health and Community Services; Australian Bureau of Statistics 1988a, 1988b

6. The estimation of Aboriginal rates has followed the convention of using as the denominator the number of births to Aboriginal mothers, disregarding the race of the father. This convention developed because of the absence of separate figures of the numbers of births to non-Aboriginal mothers and Aboriginal fathers. The exclusion of such births from the denominator may result in overestimation of the level of Aboriginal infant mortality, the presence and extent of overestimation depending on the numbers of these births relative to the numbers born to Aboriginal mothers, and on the actual identification of babies and of infant deaths. The preparation of precise estimates of Aboriginal rates requires accurate information about the identification of babies, for both the denominator (births) and numerator (deaths). Since the definition of Aboriginality involves an element of self-identification, it is possible that some deaths of Aboriginal infants may not be identified as such if the infant's Aboriginality is assessed without reference to the parents. On the other hand, it is also possible that some babies with an Aboriginal mother or father may not in fact be identified by their parents as such.

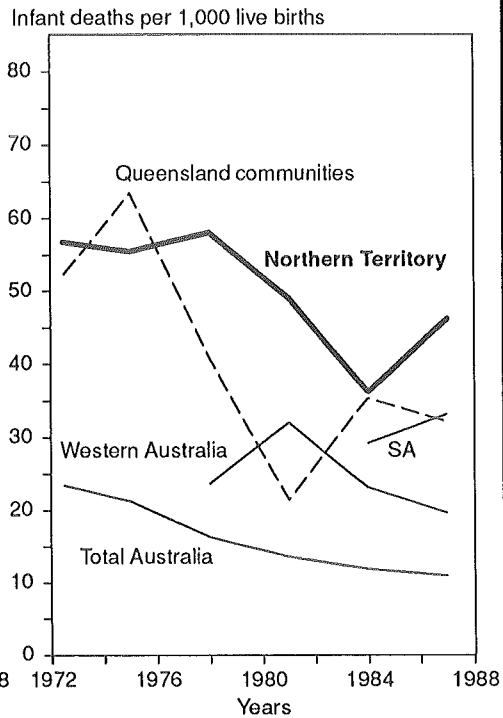
**Figure 11: Infant mortality rates, Aboriginal and total Australian population**



Note: Rates are infant deaths per 1,000 live births.

Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the Northern Territory Department of Health and Community Services

**Figure 12: Perinatal mortality rates, Aboriginal and total Australian population**



Note: Rates are perinatal deaths per 1,000 total births.

Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Health Commission and the Northern Territory Department of Health and Community Services

survival of neonates have not been matched with improvements in fetal survival, the reported rate of late fetal deaths being virtually steady since the early 1970s. It is possible, of course, that real improvements in fetal survival may have been offset by better reporting of late fetal deaths.

The major component contributing to the reductions in the infant mortality rate has been the decline in postneonatal deaths (deaths between 28 days and one year of age of live born infants). For the Northern Territory, the postneonatal mortality rate has declined from 49 deaths per 1,000 live births in 1972-1973 to 14 per 1,000 in 1986-1988 (still 3.5 times the rate for the total Australian population).



**Table 8: Perinatal mortality rates<sup>(a,b)</sup>: Aborigines and total Australian population, by triennium**

	<i>Northern Territory</i>		<i>Queensland communities</i>		<i>Western Australia</i>		<i>South Australia</i>		<i>Total population Australia</i>
1972-1973	56.7	(2.4)	52.3	(2.2)	na		na		23.4
1974-1976	55.4	(2.6)	63.4	(3.0)	na		na		21.2
1977-1979	58.0	(3.5)	40.8	(2.5)	23.6	(1.4)	na		16.3
1980-1982	49.0	(3.6)	21.4	(1.6)	32.0	(2.4)	na		13.6
1983-1985	36.2	(3.0)	35.3	(3.0)	23.1	(1.9)	29.2	(2.4)	11.9
1986-1988	46.1	(4.2)	32.1	(2.9)	19.6	(1.8)	33.1	(3.0)	10.9

(a) Rates are late fetal deaths plus neonatal deaths per 1,000 total births (live births plus late fetal deaths).

(b) Numbers in parentheses are the Aboriginal:total population rate ratios.

