

CHAPTER 6

MOTHERS AND BABIES

INTRODUCTION

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

Perinatal statistics include details of antenatal care, complications of pregnancy and labour, and neonatal health. They do not, however, record any information about the father. As these figures do not include births to Indigenous fathers and non-Indigenous mothers, they are not a count of Indigenous births, and should not be used as such. Birth registrations, on the other hand, provide information about both parents' Indigenous status, but not details about the health of the mother and the baby. It is required by law that all births be registered, but this does not always occur, or may be limited by incomplete, late or missing registrations. Similarly, some births are registered without a perinatal report being lodged. As a result, discrepancies exist between the information held in perinatal collections and births registration records. Indeed, both underestimate the number of Indigenous births, because Indigenous status is not always recorded, as demonstrated by ongoing studies in Victoria, linking the perinatal collection, birth registrations, and hospital admissions. Most recent reports indicate similar numbers of Indigenous births being reported by Koori hospital liaison officers and the Victorian perinatal collection, but approximately 25% of these are not able to be identified as certain or probable matches (Day et al. 1999; Department of Human Services 2002).

It should also be noted that because a considerable number of Indigenous babies are born to non-Indigenous women, measures of the fertility of Indigenous women inevitably underestimate the impact of births on the growth of the Indigenous population. Based on birth registrations and population projections, Indigenous fertility for 2000 was estimated to be at least 2.14 babies per woman, compared with 1.73 babies for all Australian women (ABS 2001b). However, the fertility rate in Indigenous women is likely to have been underestimated because of the incomplete identification of Indigenous status in birth registrations.

This Chapter presents data from the perinatal collections of all states and territories, for the period 1998–2000 combined. These data are held at the Australian Institute of Health and Welfare National Perinatal Statistics Unit (AIHW NPSU). Data for 1991–93 and 1994–96 were previously published by the AIHW NPSU (Plunkett et al. 1996; Day et al. 1999) and for 1996–98 in the previous report (ABS & AIHW 2001). For this publication, three years of data were combined to smooth out yearly fluctuations in the number of births to Indigenous mothers, which may subsequently cause volatility in rates such as the perinatal mortality rate.

Information on the hospitalisation of Indigenous women for pregnancy and childbirth is presented in Chapter 4. Data on Queensland's Torres Strait Islander mothers and their babies are included in this Chapter, as Queensland is the only state to report this information separately.

MOTHERS

Indigenous women have babies, on average, at younger ages than non-Indigenous women. The mean age of Indigenous mothers for 1998–2000 was 24.7 years (AIHW NPSU, perinatal collection), only a slight increase from 24.4 years in 1996–98 (ABS & AIHW 2001). The mean age of non-Indigenous mothers has increased by a similar margin, from 28.9 years in 1996–98, to 29.2 for the 1998–2000 period.

Indigenous mothers comprised 3.4% of all mothers who gave birth in Australia during 1998–2000 (table 6.1). The proportion by jurisdiction varied greatly, ranging from less than 1% in Victoria to 37% in the Northern Territory. The reported number of Indigenous mothers was highest in Queensland (8,378), followed by New South Wales (6,207), Western Australia (4,547) and the Northern Territory (3,891).

Maternal age differences by Indigenous status for the whole of Australia are shown in graph 6.2. Of Indigenous mothers who gave birth during the period 1998–2000, 79% were under 30 years of age, compared with 52% of non-Indigenous mothers. A breakdown of maternal age by state and territory is presented in table 6.3. In the Northern Territory, 29% of all Indigenous women who gave birth in 1998–2000 were under 20 years of age.

The age distribution of Torres Strait Islander mothers in Queensland for 1998–2000 was similar to that of all Indigenous mothers in Australia. Nearly 18% of Torres Strait Islander mothers were under 20 years of age, and approximately 6% were aged 35 years or more (Perinatal Data Collection, Queensland Health).

