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Australia's mothers and babies 1998

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AIHW National Perinatal Statistics Unit
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Contributors

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Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
g	gram
ICD-9	International Classification of Diseases, 9th Revision
ICD-10	International Classification of Diseases, 10th Revision
IPPR	Intermittent Positive Pressure Respiration
LMP	last menstrual period
na	not available
NPSU	National Perinatal Statistics Unit
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
SA	South Australia
Tas	Tasmania
UNSW	University of New South Wales
Vic	Victoria
WA	Western Australia
WHO	World Health Organization

Highlights

- In 1998, 255,522 babies born to 251,650 mothers were notified to perinatal data collections in the States and Territories.
- The average age of all mothers in 1998 was 28.9 years, and 27.0 years for those having their first baby, continuing the upward trend in recent years. There were 12,920 teenage mothers (5.1% of all mothers), of whom 4,088 were aged 17 years or younger.
- Although some women are deferring childbearing, in 1998 only 1 in 11 mothers had their first baby at age 35 years or older.
- There were 8,642 Indigenous mothers (3.4% of all mothers), of whom 2,731 gave birth in Queensland, 2,043 in New South Wales, 1,504 in Western Australia, 1,248 in the Northern Territory, with smaller numbers in the other States and the Australian Capital Territory. The average age of Indigenous mothers was 24.7 years and there was a high proportion of teenage mothers (21.3%).
- The proportion of mothers who were born in a country other than Australia was 22.0% in 1998.
- Multiple pregnancies accounted for 1.5% of all confinements and included 3,645 twin pregnancies, 104 triplet pregnancies, and 2 higher order pregnancies.
- In 1998, more than 1 in 5 (21.1%) births were by caesarean section. South Australia (23.9%) had the highest caesarean rate in 1998 and the Australian Capital Territory (18.8%) the lowest. Caesarean rates were higher among older mothers, those having their first baby, and those who were private patients.
- More mothers had relatively short postnatal stays in hospital in 1998 than in previous years. The proportion who stayed less than 2 days increased from 3.2% in 1991 to 10.9% in 1998, while the proportion of those staying between 2 and 4 days increased from 35% to 53.1% in the same period. Mothers without private health insurance had shorter postnatal stays than those with private health insurance.
- Low birthweight (less than 2,500 g) occurred in 16,854 (6.6%) babies in 1998, similar to 1997, but slightly higher than in other recent years. The mean birthweight of babies of Indigenous mothers was 3,169 g, 194 g less than the mean for all births; 11.8% of Indigenous babies had a low birthweight, almost twice the national proportion.
- Fetal, neonatal and perinatal death rates were 6.9, 3.1 and 10.0 per 1,000 births, respectively, in 1998, based on State and Territory perinatal data collections. Rates remain low, having steadily declined for the past two decades. The perinatal death rate of twins was 3.2 times higher, and of other multiple births 6.3 times higher, than the death rate of singleton babies.

1 Introduction

This report has been prepared by the Australian Institute of Health and Welfare's National Perinatal Statistics Unit in conjunction with the State and Territory Health Departments. The 1998 national data on births are based upon notifications to the perinatal data collection in each State and Territory.

The major purposes of these perinatal collections are:

- to describe for all births the demographic and pregnancy characteristics of mothers, and the characteristics and outcomes of their babies;
- to identify risk factors contributing to adverse outcomes of mothers, their pregnancies, and the health status of their babies;
- to assist in the planning, implementation and evaluation of health services for pregnant women and their babies;
- to enable analysis of national data, and comparison of characteristics and outcomes between States and Territories;
- to analyse perinatal and infant deaths and other outcomes, by linking perinatal data to other relevant data;
- to monitor specific outcomes such as congenital malformations;
- to conduct epidemiological studies of health problems among pregnant women and babies.

The report also contains national data on trends in perinatal deaths.

1.1 Data sources

The perinatal collections are based on a national perinatal minimum data set which has been revised on several occasions since it was first introduced in 1979. Each State and Territory has a perinatal data collection in which midwives and other staff, using information obtained from mothers and from hospital or other records, complete notification forms for each birth. The information collected includes characteristics of the mother; previous pregnancies; the current pregnancy; labour, delivery and the puerperium; and the baby's birth status (live birth or stillbirth), sex, birthweight, Apgar scores and outcome. Data processing, analysis, and publication of reports are undertaken by each State and Territory health authority. In Tasmania, the Department of Obstetrics and Gynaecology at the University of Tasmania has run the perinatal collection since 1974 and a revised perinatal collection started there in 1995. Each State and Territory provided data in an electronic format to the Australian Institute of Health and Welfare (AIHW) National Perinatal Statistics Unit at the University of New South Wales.

Due to data editing and subsequent updates of State and Territory databases, the figures in this report may differ slightly from those in reports published by the States and Territories.

The Australian Bureau of Statistics (ABS) compiles statistics and publishes reports on registrations of live births and perinatal deaths from data made available by the Registrar of Births, Deaths and Marriages in each State and Territory. The ABS now reports the perinatal deaths of babies of at least 400 g or 20 weeks gestation where birthweight is unknown. These inclusion criteria differ from the World Health Organization (WHO) definition of 500 g, or 22 weeks gestation where birthweight is unknown, as reported previously. Data obtained from ABS and its published reports were used to analyse trends and variations in perinatal deaths at the lower 400 g or 20 weeks gestation where birthweight unknown criteria, in the period from 1973 to 1998.

1.2 Tasmanian perinatal data collection

The Tasmanian perinatal collection data for 1998 were not available at the time of submission. The NPSU Management Advisory Committee, in consultation with the Tasmanian Department of Health and Human Services, decided to proceed with the inclusion of the 1997 Tasmanian data as a proxy for the unavailable 1998 data in the *Australia's mothers and babies 1998* report. It is envisaged that data will be available from Tasmania for 1999 for inclusion in the *Australian Mothers and Babies 1999* report.

1.3 Perinatal minimum data set and definitions

The national perinatal minimum data set has data items on demographic characteristics of the mother; previous pregnancies; the current pregnancy; labour, delivery and the puerperium; and the baby, including birth status, sex, birthweight, Apgar scores, resuscitation, neonatal morbidity, and congenital malformations. The National Perinatal Data Development Committee, which replaced the National Perinatal Data Advisory Committee in 1998, recommends definitions for perinatal data items to the National Health Data Committee and the National Health Information Management Group. Current definitions are included in *the National Health Data Dictionary* version 9.0 (National Health Data Committee 2000).

1.4 Criteria

Tabulated data in this report are based on births that occurred in each State and Territory in 1998. Because of differences in data items, and varying practices for coding the mother's place of residence if she lived in a State or Territory other than that in which the birth occurred, it is presently not possible to analyse the perinatal data according to region of residence. Notification forms are completed for all births of 20 weeks or more gestation, or a birthweight of 400 g or more.

1.5 Data quality

Each State and Territory perinatal data group constantly requests further information on missing or doubtful data items from hospitals and homebirth practitioners. Edit checks, and summaries of data provided in reports to individual hospitals, enable

additional review of data quality. Most States and Territories have also conducted validation studies of the accuracy of their data.

The main limitations of the perinatal collections are for data items on maternal medical conditions, obstetric complications, and neonatal morbidity. In some instances, clinical diagnoses may be recorded without reference to specific definitions. States and Territories also have different practices in collecting these clinical diagnoses, either by recording each specified diagnosis or by including checklists of the more common diagnoses.

1.6 Scope of report

Until all State and Territory perinatal collections are linked to registrations of perinatal deaths, these collections cannot provide national data on perinatal mortality. Annual reports based on registrations of perinatal deaths are published by the Australian Bureau of Statistics. These data have been used to examine trends in perinatal mortality (Tables A55–A69). Cause of perinatal death data for selected States using a modified Whitfield classification system are also presented (Table A77).

Notifications of congenital malformations from the perinatal collections are supplemented by other information from perinatal death certificates, autopsy reports, cytogenetic laboratories, children's hospitals and notifications of induced abortions. Separate reports on congenital malformations are published by the AIHW National Perinatal Statistics Unit.

1.7 State and Territory perinatal reports

Reports based on each State or Territory perinatal collection are published by State and Territory health authorities and by the Department of Obstetrics and Gynaecology of the University of Tasmania. For the 1998 data, reports have been published by New South Wales (Taylor et al. 2000), South Australia (Chan et al. 1999), Western Australia (Gee & O'Neill 2000), Victoria (The Consultative Council on Obstetric and Paediatric Mortality and Morbidity 1999) and the Northern Territory (Gladigau et al. 2000). The most recent reports for Australian Capital Territory and Queensland are for 1997 (Bourne 1998 and Queensland Health 1999, respectively).

2 Mothers

2.1 Introductory notes

This chapter provides data on demographic and pregnancy characteristics of mothers and some characteristics and outcomes of their babies. The number of babies slightly exceeds the number of mothers because of multiple pregnancies and births. The term 'confinements' has been used in the headings of tables and figures to indicate maternal characteristics, whereas 'births' refer to babies.

Each State and Territory has developed its own forms for collecting perinatal data, often to maintain compatibility with its other data collections. While the perinatal collections are based on a national minimum data set, there may be differences in the options recorded for individual data items. The data in this report relate to the State or Territory of occurrence of births rather than to the area of usual residence of the mother.

