

## CHAPTER 5

## MOTHERS AND BABIES

### INTRODUCTION

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

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

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

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

## MOTHERS

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

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

### 5.1 INDIGENOUS MOTHERS—1996–98

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

(a) Proportion of total mothers in each jurisdiction.

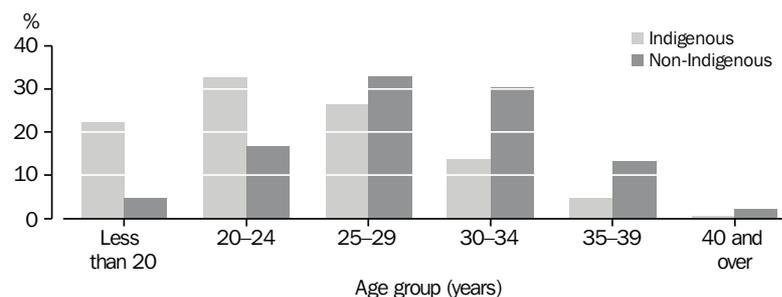
(b) Data for Tasmania were unavailable for 1996 and 1998. Data from 1995 and 1997 have been used as an estimate.

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

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

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

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



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

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

## 5.3 MATERNAL AGE BY INDIGENOUS STATUS—1996–98

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

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

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

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

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

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

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

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

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

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

*Source: The Bibbulung Gnarneep Team, personal communication.*

## BABIES

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

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

BABIES *continued*

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

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

	Low birthweight (under 2500g)		Normal or high birthweight (2500g or more)		Total(a)	
	no.	%	no.	%	no.	%
New South Wales						
Babies of Indigenous mothers	626	11	5 023	89	<b>5 649</b>	<b>100</b>
Babies of non-Indigenous mothers	15 059	6	240 159	94	<b>255 218</b>	<b>100</b>
Victoria						
Babies of Indigenous mothers	153	12	1 137	88	<b>1 290</b>	<b>100</b>
Babies of non-Indigenous mothers	12 104	7	173 955	94	<b>186 059</b>	<b>100</b>
Queensland						
Babies of Indigenous mothers	926	12	6 982	88	<b>7 908</b>	<b>100</b>
Babies of non-Indigenous mothers	8 888	7	127 392	94	<b>136 280</b>	<b>100</b>
South Australia						
Babies of Indigenous mothers	185	16	986	84	<b>1 171</b>	<b>100</b>
Babies of non-Indigenous mothers	3 839	7	51 508	93	<b>55 347</b>	<b>100</b>
Western Australia						
Babies of Indigenous mothers	595	13	3 903	87	<b>4 498</b>	<b>100</b>
Babies of non-Indigenous mothers	4 547	6	67 469	94	<b>72 016</b>	<b>100</b>
Tasmania(b)						
Babies of Indigenous mothers	32	8	371	92	<b>403</b>	<b>100</b>
Babies of non-Indigenous mothers	1 172	6	17 786	94	<b>18 958</b>	<b>100</b>
Northern Territory						
Babies of Indigenous mothers	549	15	3 137	85	<b>3 686</b>	<b>100</b>
Babies of non-Indigenous mothers	504	7	6 359	93	<b>6 863</b>	<b>100</b>
Australian Capital Territory						
Babies of Indigenous mothers	28	14	174	86	<b>202</b>	<b>100</b>
Babies of non-Indigenous mothers	1 039	7	13 069	93	<b>14 108</b>	<b>100</b>
Australia						
Babies of Indigenous mothers	3 094	13	21 713	88	<b>24 807</b>	<b>100</b>
Babies of non-Indigenous mothers	47 152	6	697 697	94	<b>744 849</b>	<b>100</b>

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

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

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

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

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

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

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

	<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						
Babies of Indigenous mothers	65	11.5	32	5.7	97	17.2
Babies of non-Indigenous mothers	1 662	6.5	607	2.4	2 269	8.9
Victoria						
Babies of Indigenous mothers	10	7.8	9	7.0	19	14.7
Babies of non-Indigenous mothers	1 303	7.0	623	3.4	1 926	10.4
Queensland						
Babies of Indigenous mothers	102	12.9	78	10.0	180	22.8
Babies of non-Indigenous mothers	954	7.0	530	3.9	1 484	10.9
South Australia						
Babies of Indigenous mothers	23	19.6	11	9.6	34	29.0
Babies of non-Indigenous mothers	369	6.7	164	3.0	533	9.6
Western Australia						
Babies of Indigenous mothers	69	15.3	23	5.2	92	20.5
Babies of non-Indigenous mothers	464	6.4	162	2.3	626	8.7
Northern Territory						
Babies of Indigenous mothers	54	14.7	29	8.0	83	22.5
Babies of non-Indigenous mothers	34	5.0	23	3.4	57	8.3
Australia(f)						
Babies of Indigenous mothers	328	13.2	185	7.6	513	20.7
Babies of non-Indigenous mothers	5 055	6.8	2 219	3.0	7 274	9.8

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

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

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

(d) Rate per 1,000 total births.