Source: Australian Institute of Health, unpublished, from data supplied by the Queensland Department of Health, the Health Department of Western Australia, the South Australian Health Commission and the Northern Territory Department of Health and Community Services; Australian Bureau of Statistics 1988a, 1988b; Hampton and Rogers 1990

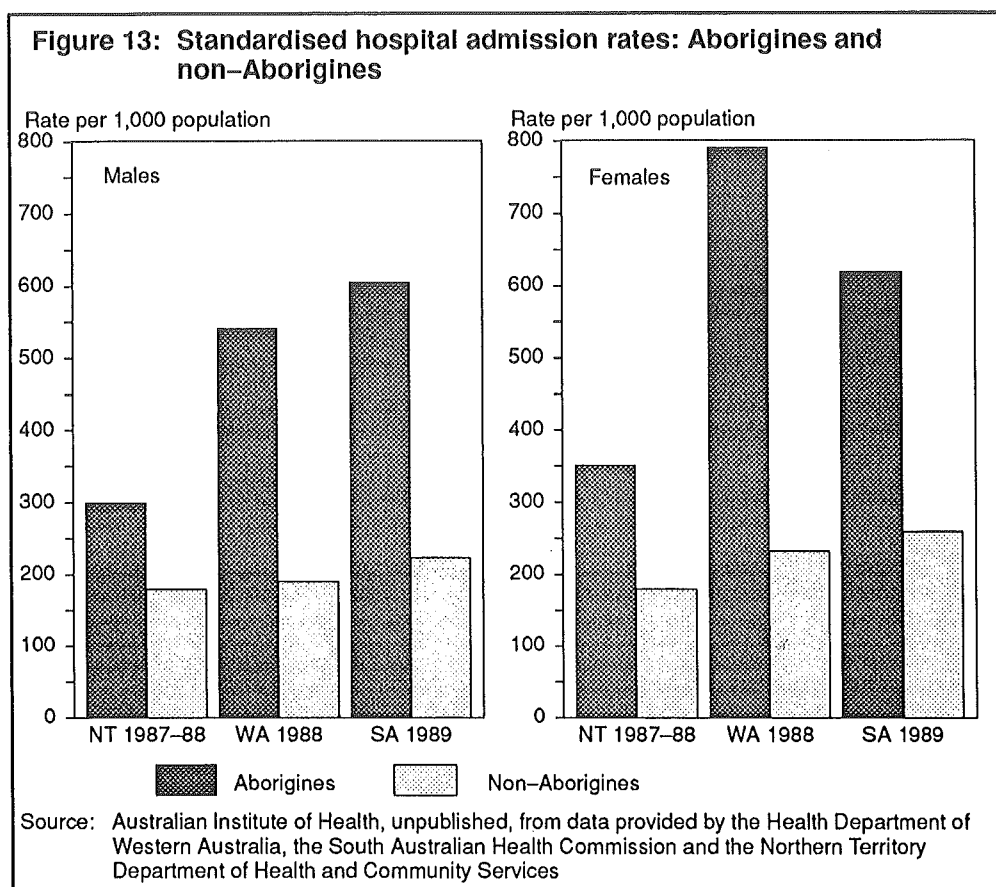
## 6 Hospitalisation

While not necessarily accurately reflecting the extent or pattern of treatable illness in the community, hospital statistics, generally reflecting more serious types of morbidity, confirm the relatively poor health status of Aborigines, both in terms of the rate of hospitalisation and the length of stay in hospital.

Overall in the Northern Territory, Aborigines are admitted to hospital almost twice as frequently as are non-Aborigines, and, once admitted, tend to stay slightly longer. They are admitted more frequently for virtually every cause, and for every age-group, than are non-Aborigines.

### Admission<sup>7</sup> rates

Admission data for Aborigines and non-Aborigines living in the Northern Territory, directly standardised using the World Standard Population as the reference population, reveal that in 1987-88 the hospital admission rate for Aboriginal males was 1.9 times that for non-Aboriginal males, and the rate for Aboriginal females was 2.0 times the non-Aboriginal rate (see Figure 13).