2.2 Confinements and births

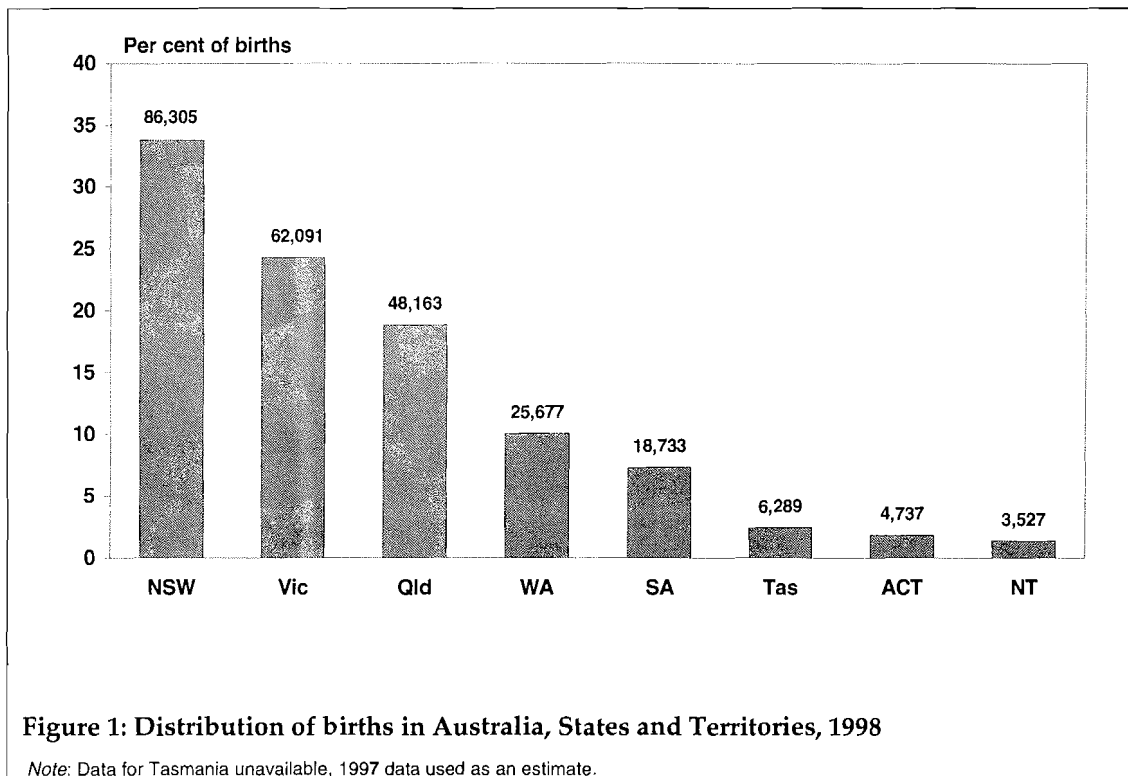
There were 251,650 confinements notified to State and Territory perinatal data groups in Australia in 1998, resulting in a total of 255,522 live births and fetal deaths (Table A1). Although birth rates in the States and Territories differ, the distribution of births generally reflects that of the population and of women in the reproductive age group (Figure 1).

To evaluate the completeness of notifications of births in the perinatal collections, these births can be compared with birth registrations published by the Australian Bureau of Statistics in *Births, Australia 1998* (ABS 1999). In the registration system, 249,495 live births were registered in Australia in 1998 (ABS 1999), 4,216 fewer than the 253,771 live births notified to the perinatal collections. As the States and Territories sometimes differ in the conventions used for coding the residence of mothers living interstate, it is not readily possible to compare the numbers in the two data systems by State and Territory. These differences in the national figures on live births are due to significant delays in the registration of some live births. It is also likely that some home births are not notified to the perinatal collections but are still registered by the parents.

Some States are already linking notifications from the perinatal collections to registrations of births and perinatal deaths. Once this is achieved in all States and Territories, with the assistance of Registrars and the Australian Bureau of Statistics, it will be possible to explain the discrepancies between the two perinatal data systems and to implement measures for ensuring complete notification and registration of births and perinatal deaths.

Linking data in the perinatal collections to birth registrations also has the advantage of enabling analysis of associations between paternal characteristics, various maternal characteristics and risk factors, and pregnancy outcome. Except for paternal occupation recorded in South Australia and Tasmania, there are no paternal data in

maternal characteristics and risk factors, and pregnancy outcome. Except for paternal occupation recorded in South Australia and Tasmania, there are no paternal data in the 1998 perinatal collections. Birth registrations include information on paternal age, Indigenous status, country of birth and occupation, so enhanced analysis would be possible by linking the two data systems.



2.3 Place of birth

Most births in Australia occur in hospitals, either in conventional labour-ward settings or in hospital birth centres. In 1998, nearly all States and Territories designated birth centres separately on notification forms. There were 4,631 confinements in birth centres in 1998 (Table A2), slightly fewer than the 4,773 notified in 1997. In 1998, confinements in birth centres accounted for 1.8% of all confinements in the States and Territories. Planned home births, and births occurring unexpectedly before arrival in hospital for planned hospital births, are the other two groups and have relatively small numbers. In the Northern Territory, the 71 'other' confinements were mainly births in bush clinics.

Planned home births are under-ascertained in some State and Territory perinatal collections. In 1998, 657 planned home births, representing 0.3% of all confinements, were notified nationally (Table A2), declining from 736 in 1997. Births occurring unexpectedly before the mother's arrival in hospital for a planned hospital birth increased from 854 in 1997 to 1,016 in 1998.

2.4 Size of maternity unit

The size of maternity units, based on the annual number of confinements, varied from those with just a few births each year to those with more than 2,000 births. The actual number of maternity units in a region depends on its geographical location, the population of the region, and policies regarding maternity services. In 1998 approximately half (46.7%) of the maternity units in Australia had fewer than 100 confinements (Table A3). More than one-third (40.1%) had between 100 and 1,000 confinements, and 13.2% had more than 1,000 confinements. Although most maternity units are relatively small in size, the majority of hospital confinements (63.3%) occurred in the larger maternity units that had more than 1,000 confinements annually (Table A4). Over two-fifths (40.4%) of hospital confinements were in units with more than 2,000 confinements annually.

2.5 Maternal age

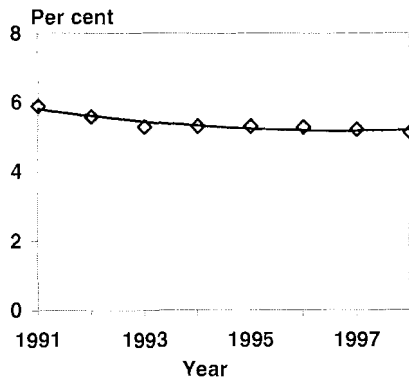
Maternal age is an important risk factor for perinatal outcome. Adverse outcomes are more likely to occur in younger and older mothers. The average age of women giving birth in Australia has increased gradually in recent years. The mean age in 1998 was 28.9 years, continuing the rise from 27.9 years in 1991. Mothers in Victoria and the Australian Capital Territory were slightly older, and those in the Northern Territory slightly younger, than average. The mean age of mothers having their first baby in 1998 was 27.0 years compared with 25.8 in 1991. The proportion of teenage mothers (5.1%) in 1998 was slightly lower than in 1997. The proportion of mothers aged 20 to 24 years has fallen from 20.2% in 1991 to 16.5% in 1998, but older mothers aged 35 years and over have continued to increase from 10.6% in 1991 to 15.8% in 1998 (Figure 2).

The actual number of teenage confinements declined from 13,373 in 1996 to 12,920 in 1998. The proportion of teenage confinements was 5.1% nationally and ranged from a low of 3.4% in Victoria to 13.9% in the Northern Territory (Table A5, Figure 3). There were relatively more younger teenage mothers in the Northern Territory.

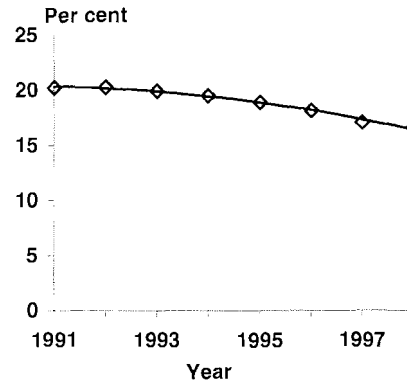
The national age-specific birth rate for teenagers declined from a peak of 55.5 per 1,000 females in 1971 to a low of 18.5 per 1,000 females in 1998 (ABS 1999). Birth rates in teenagers varied considerably in 1998 from a low of 12.4 per 1,000 females in Victoria to a high of 68.7 per 1,000 in the Northern Territory. The age-specific birth rate understates teenage pregnancy as it does not include induced abortions of unwanted pregnancies. Only South Australia and the Northern Territory collect population-based data on induced abortions. In South Australia in 1998, there were 1,200 induced abortions among teenagers (Chan et al. 1999) and 949 confinements. Lack of data on induced abortions in most States and Territories considerably hampers analysis of trends in teenage pregnancies.

The trend of decreasing age-specific birth rates of women aged 20 to 29 years continued in 1998, whereas the rates for women over 30 years increased slightly (ABS 1999).

