

## 2. Indigenous health status in perspective

### Infant mortality

The infant mortality rate is used internationally as one of the key indicators of community health. It is defined as the number of infant deaths (deaths of children less than one year of age) for every 1000 live births. Among Indigenous Australians there was an exceedingly high rate of infant mortality of around 100 infant deaths per 1000 live births—recorded as recently as the mid-1960s. In subsequent years, there was a steady and precipitous decline to around 26 per 1000 by 1981, with much of this due to improvements in post-neonatal mortality. While further improvement in infant survival also occurred during the 1980s and 1990s, this has been less impressive, with Indigenous infant mortality rates remaining consistently around two and a half times the Australian average. Consequently, about seven per cent of Indigenous male deaths and eight per cent of Indigenous female deaths occur to people less than one year-old. This compares with only one per cent of all deaths among all other infants (Cunningham & Paradies 2000). The latest available data from the ABS indicate an infant mortality rate among Indigenous infants of 14.1 per 1000 live births compared with 5.7 per 1000 live births among all infants (ABS 2000a: 75).

For Indigenous Australians, the initial drop in infant death rates coincided with improvements in community infrastructure and the development, in the 1970s, of intensive Indigenous health programs and services. However, this medical intervention is not the only factor leading to declines in infant mortality. While access and equity issues remain important in terms of the delivery of health care services to Indigenous Australians, further significant improvements in infant survival are also reliant on a decrease in the proportion of low birthweights which, in turn, is heavily correlated with nutritional issues, smoking rates, and the socio-economic status of mothers. In 1995–96, the proportion of low birthweight babies (less than 2500 grams) born to Indigenous mothers was almost twice that of babies born to non-Indigenous mothers (12.4 per cent compared with 6.2 per cent). Such low birthweight babies are less likely to survive, and those who do survive are more likely to have worse health early in life, and perhaps even in adulthood.

### Life expectancy

In 1973, the Australian government gave itself 10 years to raise the standard of health of Indigenous people to the level of that of the rest of the population. Almost 30 years later, Indigenous life expectancies remain stuck at around 20 years lower than the rest of the Australian population. The first reasonable national estimates of Indigenous mortality were obtained from 1981 and 1986 Census data and revealed life expectancies to be around 56 years for males and 64 years for females. Also apparent was a relative lack of mortality variation between the states and territories, although life expectancies were lowest in regions with the most remote and rural communities, a situation that has persisted. However, a pattern of relatively high death rates at all ages, but especially in middle adulthood between 30 and 50 years, was found to be universal. Once again, this feature

has shown little sign of subsequent abatement. While analysis of 1991 Census and mortality data indicated a slight improvement in overall survival prospects, data from the 1996 Census point to a slight worsening of overall mortality, with no change in male life expectancy but with female life expectancy falling below 64 years. One consequence partly associated with this differential mortality is that the Indigenous population has a much younger age profile with a median age in 1996 of 20 years compared with 34 years for the non-Indigenous population.

Leaving aside problems of identification of Indigenous people in official records, there is sufficient evidence to suggest that underlying age-specific death rates vary among Indigenous populations living in different parts of the country. The lowest life expectancies (53.7 years for males and 58.9 years for females) are found in the western half of the continent in Western Australia, South Australia and the Northern Territory. In the eastern half, life expectancies are somewhat higher (59.2 years for males and 63.6 years for females). Not surprisingly, the western jurisdictions closely match the distribution of regions which have persistently displayed the greatest socio-economic disadvantage against indices incorporating measures of housing adequacy, educational attainment, employment status and income status.

The most striking feature is the overall lack of progress in raising Indigenous life expectancies, given that survival chances for the total Australian population have undergone marked improvement over the period for which reliable Indigenous estimates have been available. More poignant is the fact that the level of mortality observed for Indigenous males at the end of the twentieth century is equivalent to that recorded for all Australian males at the beginning of the century. Among females, the comparison is similarly discouraging, with life expectancy for Indigenous females currently hovering around a level last recorded for females generally in 1920. This lack of steady improvement in life expectancy, despite declines in infant mortality, is a different demographic phenomenon compared with that of Indigenous peoples in New Zealand and North America, and it persists because of much higher rates of Indigenous Australian adult mortality.

### **Mortality—rates and causes**

Estimation of the true national level of Indigenous mortality remains constrained by incomplete vital registration. While the ABS now publishes reported Indigenous death statistics for all states and territories, most detailed tabulations, and certainly those used for trend analysis, are based on information from the Northern Territory, Western Australia and South Australia only. This is based on an assessment of the completeness of recording from a comparison of registered deaths in each state and territory against an estimate of expected deaths. Overall, in 1999, a total of 1980 Indigenous deaths were registered. This was more than twice the number that would have been expected if the age-specific death rates of the total Australian population were experienced throughout the Indigenous population.