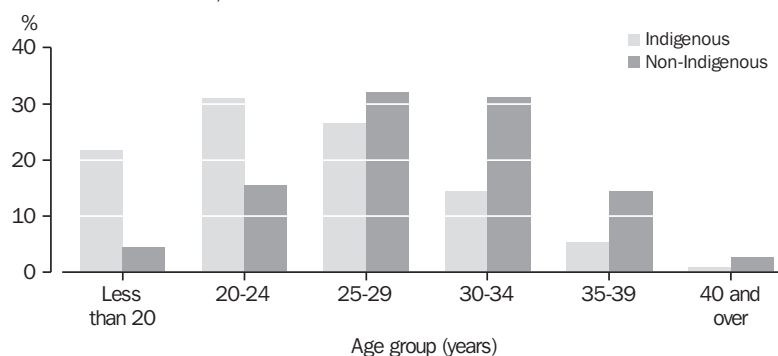
6.1 INDIGENOUS MOTHERS — 1998–2000

| | <i>no.</i> | <i>%(a)</i> |
|------------------------------|---------------|-------------|
| New South Wales | 6 207 | 2.4 |
| Victoria | 1 266 | 0.7 |
| Queensland | 8 378 | 5.8 |
| South Australia | 1 309 | 2.4 |
| Western Australia | 4 547 | 6.0 |
| Tasmania | 249 | 1.4 |
| Northern Territory | 3 891 | 36.5 |
| Australian Capital Territory | 175 | 1.3 |
| Australia | 26 013 | 3.4 |

(a) Proportion of Indigenous mothers in each jurisdiction.

Source: AIHW National Perinatal Statistics Unit, perinatal collection.

6.2 MATERNAL AGE, BY INDIGENOUS STATUS — 1998–2000



Source: AIHW National Perinatal Statistics Unit, perinatal collection.

6.3 MATERNAL AGE, BY INDIGENOUS STATUS — 1998–2000

| | Under 20 years | | 20–34 years | | Over 34 years | | Total(a) | |
|-------------------------------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|--------------|
| | no. | % | no. | % | no. | % | no. | % |
| New South Wales | | | | | | | | |
| Indigenous mothers | 1 291 | 20.8 | 4 519 | 72.8 | 392 | 6.3 | 6 207 | 100.0 |
| Non-Indigenous mothers | 10 779 | 4.3 | 196 935 | 78.4 | 43 449 | 17.3 | 251 292 | 100.0 |
| Victoria | | | | | | | | |
| Indigenous mothers | 194 | 15.3 | 969 | 76.5 | 103 | 8.1 | 1 266 | 100.0 |
| Non-Indigenous mothers | 5 923 | 3.2 | 143 393 | 78.4 | 33 639 | 18.4 | 182 964 | 100.0 |
| Queensland | | | | | | | | |
| Indigenous mothers | 1 576 | 18.8 | 6 243 | 74.5 | 559 | 6.7 | 8 378 | 100.0 |
| Non-Indigenous mothers | 7 851 | 5.8 | 107 861 | 79.5 | 19 916 | 14.7 | 135 629 | 100.0 |
| South Australia | | | | | | | | |
| Indigenous mothers | 286 | 21.8 | 924 | 70.6 | 99 | 7.6 | 1 309 | 100.0 |
| Non-Indigenous mothers | 2 583 | 4.9 | 42 051 | 79.5 | 8 288 | 15.7 | 52 922 | 100.0 |
| Western Australia | | | | | | | | |
| Indigenous mothers | 1 120 | 24.6 | 3 161 | 69.5 | 266 | 5.9 | 4 547 | 100.0 |
| Non-Indigenous mothers | 3 387 | 4.8 | 56 110 | 79.1 | 11 443 | 16.1 | 70 940 | 100.0 |
| Tasmania | | | | | | | | |
| Indigenous mothers | 37 | 14.9 | 195 | 78.3 | 17 | 6.8 | 249 | 100.0 |
| Non-Indigenous mothers | 1 468 | 8.3 | 13 791 | 78.3 | 2 273 | 12.9 | 17 615 | 100.0 |
| Northern Territory | | | | | | | | |
| Indigenous mothers | 1 116 | 28.7 | 2 565 | 65.9 | 206 | 5.3 | 3 891 | 100.0 |
| Non-Indigenous mothers | 307 | 4.5 | 5 322 | 78.6 | 1 143 | 16.9 | 6 773 | 100.0 |
| Australian Capital Territory | | | | | | | | |
| Indigenous mothers | 34 | 19.4 | 127 | 72.6 | 14 | 8.0 | 175 | 100.0 |
| Non-Indigenous mothers | 474 | 3.5 | 10 652 | 77.6 | 2 602 | 19.0 | 13 729 | 100.0 |
| Australia | | | | | | | | |
| Indigenous mothers | 5 654 | 21.7 | 18 703 | 71.9 | 1 656 | 6.4 | 26 022 | 100.0 |
| Non-Indigenous mothers | 32 772 | 4.5 | 576 115 | 78.7 | 122 753 | 16.8 | 731 864 | 100.0 |

(a) Total includes births where maternal age was not stated.