(e) Rate per 1,000 live births.

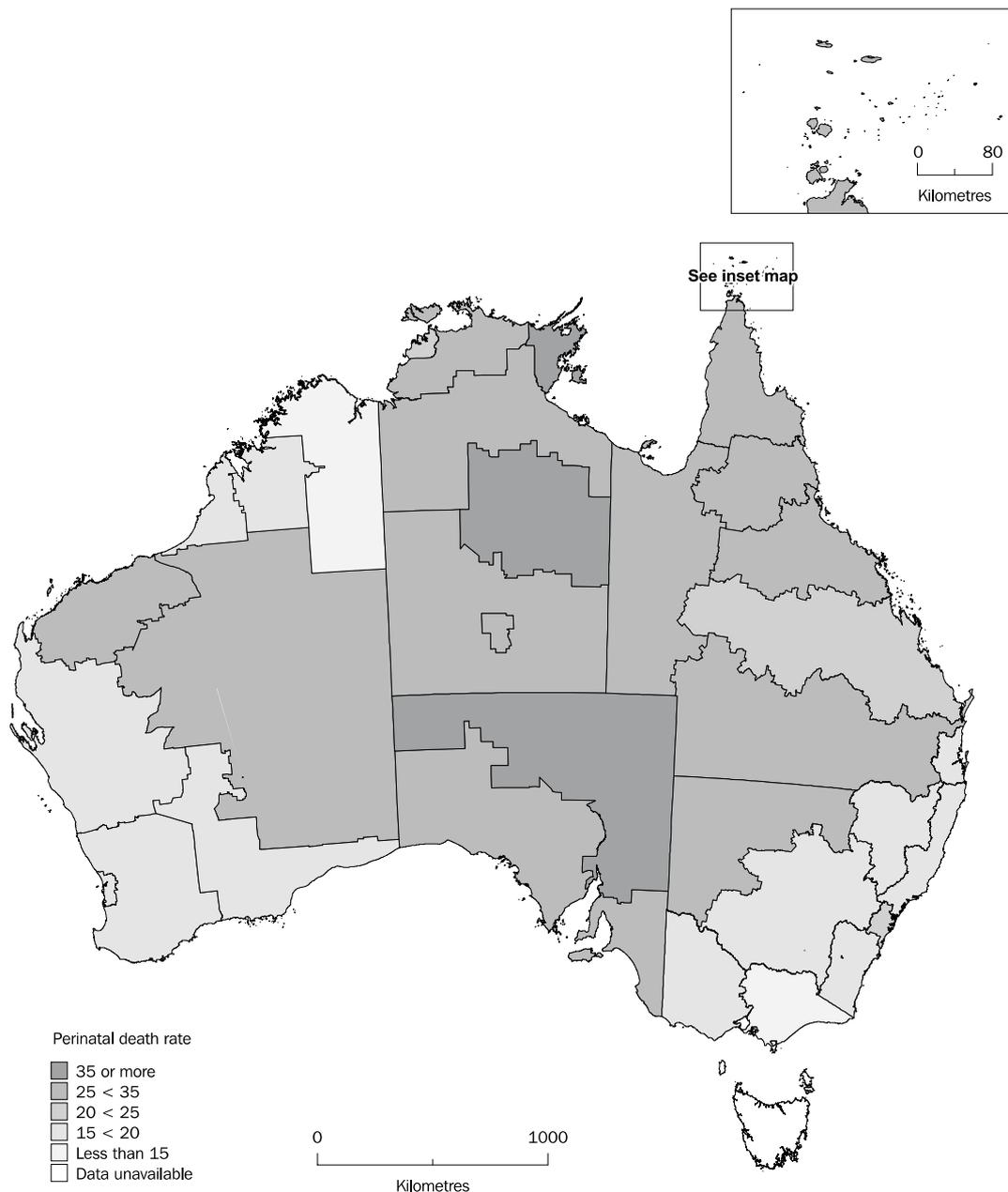
(f) Includes Australian Capital Territory and Tasmania.

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

### PERINATAL MORTALITY *continued*

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

5.7 PERINATAL MORTALITY—1991–96(a)(b)



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

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

Source: Day et al. 1999.

SUMMARY

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