Using data for the Northern Territory, Western Australia and South Australia, age-specific death rates were higher than for other Australians at all ages, but especially among those aged between 25 and 64 years (Cunningham & Paradies 2000: 30). For example, between the ages of 35 and 44 years, the ratio of Indigenous to non-Indigenous mortality rates is 6.9 for males and 7.8 for females (ABS and AIHW 1999: 132). While it is difficult to establish detailed trends in Indigenous mortality, owing to changes over time in the coverage of Indigenous deaths in vital statistics, there appears to have been a decline in age-specific death rates since 1994 in all age groups except for 15–24 and 45–54 years (ABS 2000a: 75). Overall, it remains the case that a high proportion of registered Indigenous deaths occur among young people. In 1999, the national median age at death for Indigenous people was 53 years, some 25 years less than the median age at death of all Australians (ABS 2000a: 74).

A good deal is now known about the immediate causes of ill-health and mortality among Indigenous Australians. Across all primary categories of the International Classification of Diseases (ICD9), relative risk for both Indigenous males and females remains notably higher than for other Australians. Most disparities, however, are concentrated around diseases of the circulatory system, external causes, and malignant neoplasms, while a relatively high incidence of respiratory diseases, endocrine diseases and diseases of the digestive system is also present. Together, these causes account for more than two-thirds (69 per cent) of the excess deaths among Indigenous people.

According to the most recently available data from deaths registration, diseases of the circulatory system are the leading cause of death among the Indigenous population, accounting for 31 per cent of all cases in 1999. Primary among these is ischaemic heart disease, responsible for 56 per cent of all recorded deaths in this category, followed by cerebrovascular disease (stroke) accounting for 19 per cent of deaths.

The second leading cause of death (16% of all Indigenous deaths) is external causes (including accidents, assault and intentional self-harm). By contrast, external causes are responsible for only seven per cent of deaths among the total population. Significantly, the median age at death for external causes is much lower among Indigenous people (28 years)—more than 10 years less than among the rest of the population.

Malignant neoplasms (cancers) account for about one-seventh of Indigenous deaths (14%). The most common of these (responsible for around 50 per cent of cases) are malignant neoplasms of the trachea, bronchus and lung. Diseases of the respiratory system and endocrine, nutritional and metabolic diseases are the next main causes of death (8% and 7% respectively). Among the latter, diabetes is responsible for as much as 87 per cent of all cases. Consequently, excess mortality due to diabetes is more than eight times the expected level if age-specific rates of the total population are applied. Diseases of the digestive system represent the final leading cause of death category among Indigenous people, accounting for five per cent of all deaths. This prevalence is four times that observed among the total population. The major contributor to Indigenous mortality within this category is liver disease.

## Morbidity

Data on hospital separations are often used as indicators of morbidity. However, as Deeble et al. (1998: 46) point out, these are imperfect measures as high rates may reflect not only serious morbidity but inadequate primary care or specialist services (especially in areas where Indigenous people are the predominant population). Low rates, on the other hand, may simply be the result of difficulties of access. In either event, the decision to hospitalise is often subjective and based on different perceptions of the need for hospital care on the part of doctors and health workers.

Cunningham and Beneforti (2000) have produced a major study of Indigenous and non-Indigenous hospital statistics that has greatly assisted in the analysis of morbidity. Despite implementation of the National Aboriginal and Torres Strait Islander Health Information Plan, as well as a series of framework agreements involving the federal, state and territory governments, inadequate identification of the Indigenous population within hospital records remains a major constraint for analysis. As a consequence, comparisons of the Indigenous population with other Australians using hospital statistics will underestimate the true differences between the two populations.

Notwithstanding under-reporting, and after adjusting for age differences, almost twice as many hospital separations were reported in 1997–98 for those identifying as Indigenous than would have been expected if they had experienced the same rates as the total population. Higher rates of Indigenous hospitalisation were also reported in the Northern Territory, Western Australia and South Australia, although the extent to which this reflects jurisdictional differences in the completeness of Indigenous identification in hospital records is unknown. At the same time, hospitalisation rates also appear to be highest in remote areas (more than twice the non-Indigenous rate), while rates for Indigenous people in rural and metropolitan centres were still between 1.5 and 1.7 times higher than for the rest of the population.

One striking observation in the Cunningham and Beneforti analysis, which is of direct relevance for the present study, is that fully 98 per cent of separations identified as Indigenous in 1997–98 occurred in public hospitals, compared with only 68 per cent of non-Indigenous separations. This partly reflects the under-identification of Indigenous patients in private hospitals, although it is consistent with the pattern of highest public health spending among the lowest income groups.