Source: AIHW National Perinatal Statistics Unit, perinatal collection.

6.4 NGANAMPA HEALTH COUNCIL, SOUTH AUSTRALIA, ANTENATAL CARE PROGRAM

The Nganampa Health Council is an Anangu (Aboriginal) controlled community health organisation providing a range of health programs to all persons on Anangu Pitjanjatjara Lands in the far north-west of South Australia.

When Nganampa Health Council took over the provision of health services in 1985, it identified poor antenatal care as a major health problem in the region.¹ Most women presented late in the second trimester of pregnancy and few had regular antenatal visits or appropriate investigations or check-ups. It was estimated that less than a third of all women were receiving reasonable antenatal care at that time.

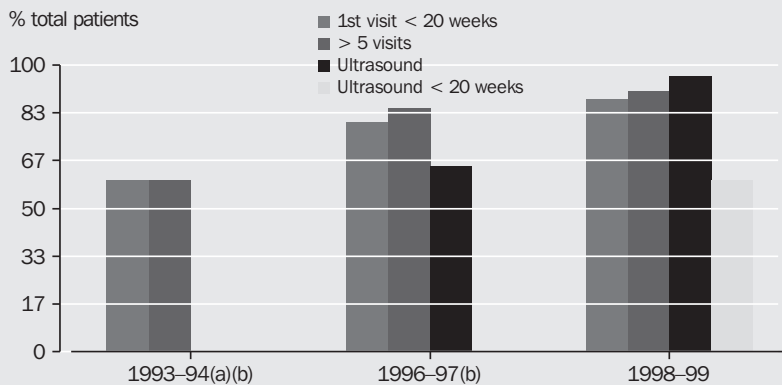
In response, Nganampa Health Council developed a care record system for antenatal patients, to be used in all clinics. The system is both a tool for health management and a source of antenatal care data for the population. It allows the health service to collate information and report annually on its success in moving towards agreed targets.

The initial antenatal care targets for pregnant women were:

- first presentation prior to 20 weeks
- more than five antenatal care visits for each pregnancy
- an ultrasound performed in all pregnancies
- an ultrasound performed at an appropriate time for estimating gestational age
- appropriate investigations performed and checked in all pregnancies.

Data show a steady but marked improvement in antenatal care for women in the Anangu Pitjanjatjara Lands over this time, particularly when contrasted with the very poor antenatal status of women at the time the service commenced. Indications of improved access to antenatal health for women in the region are clearly illustrated in the following graph.

NGANAMPA HEALTH COUNCIL ANTENATAL PROGRAM: IMPROVED ATTENDANCE



(a) Data not available for ultrasound.

(b) Data not available for ultrasound less than 20 weeks.

Source: Department of Health and Aged Care 2001, pp. 53.

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6.4 NGANAMPA HEALTH COUNCIL, SOUTH AUSTRALIA, ANTENATAL CARE PROGRAM *continued*

An independent study² undertaken at Nganampa between 1984 and 1996 showed encouraging results. The authors noted that substantial, statistically significant improvements had been demonstrated, for example:

- perinatal mortality rates decreased from 45.2/1000 to 8.6/1000², compared with a national average rate for non-Indigenous babies of 6.7/1000³
- low birthweight decreased from 14.2% to 8.1%², compared with a national average rate for non-Indigenous babies of 6.2%³
- mean birthweight increased from 3,080 grams to 3,183 grams², compared with a national mean of 3,365 grams for non-Indigenous babies³.

Endnotes:

1 Nganampa Health Council: pymedia.in-sa.com.au/ap/nganampahealth/index.html

2 Sloman D, Shelly J, Watson L & Lumley J 1999, *Obstetric and Child Health Outcomes on the Anangu Pitjantjatjara Lands, 1984–1996: A Preliminary Analysis*, Proceedings of the 5th National Rural Health Conference, Adelaide, March 1999, pp. 189–95.

3 Day P, Sullivan EA & Lancaster P 1999, *Indigenous mothers and their babies. Australia 1994–1996*, Australian Institute of Health and Welfare, National Perinatal Statistics Unit, Perinatal Statistics Series, No. 8.