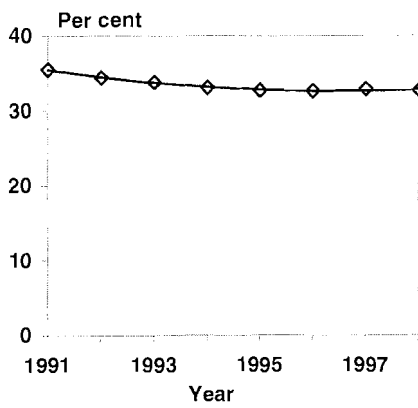
Proportion of mothers aged less than 20 years of age



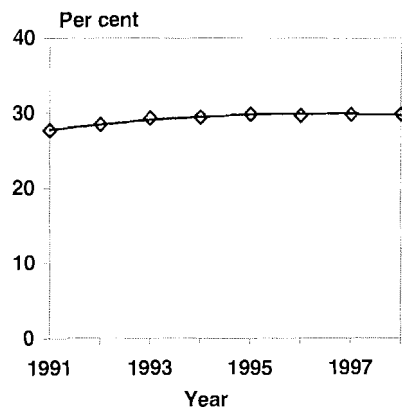
Proportion of mothers aged 20–24 years



Proportion of mothers aged 25–29 years



Proportion of mothers aged 30–34 years



Proportion of mothers aged 35 years and over

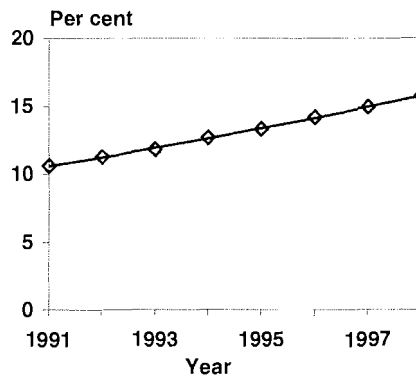
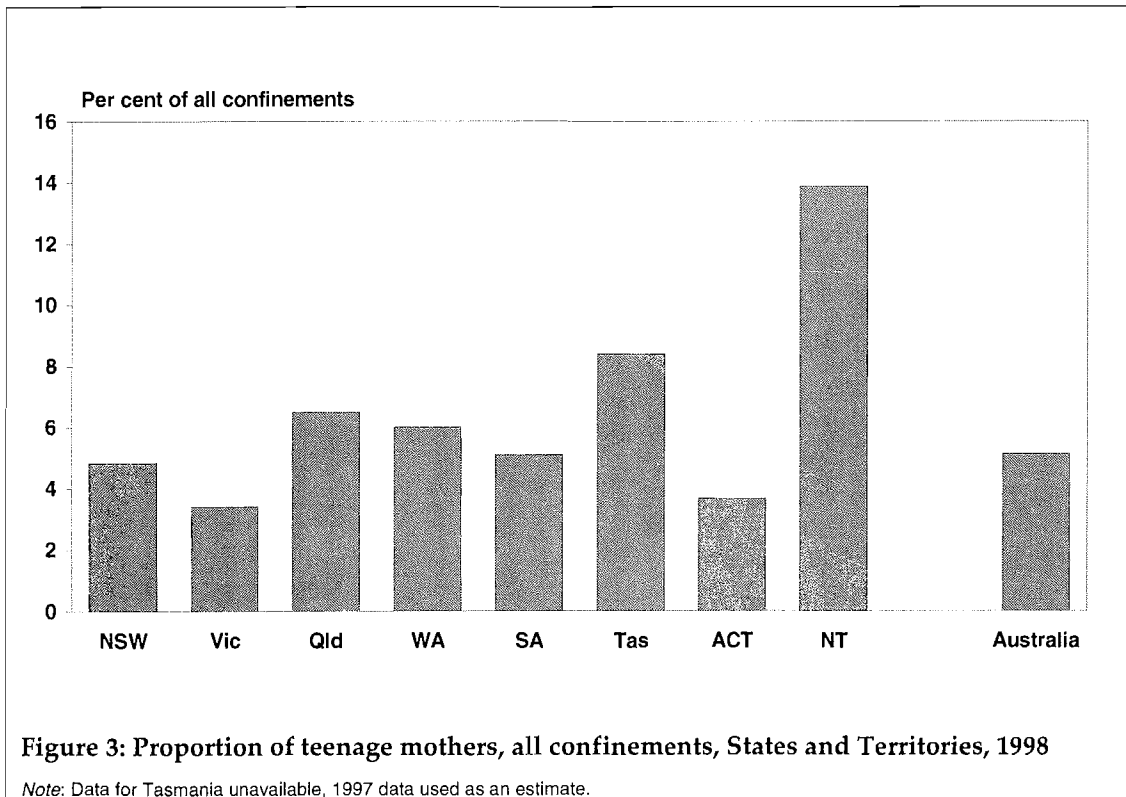


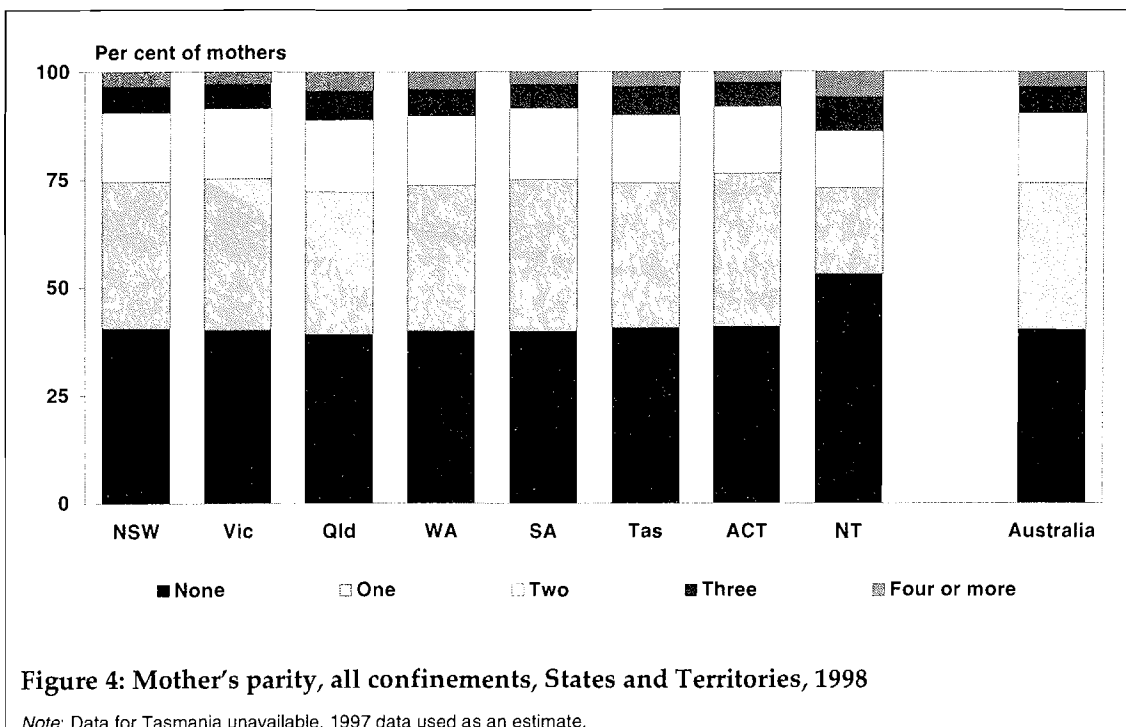
Figure 2: Trends in maternal age, Australia, 1991–1998

Note: Data for Tasmania unavailable, 1997 data used as an estimate.



2.6 Maternal parity

Parity is the number of previous pregnancies that resulted in live births or stillbirths. In 1998, 40.2% of mothers were having their first baby and another 34.1% already had one child (Table A6, Figure 4).



One in six mothers (16.2%) had given birth twice previously and 9.6% had three or more children. The proportion of mothers who had given birth at least twice previously increased with maternal age from 2.1% for teenagers to 50.2% for mothers aged 40 years and over (Table A7).

As indicated in Section 2.5, the average age at which women are having their first baby is gradually increasing. Nevertheless, the majority (67.8%) of these women are aged less than 30 years (Table A7). While the proportion of first-time mothers who are 35 years or older is also increasing, only 1 in 11 (9.1%) of all primiparous women were in this age group.

2.7 Marital status

Married mothers and those living in de facto relationships have been grouped together, except in Tasmania where 'de facto' and 'single' were given the same code. Single mothers accounted for 7.6% of all confinements in Australia (excluding New South Wales) in 1998 and another 0.9% were widowed, divorced, or separated (Table A8). There were relatively fewer single mothers in the Australian Capital Territory and relatively more in the Northern Territory. Over half (54.4%) of all teenage mothers were single, ranging from 82.8% for mothers aged less than 15 years to 45.1% for mothers aged 19 years (Table A9). Data on marital status for New South Wales was excluded at the request of NSW Health due to large fluctuations in numbers for mothers, thought to be due to changes in the method and timing of collection.