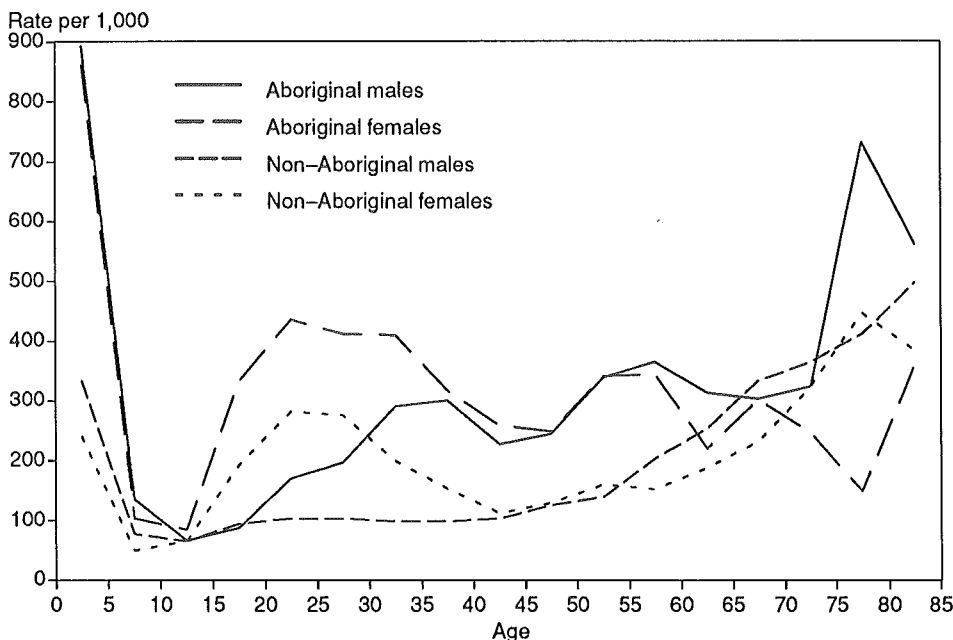
7. Hospitalisation data are usually reported in terms of 'separations', comprising discharges, transfers and deaths. However, in this paper the more generally understood term 'admission' is used.

### Age-specific admission rates

For almost all age groups, the age-specific admission rates for Aborigines were higher than for non-Aborigines (Figure 14). For Aborigines, by far the highest age-specific admission rates were for infants and young children (age group 0-4 years), whereas for non-Aborigines the highest rates were for older people (aged 65 years and older).

For females, the highest Aboriginal:non-Aboriginal rate ratio was for the 0-4 year age group, with the next highest ratios being found among middle aged adults (age groups 40-44 years and 55-59 years). For males, the highest ratios were for young and middle aged adults (age groups 30-34 years and 35-39 years), slightly higher than the ratio for infants and young children (age group 0-4 years).

**Figure 14: Age-specific hospital admission rates, Northern Territory, Aborigines and non-Aborigines, 1987-88**



Source: Australian Institute of Health, unpublished, from data provided by the Northern Territory Department of Health and Community Services

### Causes of hospitalisation

For Aboriginal males in the Northern Territory in 1987-88, the leading cause of hospitalisation was disease of the respiratory system (ICD 460-519), with more than half the admissions being contributed by the 0-4 year age group.

Conditions classified within the ICD group 'External causes of injury and poisoning' (ICD E800-E999) contributed the next highest number of admissions, with infectious and parasitic diseases (ICD 001-139) being the next most frequent cause of hospitalisation.

For Aboriginal females, after pregnancy-related conditions, the leading cause of hospitalisation was disease of the respiratory system, followed by conditions classified within the ICD group 'External causes of injury and poisoning'. Infectious and parasitic diseases were also frequent causes of admissions.

## 7 Summary

The current data support the findings of the Northern Territory Department of Health's 1986 review of health and illness in the Territory: Aboriginal ill-health is a major cause of premature deaths and excess hospitalisation, and many of the causes of ill-health are preventable.

Overall, Aboriginal mortality is four times that of the total Australian population. The major cause of Aboriginal deaths in the Northern Territory, as in other parts of Australia, is disease of the circulatory system, including heart disease. However, in terms of the excess mortality experienced by Aborigines, the various infectious diseases, including those of the respiratory tract, make the largest contribution. The greatest difference between Aboriginal and non-Aboriginal death rates is found among young and middle aged adults.