By far the largest reason for hospitalisation among those identified as Indigenous in 1997–98 was regular and repeat visits for dialysis. A sense of the much greater burden of hospital care due to dialysis for Indigenous people compared with the rest of the population is provided by the standardised morbidity ratio (SMR) for this cause of 6.7 for males and 11.2 for females.<sup>3</sup> Use of SMRs as a guide to other major causes of Indigenous hospitalisation reveals relatively high ratios (>2.0) for endocrine/nutritional and metabolic disorders, infectious diseases, respiratory diseases, and diseases of the skin and subcutaneous tissue. However, as a proportion of all Indigenous separations, complications of pregnancy and childbirth, respiratory diseases and injury dominated for women, while the most common causes for men were respiratory diseases and injury.

## Reported illness and health status

The 1994 NATSIS yielded information on self-reported recent illness and long-term health conditions. This has been summarised by the ABS (1996) and provided the basis for establishing a morbidity profile in Deeble et al. (1998). While the distinction between recent and long-term conditions was also sought in the 1995 NHS, it is considered that a combination of these conditions provides the most useful information from the NHS, given the somewhat artificial distinction between them, certainly in the minds of many respondents (ABS 1999: 5).

The majority of Indigenous and non-Indigenous males and females in every age group reported at least one recent or long-term condition in the 1995 NHS. Overall, more than three-quarters of Indigenous people (76%) reported a recent or long-term condition, although this was lower than the proportion of non-Indigenous people (86%). However, since the proportion of people reporting such conditions increases with age, true comparison requires age adjustment. This reveals that the reported levels of illness were equivalent among Indigenous and non-Indigenous respondents, although cross-cultural comparison of self-reported conditions is problematic.

As in the NATSIS, diseases of the respiratory system were the most commonly reported types of condition by Indigenous people (37% of reported cases) but, unlike in the NATSIS, a much greater incidence of diseases of the nervous system was reported (34 per cent of cases). These were also the two most commonly reported disease categories for the rest of the population. Typical respiratory conditions included asthma, sinusitis, bronchitis, emphysema and influenza, with little variation in prevalence observed across age groups. As for diseases of the nervous system, these referred mostly to eye and hearing problems, which both increased markedly with age.

Among specific conditions, asthma was more commonly reported for Indigenous people than for non-Indigenous people in every age group, and was particularly prevalent among children and youth below the age of 25 years. More striking was that the reporting of diabetes was seven to eight times higher for Indigenous people between the ages of 25 and 55 years. Overall, diseases of the circulatory system were reported by 15 per cent of Indigenous people. While this was less than for the non-Indigenous population (21%), hypertension was notably higher among Indigenous people, especially in young adult to middle age groups (25–55 years) where reported levels were three times higher than for the rest of the population.

Contrary to what might be expected from morbidity statistics and continuing high levels of mortality, almost three-quarters (73%) of NHS Indigenous respondents reported their health status as 'good', 'very good' or 'excellent'. However, this was notably lower than the proportion of non-Indigenous respondents (83%). It is also the case that Indigenous males and females were far more likely than their non-Indigenous counterparts to report their health as 'poor' or 'fair' at all age groups, especially over the age of 25 years. Even though objective statistics might suggest greater difference between Indigenous and non-Indigenous self-assessed health status, the fact that some difference is evident is in itself significant, given that self-assessments may be affected by individual awareness and expectations about health, and factors such as differential access to health care and health information.

## Health risk factors

It has long been recognised that Indigenous people experience relatively high exposure to risk factors that are strongly associated with a variety of chronic, preventable and non-communicable diseases. While sometimes reported as 'lifestyle' factors, as in the case of smoking or alcohol consumption, not all health risks stem from behavioural decision making. Also important are more structural influences, such as living conditions and the means to improve nutrition.

The idea that Indigenous community housing should be designed, constructed and maintained to support healthy living practices is now firmly embedded in government policy. The National Indigenous Housing Guide includes a range of design and functionality guidelines aimed at ensuring access to adequate functional housing, clean water, and safe disposal of refuse and waste as a means of disease prevention (Commonwealth of Australia 1999). In the meantime, the reality of many Indigenous communities around the country remains a substantial backlog of need in the provision of healthy housing and infrastructure. Difficulty in overcoming this need is compounded by populations that are not only growing rapidly in size, but are also increasingly dispersed in distribution.