Source: Department of Health and Aged Care ed. 2001, 'Better Health Care: Studies in the Successful Delivery of Primary Health Care Services for Aboriginal and Torres Strait Islander Australians', Commonwealth of Australia, Canberra, pp. 52–3.

BABIES

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

Table 6.5 shows that in the period 1998–2000, babies of Indigenous mothers were about twice as likely to be of low birthweight as babies born to non-Indigenous mothers. Since 1991, there appears to have been little change in both the proportion of low birthweight babies born to Indigenous mothers and these babies' mean birthweight (Plunkett et al. 1996; Day et al. 1999; ABS & AIHW 1997, ABS & AIHW 1999, ABS & AIHW 2001).

In 1998–2000, in Queensland, the proportion of low birthweight babies born to Torres Strait Islander mothers (9.5%) was somewhat lower than that recorded for babies born to Aboriginal mothers (12.8%), but higher than that recorded for babies born to non-Indigenous mothers (6.6%) (Perinatal Data Collection, Queensland Health). Coory (2000) has queried the use of birthweight as an appropriate measure of the health of babies born to Torres Strait Islander mothers. By using 10 years of combined Queensland perinatal data on live births, he found that even though the recorded birthweights of babies of both Torres Strait Islander and non-Indigenous mothers were similar, babies born to Torres Strait Islander mothers experienced higher rates of neonatal mortality than babies born to non-Indigenous mothers. The study suggests that this result may be related to the high prevalence of diabetes among Torres Strait Islander mothers. More research is needed to explore these findings.

6.5 BIRTHS, BY BIRTHWEIGHT AND MOTHER'S INDIGENOUS STATUS — 1998–2000

| | Low birthweight (under 2 500g) | | Normal or high birthweight (2 500g or more) | | Total(a) | |
|-------------------------------|-----------------------------------|-------------|--|-------------|----------------|--------------|
| | no. | % | no. | % | no. | % |
| New South Wales | | | | | | |
| Indigenous mothers | 731 | 11.7 | 5 533 | 88.2 | 6 270 | 100.0 |
| Non-Indigenous mothers | 15 704 | 6.2 | 239 411 | 93.8 | 255 246 | 100.0 |
| Victoria | | | | | | |
| Indigenous mothers | 182 | 14.2 | 1 103 | 85.8 | 1 285 | 100.0 |
| Non-Indigenous mothers | 12 527 | 6.7 | 173 503 | 93.3 | 186 059 | 100.0 |
| Queensland | | | | | | |
| Indigenous mothers | 995 | 11.7 | 7 484 | 88.2 | 8 481 | 100.0 |
| Non-Indigenous mothers | 9 063 | 6.6 | 128 660 | 93.4 | 137 738 | 100.0 |
| South Australia | | | | | | |
| Indigenous mothers | 220 | 16.7 | 1 100 | 83.3 | 1 320 | 100.0 |
| Non-Indigenous mothers | 3 601 | 6.7 | 50 202 | 93.3 | 53 803 | 100.0 |
| Western Australia | | | | | | |
| Indigenous mothers | 652 | 14.2 | 3 948 | 85.8 | 4 601 | 100.0 |
| Non-Indigenous mothers | 4 548 | 6.3 | 67 523 | 93.7 | 72 076 | 100.0 |
| Tasmania | | | | | | |
| Indigenous mothers | 17 | 6.7 | 231 | 91.3 | 253 | 100.0 |
| Non-Indigenous mothers | 1 225 | 6.8 | 16 504 | 92.1 | 17 922 | 100.0 |
| Northern Territory | | | | | | |
| Indigenous mothers | 536 | 13.6 | 3 326 | 84.7 | 3 929 | 100.0 |
| Non-Indigenous mothers | 520 | 7.6 | 6 305 | 91.8 | 6 867 | 100.0 |
| Australian Capital Territory | | | | | | |
| Indigenous mothers | 31 | 17.6 | 145 | 82.4 | 176 | 100.0 |
| Non-Indigenous mothers | 1 038 | 7.4 | 12 955 | 92.5 | 13 999 | 100.0 |
| Australia | | | | | | |
| Indigenous mothers | 3 364 | 12.8 | 22 870 | 86.9 | 26 315 | 100.0 |
| Non-Indigenous mothers | 48 226 | 6.5 | 695 063 | 93.5 | 743 710 | 100.0 |

(a) Total includes births where birthweight was not stated.