The net result of the excess mortality experienced by Aboriginal males is that the expectation of life at birth is about 19 years less than that of other males in the Northern Territory. For females, expectation of life at birth of Aborigines is almost 16 years less than that of other females in the Territory.

Despite substantial improvements since the early 1970s, the mortality of Aboriginal infants in the Northern Territory remains more than 3.5 times that of the total Australian population, and perinatal mortality is about four times that of all Australians.

The rates of hospitalisation of Aborigines are around twice those of other Northern Territorians. The greatest differences between Aboriginal and non-Aboriginal admissions are for infants and young children and for young and middle aged adults.

By virtually every health status measure, the health of Aborigines in the Northern Territory, and elsewhere in Australia, is much worse than that of other Australians. The extent of Aboriginal health disadvantages clearly justifies the attempts by the Commonwealth, State and Territory governments and Aboriginal communities to develop a National Aboriginal Health Strategy. The elimination of Aboriginal health disadvantages urgently needs the implementation of the broad-based strategy, along with complementary strategies aimed at redressing their social and economic disadvantages.

## Glossary

*Aborigine/Torres Strait Islander.* A person of Aboriginal or Torres Strait Islander descent who identifies as an Aborigine or Torres Strait Islander and is accepted as such by the community in which he (she) lives.

*age specific death rate.* Number of deaths in a specified period of persons of a specific age group per 1,000 persons of the same age group.

*age specific fertility rate.* The number of live births to women in a specified age group in one year per 1,000 women in the same age group.

*age standardised.* Weighted average of age-specific rates according to a standard distribution of age to eliminate the effect of different age distributions and thus facilitate valid comparison of groups with differing age compositions.

*expectation of life.* Predicted number of years of life remaining to a person if the present pattern of mortality does not change.

*fertility.* The actual production of live offspring. Fetal deaths and abortions are not included in the measurement of fertility in a population.

*fertility rate.* See age specific fertility rate.

*infant death.* Death of an infant within a year of birth.

*infant mortality rate.* Number of infant deaths per 1,000 live births.

*late fetal death.* Birth of a fetus weighing at least 500 grams (or where birthweight is unavailable, of at least 22 weeks gestation), which shows no signs of life.

*late fetal death rate.* Number of late fetal deaths per 1,000 total births, live and stillborn.

*low birthweight.* Less than 2,500 grams.

*neonatal death.* Death of an infant within 28 days of birth.

*neonatal mortality rate.* Number of neonatal deaths per 1,000 live births.

*perinatal death.* Stillbirths (fetal deaths) plus neonatal deaths.

*perinatal mortality rate.* Number of perinatal deaths per 1,000 total births.

*postneonatal death.* Death between 28 days and one year of birth of an infant surviving the neonatal period.

*postneonatal mortality rate.* Number of postneonatal deaths per 1,000 live births.

*prevalence.* The number of instances of a given disease or other condition in a given population at a designated time.

*Queensland Aboriginal communities.* Data relate to Aurukun, Bamaga, Cherbourg, Doomadgee, Pormpuraaw (Edward River), Hopevale, Kowanyama, Lockhart River, Gununa (Mornington Island), Palm Island, Weipa South, Woorabinda, Wujal Wujal and Yarrabah. Some recent data also include Camooweal, Cowal Creek, Thursday Island and Weipa North.

*relative risk.* The ratio of the risk of disease or death among the exposed to the risk among the unexposed.

*stillbirth.* See late fetal death

*stillbirth rate.* See late fetal death rate

*total fertility rate.* The number of live births a woman would have if, throughout her reproductive years, she had children at the rates prevailing in the reference calendar year. It is the sum of the age specific fertility rates for that calendar year.

## Reference

Last, J M (editor) (1988) *A dictionary of epidemiology*. Oxford University Press, New York.