2.8 Indigenous status

The *National Health Data Dictionary* (National Health Data Committee 1998) defines Indigenous status as:

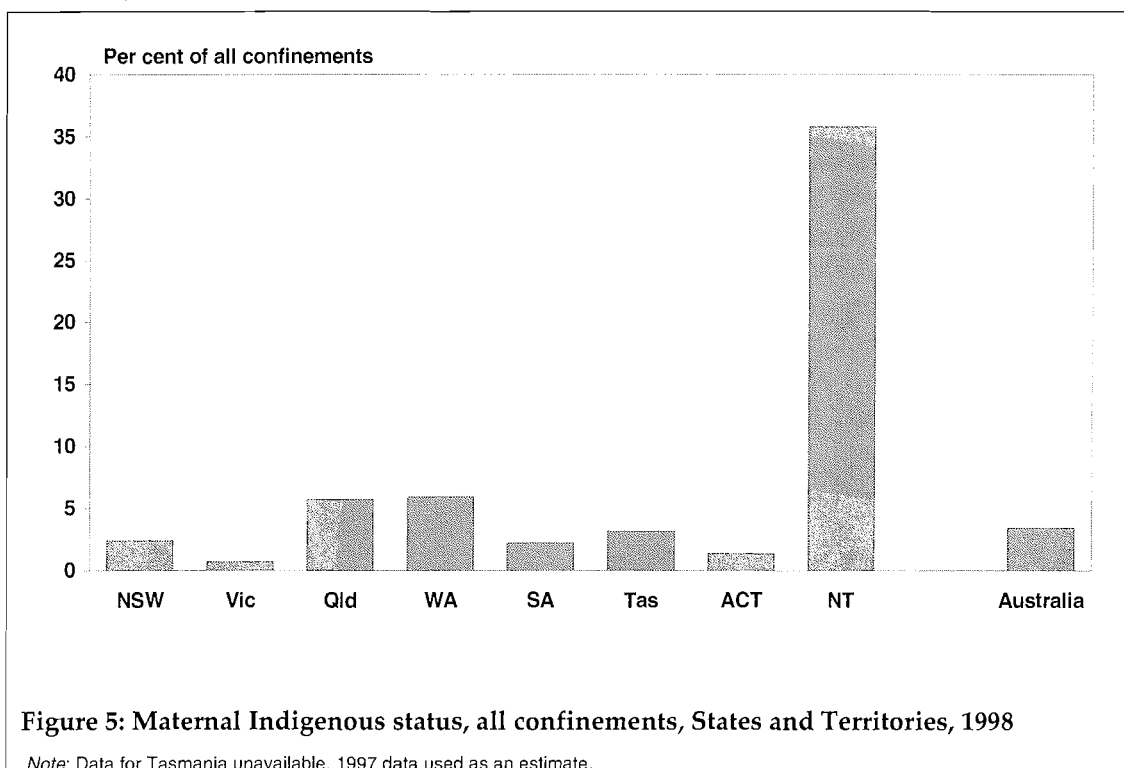
An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community with which he or she lives.

All States and Territories have a separate data item on Indigenous status on their perinatal form. Some States and Territories separately identify Indigenous mothers as those of Aboriginal or Torres Strait Islander descent. Up until 1996, confinements of Indigenous mothers in Tasmania were given a specific code if Aboriginality was recorded on the form in the item for maternal country of birth. This change to a separate data item on Indigenous status has meant that the number of Indigenous mothers identified by the Tasmanian perinatal data collection in 1997 has significantly increased compared to earlier years. There has been ongoing validation work on the ascertainment of Indigenous mothers and their babies by the perinatal data collections (Day et al. 1999). The term 'Indigenous' is used in this report to refer to mothers and babies of Aboriginal or Torres Strait Islander descent.

In 1998, 8,642 Indigenous women gave birth in Australia; this represented 3.4% of all confinements (Table A10). Indigenous mothers accounted for a much greater proportion of all confinements in the Northern Territory (35.8%) than elsewhere in Australia (Figure 5). There were also significant proportions of confinements to

Indigenous women in Western Australia (5.9%) and Queensland (5.8%). Because of their larger populations, there were actually more confinements of Indigenous mothers in Queensland (2,731), New South Wales (2,043) and Western Australia (1,504) than in the Northern Territory (1,248).

Indigenous mothers are more likely to have their babies at a younger age, and to have more babies, than other mothers (Tables A11, A12). In 1998, the average age of an Indigenous mother at confinement was 24.7 years compared with 28.9 years for all mothers at confinement. More than one in five (21.3%) Indigenous mothers were teenagers. The proportion of teenagers among Indigenous mothers was higher in the Northern Territory (30.0%) than in the other States and the Australian Capital Territory.



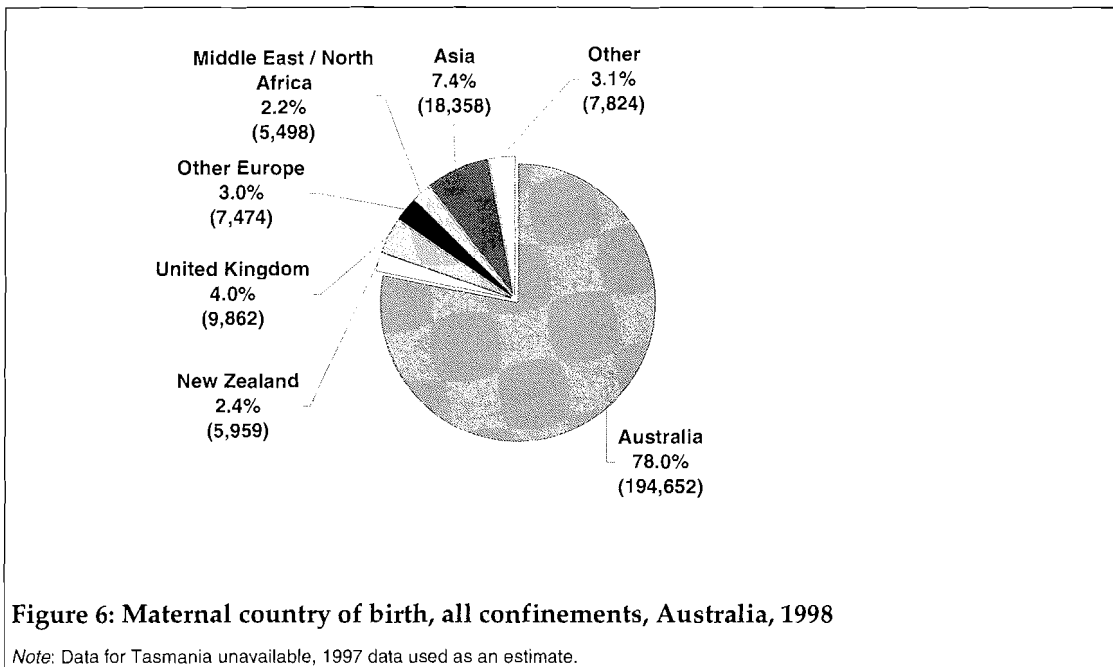
2.9 Maternal country of birth

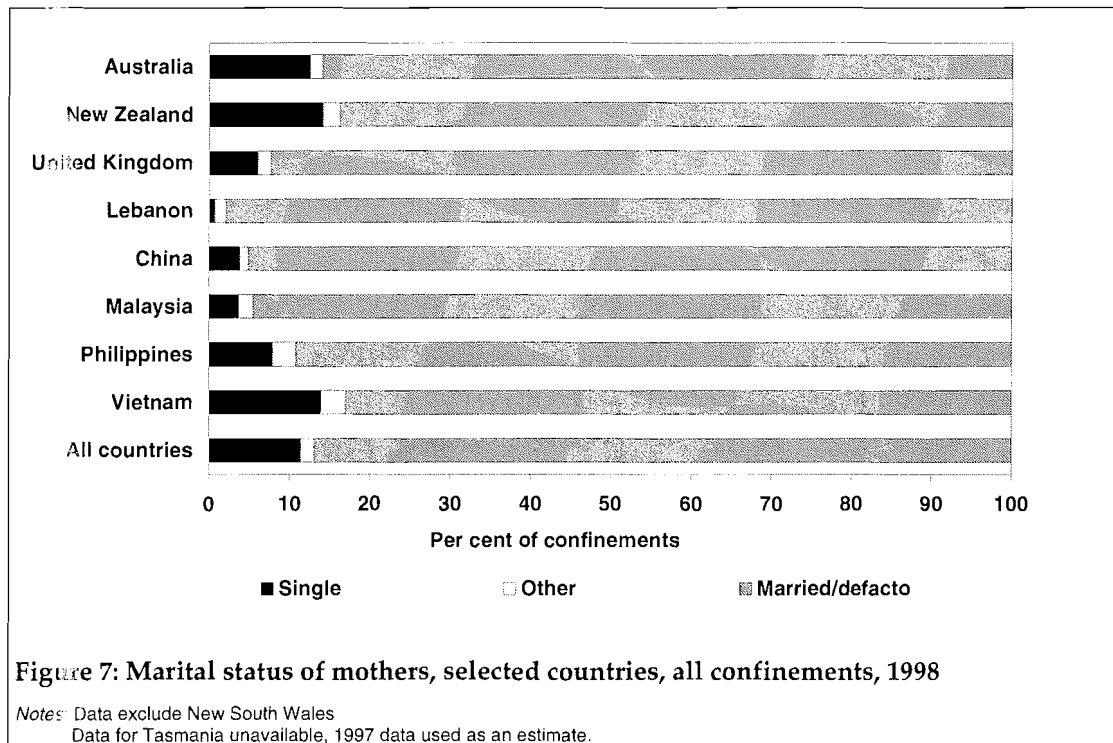
The country of birth of the mother may be an important risk factor for outcomes such as low birthweight and perinatal mortality. In 1998, the States and Territories were using the four-digit ABS country of birth classification.