Using census-derived normative measures of overcrowding, it has been calculated that 14 865 Indigenous households in non-improvised dwellings (16% of the total) were overcrowded in 1996 (Jones 1999). In addition, 1883 Indigenous families and 1310 individual Indigenous adults were recorded in improvised dwellings. Overall, this translates into almost 35 000 additional bedrooms required to eliminate overcrowding. At the same time, the 1999 CHINS revealed that 30 per cent of the 20 400 dwellings included in the survey required major repairs or replacement, thereby highlighting the persistent problem of depreciating stock and need for asset management. In addition, only 14 per cent of the 1291 communities in the survey were connected to town water supplies, with most dependent on bore water or alternative sources, especially the smaller communities of less than 50 persons. Even among the larger communities of more than 50 persons, almost half (44%) of those not connected to town supplies had no water treatment facility. This pattern of infrastructure provision is mirrored in sewerage systems, with only seven per cent of communities using a town system and the majority reliant on septic or other systems. A total of 69 small communities had no sewerage system.

It has long been recognised that poor diet and nutritional status are strongly associated with cardiovascular disease and diabetes, but malnutrition also forms part of the general complex of reduced resistance to infectious and other disease, and may engender its own morbidity profile, as in the form of osteoporosis, dental caries, gall bladder disease, nutritional anaemias, digestive tract disorders and diet-related cancers. It is also the case that nutritional disorders are relatively high among Indigenous populations. One recent study, for example, estimates that as much as 20 per cent of Aboriginal children in the Top End of the Northern Territory are malnourished (Ruben & Walker 1995).

Anthropometric measures, such as weight adjusted for height and age, can provide useful indicators of nutritional status and associated risk of long-term ill health. For example,

underweight pregnant mothers often give birth to underweight babies, while being underweight in childhood (wasting) can lead to slower physical growth and failure to thrive. On the other hand, being overweight is a risk factor for a number of health conditions in adult life, such as diabetes and heart disease. The 1995 NHS provides information on self-reported height and weight for adults aged 18 years and over. This suggests that Indigenous adults were more likely than other adults to be obese (16% compared with 11%) and less likely to be of acceptable weight (29% compared with 42%). This observation is deliberately cautious because of the high non-response of Indigenous respondents to NHS questions on weight and height (22% compared with 9%). As for nutritional indicators for children, these are available for those aged between seven and 15 years from the NATSIS and have been analysed by Cunningham and Mackerras (1998). Compared with Australian standards, Indigenous children are more likely to be underweight or obese and less likely to be of acceptable weight. This is true of both sexes, although the discrepancies are greatest in rural areas and least in capital cities, especially in regard to wasting.

Tobacco smoking is a well-known risk factor for a number of major causes of mortality including heart disease, lung disease and cancers of various types. It has also been linked to low birthweight. According to the 1995 NHS, 51 per cent of Indigenous adults aged 18 years and over living in non-remote areas indicated that they currently smoked, compared with only 23 per cent of non-Indigenous adults. The size of this gap was similar for both males and females, although male smoking levels were generally higher. Excess alcohol consumption is also a major health risk factor and, although Indigenous adults are less likely than other adults to drink alcohol, they are more likely to do so at hazardous levels. Thus, the 1995 NHS reports that 51 per cent of Indigenous adults did not consume alcohol, compared with 44 per cent of all other adults. However, of those who consumed alcohol, 23 per cent of Indigenous people did so at medium to high levels of risk, compared with only 10 per cent of other adults.

Information is available via the 1999 CHINS on aspects of physical access to health services. This survey covered all discrete Indigenous communities (1291) across Australia embracing a population of 109 000, which approximated 27 per cent of the total estimated Indigenous population in 1999. While the majority of such communities are located in sparsely settled areas and are excluded from the NHS sample, the CHINS data do refer to a wider area than this, and therefore have some relevance to the interpretation of NHS results.

Many communities (69%) were located more than 100 kilometres from the nearest hospital, with smaller communities more likely than larger ones to be distant from hospitals. On a reported population basis, this comprised 54 per cent of the population in discrete communities—a total of 58 860 persons. While only 53 per cent of communities remote from hospitals had access to emergency air medical services, these tended to be the larger communities, and so 86 per cent of the population in such communities had access to emergency air medical services. Again, on a population basis, 90 per cent of the population in discrete communities were located within 25 kilometres of a first-aid clinic. However, lack of transport can impede service usage, and so the CHINS also measured the frequency with which health workers visited communities that were more than 10 kilometres from a hospital. This revealed that only nine per cent of such communities had daily access to

a doctor, 54 per cent had weekly or fortnightly access, 22 per cent had access monthly or less frequently, and 15 per cent had no access. These data support the findings from case studies that indicate that a lack of physical access to health services remains a constraint on improved health outcomes (McDermott, Plant & Mooney 1996).