## References

- Aboriginal Development Commission (1988) *1987 Aboriginal and Torres Strait Islander housing and accommodation needs survey*. Aboriginal Development Commission, Canberra.
- Australian Bureau of Statistics (1987) *Census 86. Aboriginals and Torres Strait Islanders: Australia, States and Territories*. Catalogue no. 2499.0. Australian Bureau of Statistics, Canberra.
- Australian Bureau of Statistics (1988a) *Deaths Australia, 1987*. Catalogue no. 3302.0. Australian Bureau of Statistics, Canberra.
- Australian Bureau of Statistics (1988b) *Perinatal deaths, Australia, 1987*. Catalogue no. 3304.0. Australian Bureau of Statistics, Canberra.
- Department of Aboriginal Affairs (1981) Report on a review of the administration of the working definition of Aboriginals and Torres Strait Islanders, Department of Aboriginal Affairs, Constitutional Section, Canberra.
- Devanesen D, Furber M, Hampton D, Honari M, Kinmonth N, Peach HG (1986) Health indicators in the Northern Territory. Northern Territory Department of Health, Darwin.
- Gray A (1983) *Australian Aboriginal fertility in decline*. Doctor of Philosophy thesis, Australian National University, Canberra.
- Gray A (1988) Reference estimates of Aboriginal mortality, 1981-1986. Paper presented at the Annual Conference, Australian Population Association, Brisbane, September 1988.
- Gray A (1990a) Aboriginal fertility: trends and prospects. *Journal of the Australian Population Association*;7(1):57-77.
- Gray A (1990b) National estimates of Aboriginal mortality, in Gray A (ed) *A matter of life and death: contemporary Aboriginal mortality*. Aboriginal Studies Press, Canberra: 147-158.
- Gray A, Hogg R (1989) Mortality of Aboriginal Australians in western New South Wales, 1984-1987. New South Wales Department of Health, Sydney.
- Hampton M, Rogers RJ (1990) *Aboriginal births and deaths: review of data quality and statistical summary, South Australia, 1988*. Australian Bureau of Statistics and Aboriginal Health Organisation of South Australia, Adelaide (ABS catalogue no. 4104.0)
- Hicks DG (1985) *Aboriginal mortality rates in Western Australia, 1983*. Master of Public Health thesis, University of Sydney, Sydney.
- Khalidi NA (1989) *The Aboriginal population of Alice Springs: a demographic study*. Doctor of Philosophy thesis, Australian National University, Canberra.
- Thomson N, Smith L (1985) An analysis of Aboriginal mortality in NSW country regions, 1980-1981. *Med J Aust Spec Suppl*;143: S49-S54.

### **Aboriginal and Torres Strait Islander health series**

- No 1: Overview of Aboriginal health status in Western Australia
- No 2: Overview of Aboriginal health status in the Northern Territory
- No 3: Overview of Aboriginal health status in South Australia
- No 4: Overview of Aboriginal health status in Queensland
- No 5: Overview of Aboriginal health status in New South Wales

### **Other publications and reports related to this series**

Australian Institute of Health (1986) *Aboriginal health statistics: proceedings of a workshop, Darwin, April 198*. Australian Institute of Health, Canberra.

*Aboriginal health information bulletins* Six-monthly bulletins produced by the AIH and the Australian Institute of Aboriginal Studies.

Thomson N and Merrifield P (1988) *Aboriginal health: an annotated bibliography* Aboriginal Studies Press, Canberra.

Thomson N, Paden F and Cassidy G (1990) *Identification of Aborigines in hospital admissions in the North Coast Health Region, New South Wales*. Published by the AIH and North Coast Health Region of the New South Wales Department of Health.

## **Australian Institute of Health publications series**

### **Aboriginal and Torres Strait Islander health series**

Reports on health problems of Aborigines and/or Torres Strait Islanders.

### **Australia's health series**

Biennial report on the health of Australians and the state of Australia's health services.

### **Disease classification series**

Publications, particularly from the National Nosology Reference Centre, on the use of the International Classification of Diseases, and on other classifications of disease.

### **Health care technology series**

Reviews, analyses and data relating to health care technology.

### **Health economics series**

Statistics and comments on financial and economic aspects of health services in Australia.

### **Health labourforce series**

Data and analysis on the health labourforce, including methodology, specific labourforce issues, and occupation specific topics.

### **Health services series**

Statistics and analysis on health service issues, including institutional and medical care.

### **Mortality series**

Analyses of Australian death data.

### **Prevention program evaluation series**

Social and economic evaluations of health promotion and disease prevention programs.