A high proportion (22.0%) of women giving birth in Australia in 1998 were born in other countries (Figure 6). Because of the large number of countries, generally only those countries with more than 1,000 confinements are reported separately (Table A13). Mothers born in the United Kingdom comprised 4.0% of all confinements and accounted for relatively higher proportions of all mothers in Western Australia (9.4%) and South Australia (5.8%). New Zealand-born mothers comprised 2.4% of all confinements. The proportion of mothers who were born in Asia has increased considerably in the last decade, reflecting recent trends in migration to Australia. In 1998, 7.4% of mothers had been born in Asia, compared with 5.2% in 1991.

Mothers born in countries where English is not the first language are more likely to reside in the more populous States, New South Wales and Victoria (Table A13). This pattern is evident for countries such as Lebanon and several Asian countries, particularly Vietnam, the Philippines and China. Teenage confinements were more common among mothers born in New Zealand, Lebanon and the Philippines; while births to mothers aged 35 years and over were more common to women born in Italy, China and Hong Kong (Table A14). These variations in geographical distribution and maternal age need to be recognised in planning culturally acceptable maternity and postnatal community health services, including prenatal diagnosis and interpreter services.

Marital status also varies according to the mother's country of birth. A higher proportion of mothers born in Australia, New Zealand and Vietnam was single than those born in most other countries (Table A15, Figure 7).





2.10 Status in hospital

The proportion of the Australian population with private health insurance declined from about 50.0% in 1984 to 30.1% in December 1998 (AIHW 2000). Patients admitted to hospitals may elect to be public or private; and is usually determined by whether or not they have private health insurance. The Northern Territory did not collect information on status in hospital in their perinatal collections in 1998. The proportion of mothers with private status in hospital in the other States and the Australian Capital Territory was 30.4% and ranged from 28.8% in Western Australia to 32.2% in Victoria (Table A16).

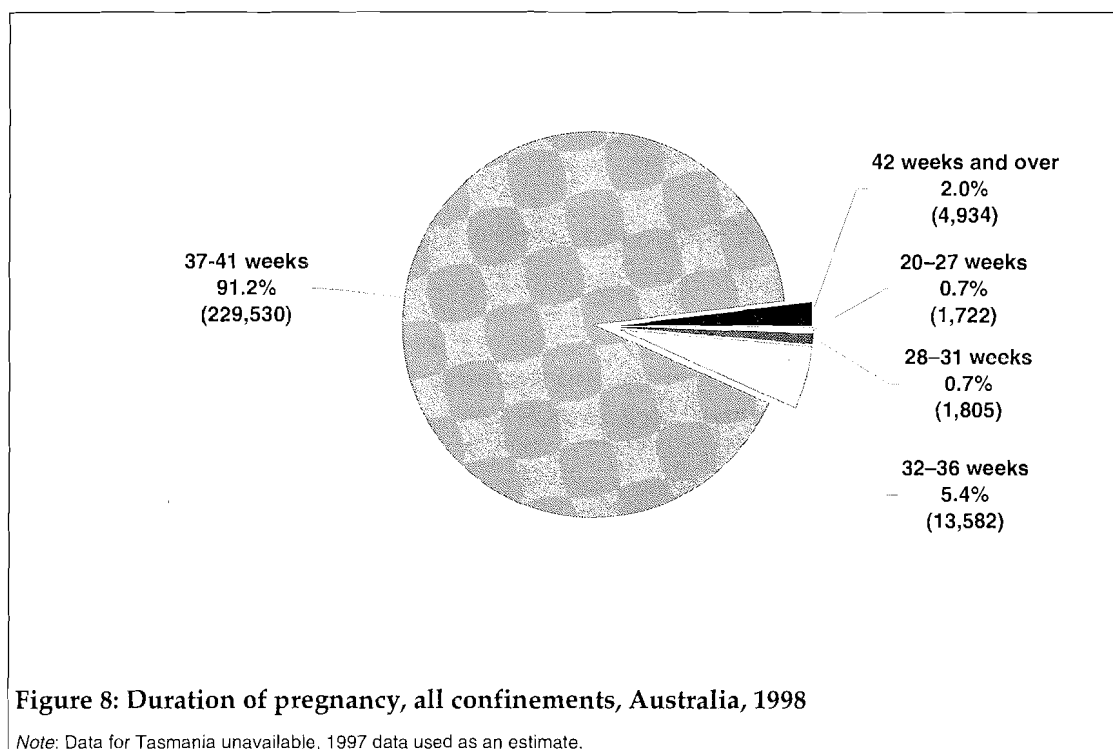
The mother's status can be used as an indicator of socioeconomic status. Excluding confinements in the Northern Territory, where this information was not recorded, mothers who had private status in hospital (14.5%) were more likely than those who had public status (6.5%) to have their first baby at 35 years or older, but clearly the proportion in this age group is still relatively small.

2.11 Duration of pregnancy

Accurate population data on gestational age are difficult to obtain. Estimates based on the calculated interval between the first day of the last menstrual period (LMP) and the baby's date of birth may be imprecise for some women because of uncertainty about the date of the LMP, irregular cycles, or delayed ovulation after use of oral contraceptives. Nevertheless, in the majority of pregnancies the gestational age derived from the dates provides an appropriate estimate of the duration of pregnancy.

As most pregnant women have at least one ultrasound examination during pregnancy, this may provide useful information on gestational age if performed in early pregnancy. The different practices for recording and estimating gestational age in the States and Territories are likely to result in variable estimates of the distribution of gestational age. This should be kept in mind when comparing State and Territory data on gestational age.

Preterm birth (less than 37 weeks gestation) occurred in 6.8% of all confinements (Table A17, Figure 8). The average duration of pregnancy in Australia was 39.0 weeks. Mothers gave birth at 20–27 weeks in 0.7% of confinements, at 28–31 weeks in 0.7%, and at 32–36 weeks in 5.4%. There was a higher incidence of preterm birth in the Northern Territory (10.3%) than elsewhere (Figure 9).



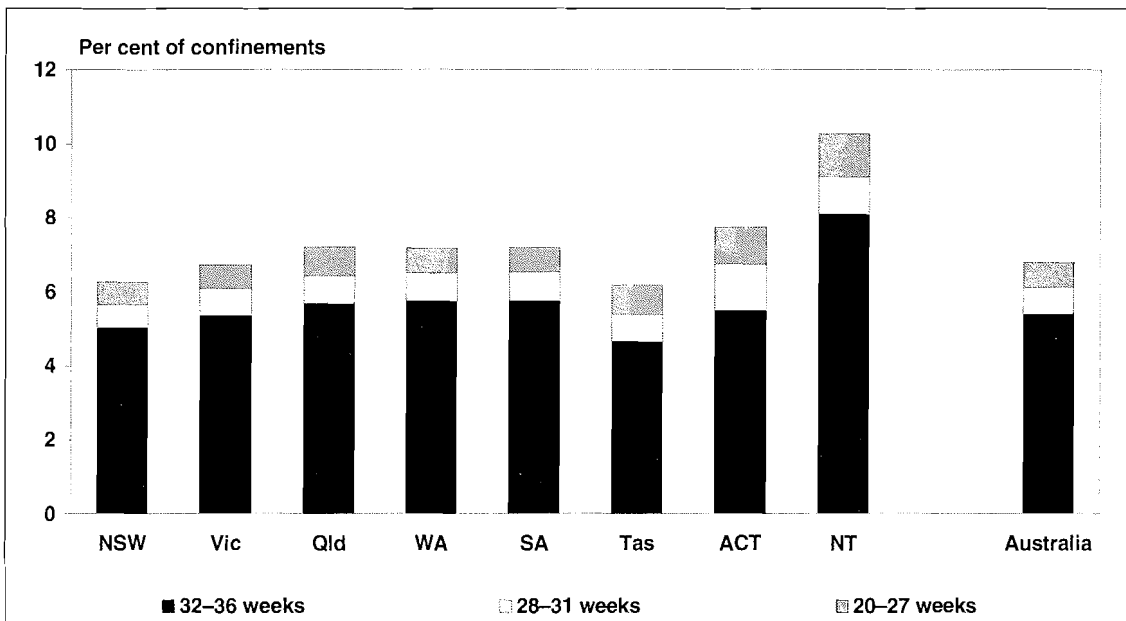


Figure 9: Preterm confinements, States and Territories, 1998

Note: Data for Tasmania unavailable, 1997 data used as an estimate.

Preterm birth varied with maternal age and was more likely among the youngest and oldest mothers than among those aged 20 to 34 years (Table A18, Figure 10).