Source: AIHW National Perinatal Statistics Unit, perinatal collection.

Over the period 1998–2000, the national perinatal mortality rate (see Glossary) for babies born to Indigenous women was twice as high as that for babies born to non-Indigenous women (table 6.6). While it is difficult to assess trends, due to uncertainties about the extent to which women are identified as Indigenous in the perinatal collections, the overall perinatal mortality rate for this period is similar to that for 1996–98. In the Northern Territory, the perinatal mortality rate fell from 27.0 deaths per 1,000 births in 1994–96 to 24.9 per 1,000 in 1998–2000, suggesting that improvements seen in that jurisdiction over the decade from 1986 to 1995 may be continuing (Markey et al. 1998; ABS & AIHW 1999). Despite the decrease, however, the Northern Territory perinatal death rate is still among the highest in Australia.

In 1998–2000, there were 29 perinatal deaths of babies born to Torres Strait Islander mothers in Queensland. The perinatal death rate for babies born to Torres Strait Islander mothers (18.6 per 1,000 births) was lower compared to that for babies born to Aboriginal mothers (21.3 per 1,000 births). These perinatal mortality rates of babies born to Torres Strait Islander and Aboriginal mothers remain considerably higher than the rate for babies born to non-Indigenous mothers (10.4 per 1,000 births) (Perinatal Data Collection, Queensland Health).

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

In addition, regional differences in perinatal death rates may, in part, reflect regional differences in the identification of babies of Indigenous mothers. Data have been combined for three years to smooth out fluctuations. Readers are advised to focus on general patterns rather than precise numbers and rates.

6.6 PERINATAL MORTALITY(a), BY MOTHER'S INDIGENOUS STATUS — 1998–2000

| | <i>Fetal deaths</i> | | <i>Neonatal deaths(b)</i> | | <i>Perinatal deaths(c)</i> | |
|-------------------------------|---------------------|----------------|---------------------------|----------------|----------------------------|----------------|
| | <i>no.</i> | <i>rate(d)</i> | <i>no.</i> | <i>rate(e)</i> | <i>no.</i> | <i>rate(d)</i> |
| New South Wales | | | | | | |
| Indigenous mothers | 66 | 10.5 | 31 | 5.0 | 97 | 15.5 |
| Non-Indigenous mothers | 1 657 | 6.5 | 645 | 2.5 | 2 302 | 9.0 |
| Victoria | | | | | | |
| Indigenous mothers | 14 | 10.9 | 11 | 8.6 | 25 | 19.5 |
| Non-Indigenous mothers | 1 278 | 6.9 | 618 | 3.3 | 1 896 | 10.2 |
| Queensland | | | | | | |
| Indigenous mothers | 107 | 12.6 | 63 | 7.5 | 170 | 20.0 |
| Non-Indigenous mothers | 935 | 6.8 | 500 | 3.7 | 1 435 | 10.4 |
| South Australia | | | | | | |
| Indigenous mothers | 22 | 16.7 | 9 | 7.0 | 31 | 23.6 |
| Non-Indigenous mothers | 320 | 5.9 | 132 | 2.5 | 452 | 8.4 |
| Western Australia | | | | | | |
| Indigenous mothers | 59 | 12.8 | 39 | 8.6 | 98 | 21.3 |
| Non-Indigenous mothers | 490 | 6.8 | 138 | 1.9 | 628 | 8.7 |
| Northern Territory | | | | | | |
| Indigenous mothers | 61 | 15.5 | 37 | 9.7 | 98 | 24.9 |
| Non-Indigenous mothers | 48 | 7.0 | 35 | 5.1 | 83 | 12.1 |
| Australia(f) | | | | | | |
| Indigenous mothers | 337 | 12.8 | 193 | 7.4 | 530 | 20.1 |
| Non-Indigenous mothers | 5 004 | 6.7 | 2 171 | 2.9 | 7 175 | 9.6 |

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

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

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

(d) Rate per 1,000 total births.

(e) Rate per 1,000 live births.

(f) Includes Australian Capital Territory and Tasmania.

Source: AIHW National Perinatal Statistics Unit, perinatal collection.

SUMMARY

Indigenous mothers are more likely to have their babies at younger ages than non-Indigenous mothers, and to have a low birthweight baby. The national perinatal mortality rate for babies of Indigenous mothers remains at about twice the rate for babies of non-Indigenous mothers, but varies considerably across states and territories.