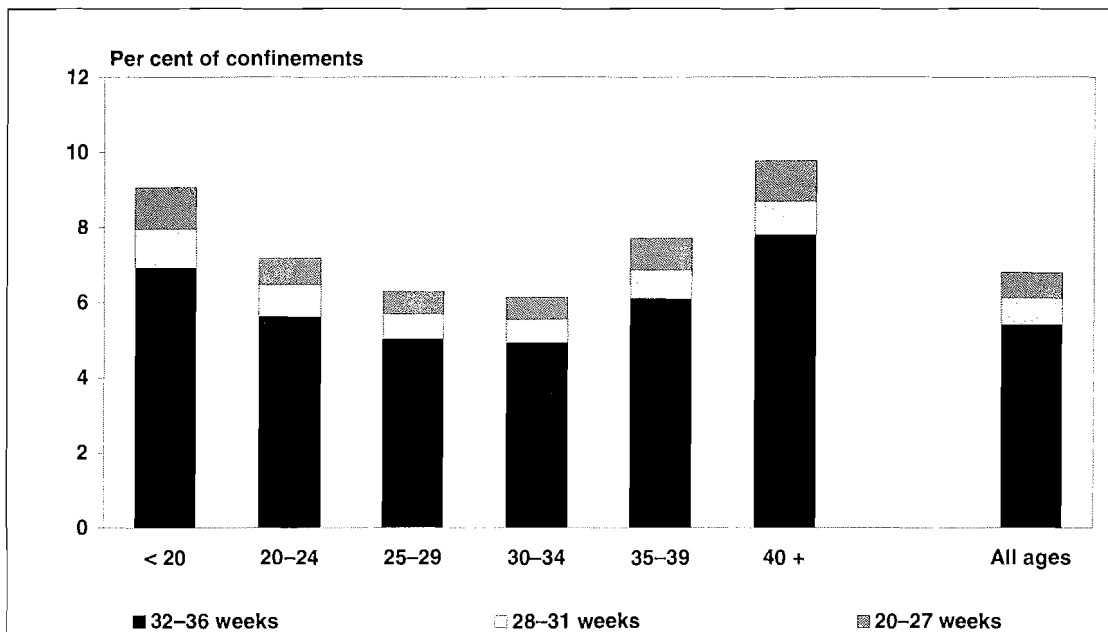


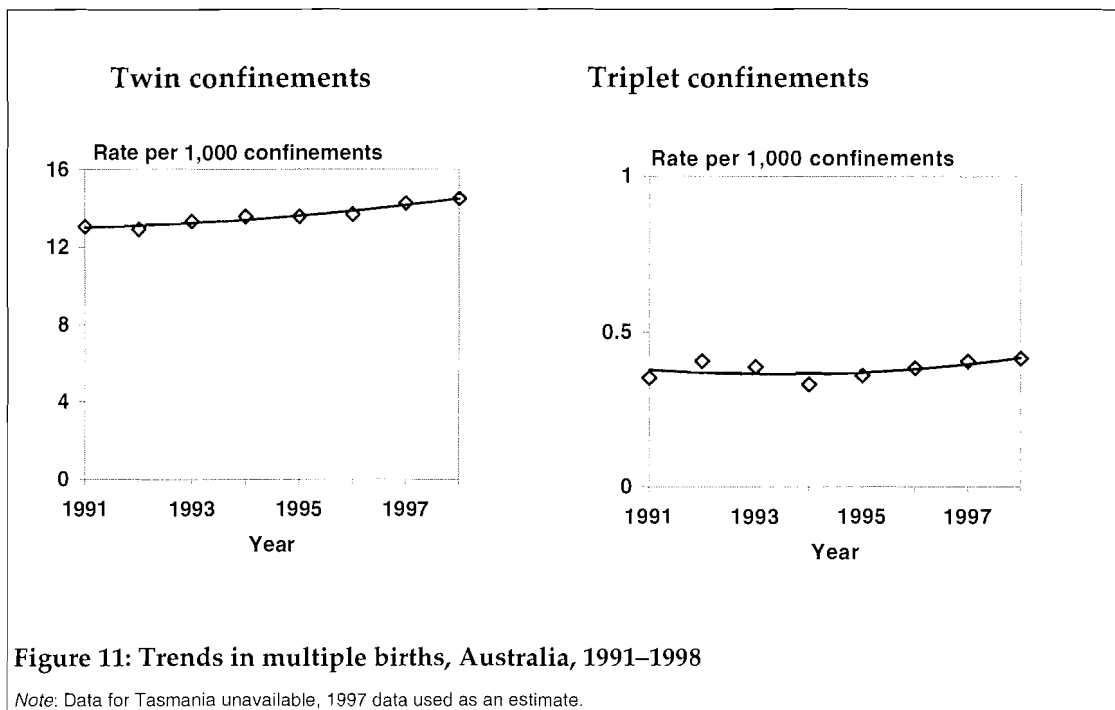
Figure 10: Preterm confinements by maternal age, Australia, 1998

Note: Data for Tasmania unavailable, 1997 data used as an estimate.

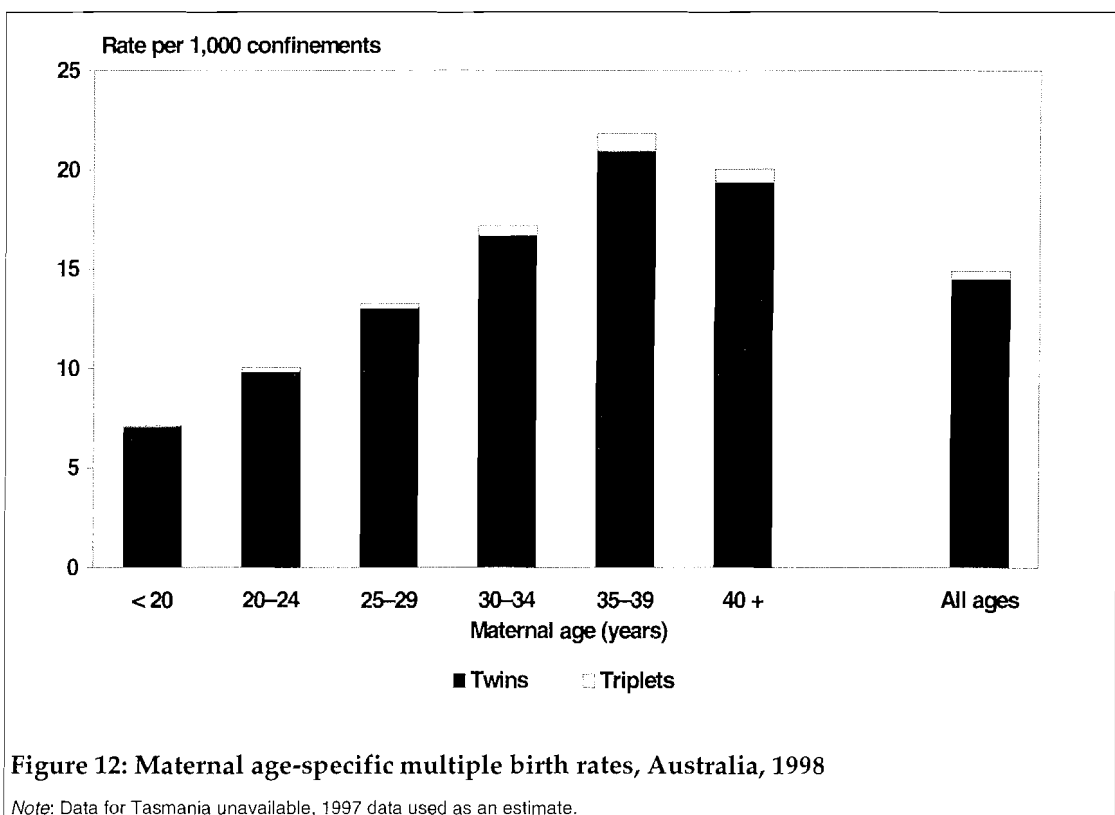
2.12 Multiple pregnancy

In the perinatal collections, multiple pregnancies are based on the number of fetuses that remain in utero at 20 weeks gestation and are subsequently delivered as separate births. This definition excludes fetuses aborted before 20 completed weeks or fetuses compressed in the placenta at 20 weeks or more. If gestational age is unknown, only fetuses weighing 400 g or more are taken into account in determining whether it is a singleton or multiple pregnancy. As the perinatal collections include both live births and stillbirths, there are slightly more multiple pregnancies in these figures than in the data on registrations of live births published by the Australian Bureau of Statistics.

In 1998, there were 3,751 multiple pregnancies (1.5% of all confinements), consisting of 3,645 twin pregnancies, 104 triplet pregnancies, and 2 quadruplet pregnancies (Table A19). The twinning rate was 14.5 per 1,000 confinements in 1998 (Figure 11), substantially higher than the low point of 9.0 per 1,000 confinements in 1977 (Doherty & Lancaster 1986). The number of triplet pregnancies increased from 85 in 1994 to 92 in 1995, 97 in 1996 and 104 in 1997. The increasing trend in multiple pregnancies in the last two decades is mainly attributable to fertility drugs, assisted conception and increase in the number of older aged mothers.

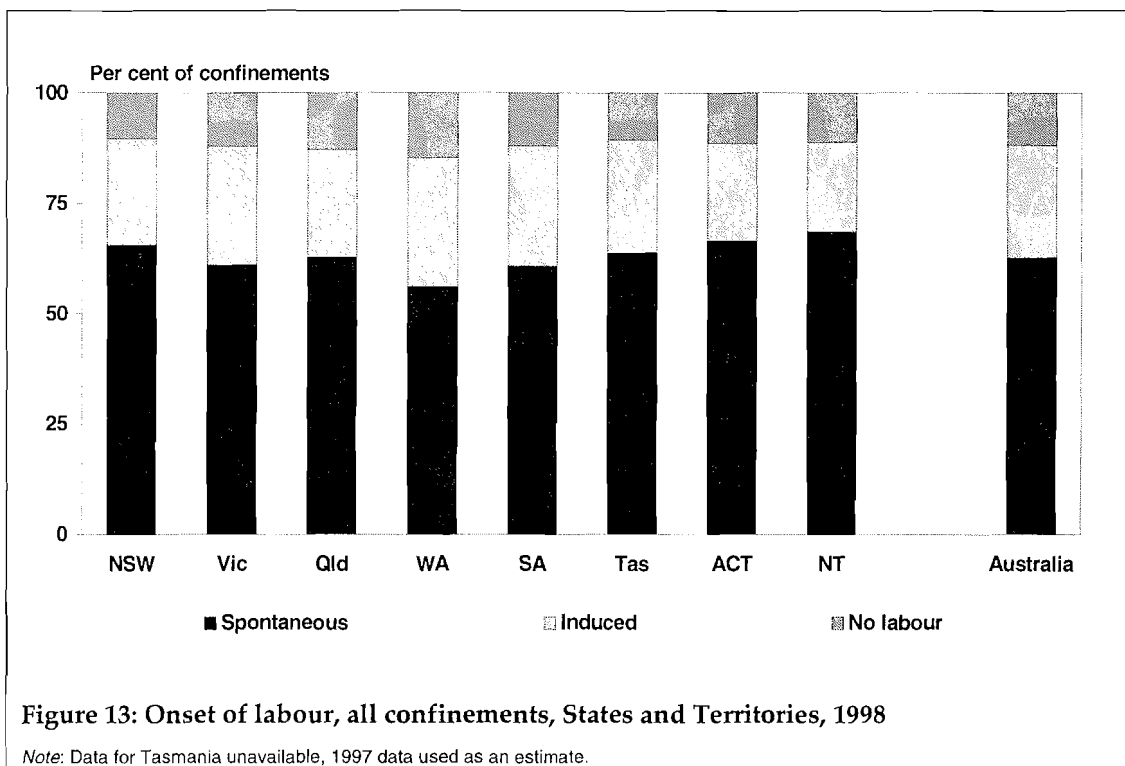


Multiple pregnancy increases with advancing maternal age, peaking in women aged in the 35–39 year age group. In 1998, the highest proportion of twin confinements (2.1%) was among mothers aged 35 to 39 years (Table A20, Figure 12).



2.13 Onset of labour

The onset of labour was spontaneous in 62.6% of all confinements (Table A21, Figure 13); this proportion was highest in the Northern Territory (68.5%) and lowest in Western Australia (56.1%); there was considerable variation in whether labour was augmented.



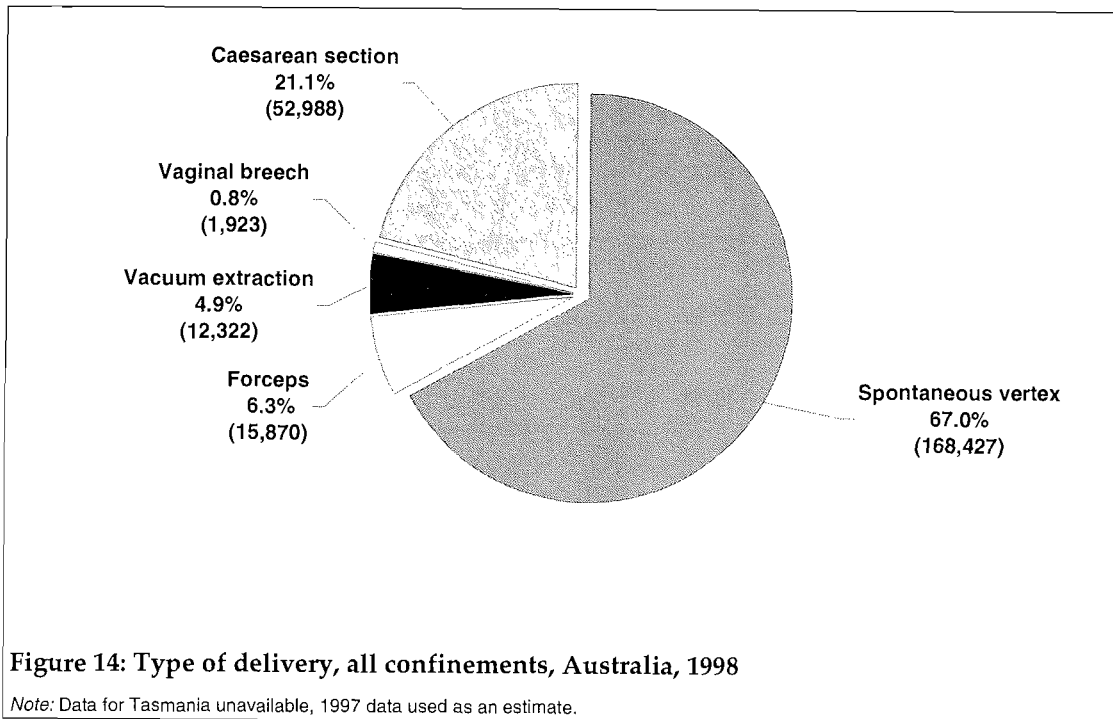
Labour was induced in 25.5% of pregnancies and induction was more likely in Western Australia (29.2%) than in the other States and Territories. Combined medical and surgical induction of labour was more likely than either type alone. Most confinements with no labour were elective caesarean sections.

2.14 Presentation at birth

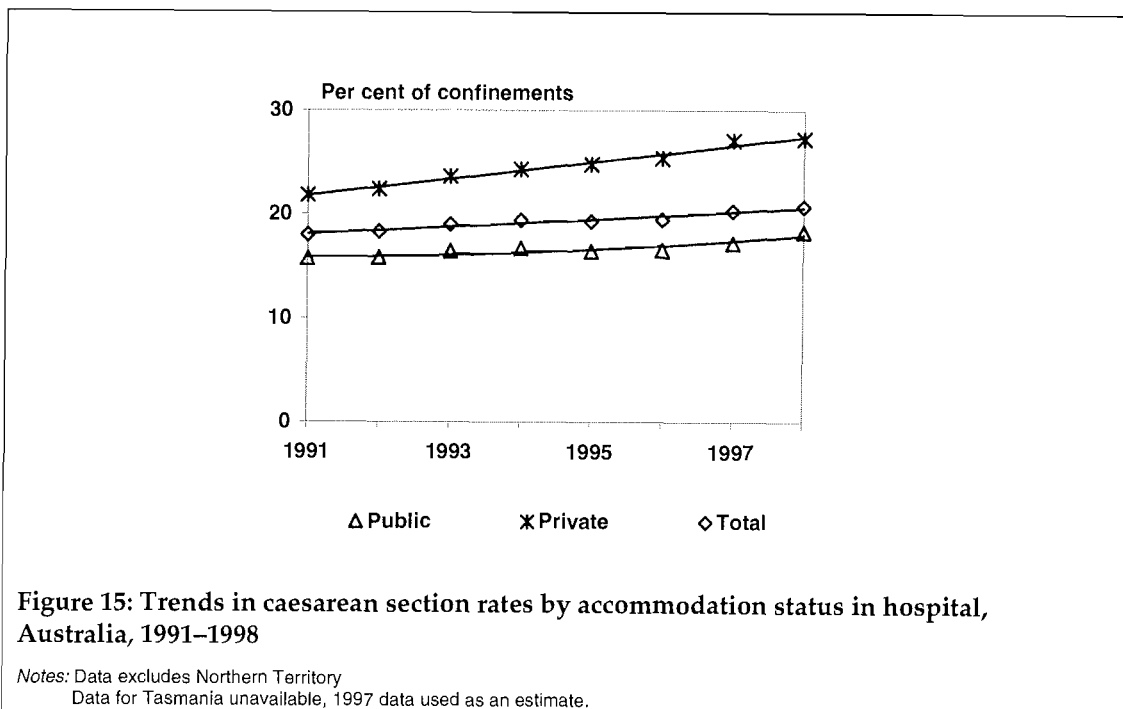
Breech presentation occurred in 4.3% of all confinements and other presentations in 0.7% (Table A22). In multiple pregnancies, the presentation and type of delivery of the first-born baby was used to classify each confinement.

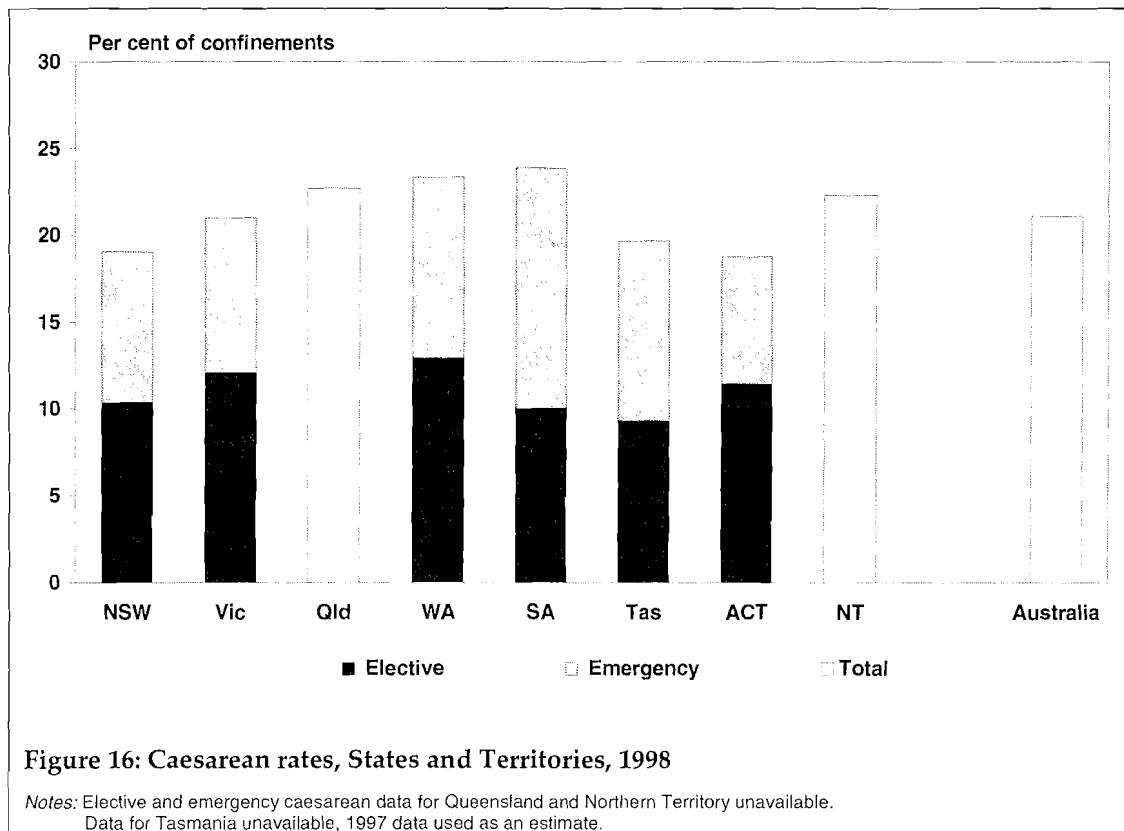
2.15 Method of birth

Two-thirds (67.0%) of all confinements were spontaneous vaginal deliveries (Table A23, Figure 14). Forceps delivery occurred in 6.3%, vacuum extraction in 4.9%, and vaginal breech delivery in 0.8%.



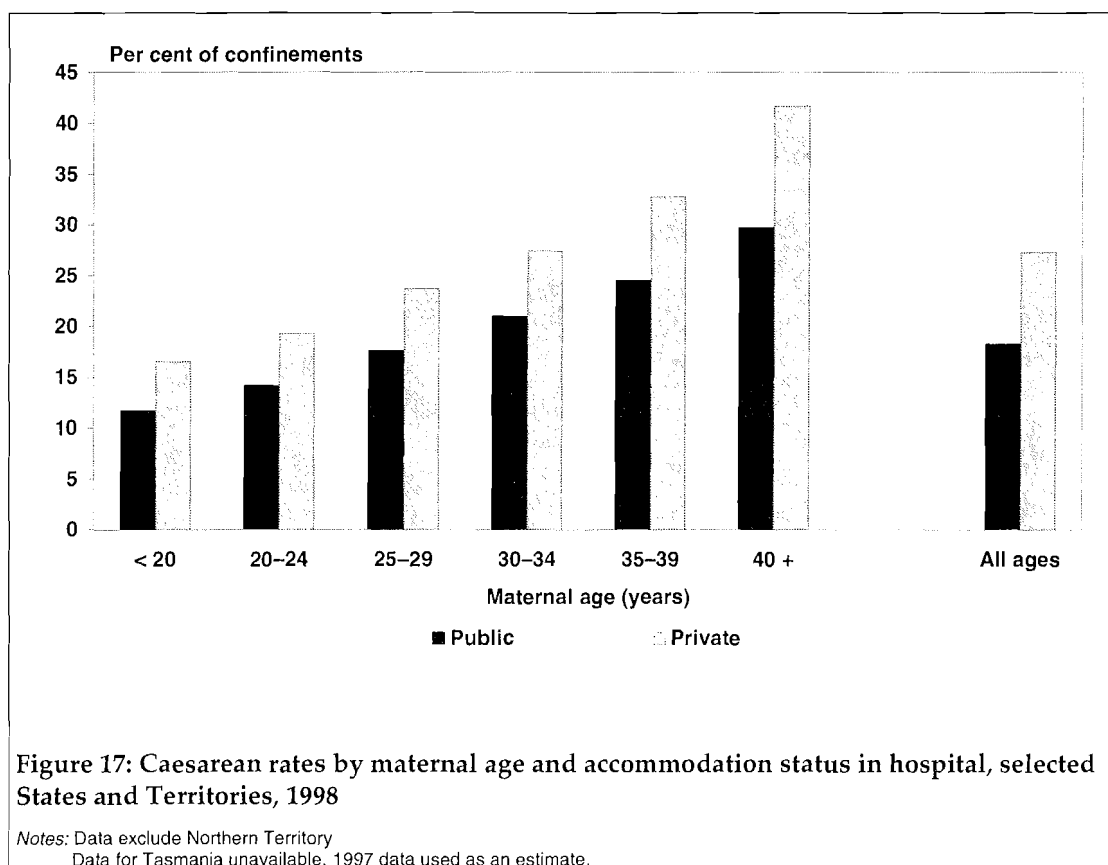
There were 52,988 caesarean sections performed in 1998, accounting for 21.1% of all confinements (Figure 14). The caesarean rate (per cent) continues to show an overall upward trend in recent decades (Lancaster & Pedisich 1993). South Australia (23.9%) had the highest caesarean rate in 1998 and the Australian Capital Territory (18.8%) the lowest (Table A24, Figure 16).





Caesarean rates for each State and Territory were compared in categories of maternal age, status in hospital, parity, singleton and multiple pregnancies, breech presentation in singleton confinements, and birthweight in singleton births (Tables A24, A25, A26 and A27). Excluding the Northern Territory which did not have data on status in hospital, the caesarean rate of 27.3% for women who were private patients in hospital was 49% higher than the rate of 18.3% for public patients (Table A24, Figure 17). This difference was partly attributable to a higher proportion of older women among private patients. Almost one-third of mothers with private status in hospital in Queensland (32.0%), Western Australia (31.0%) and South Australia (29.0%) had their babies by caesarean section.

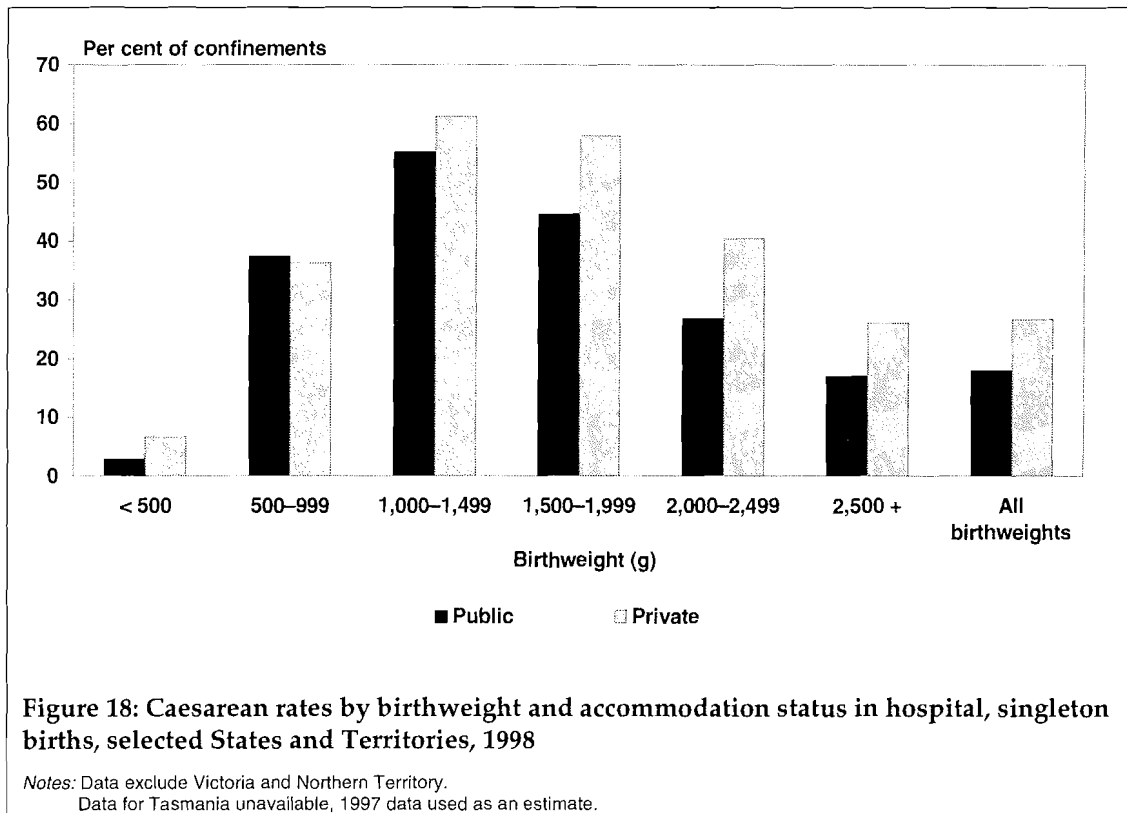
Analysis of national caesarean rates by 5-year maternal age group, public and private status in hospital and number of previous births (Tables A25, A26) showed these factors were associated with higher rates of caesarean section. Caesarean rates were generally higher as maternal age increased. Mothers having their first baby had higher caesarean rates than those who had given birth previously. Caesarean rates in nearly all maternal age and parity groups for mothers with private status in hospital were higher than for those with public status. Mothers aged 35 to 39 years who had private status in hospital and who were having their first baby had a caesarean rate of 39.2% compared with 32.9% for those who had public status. For mothers aged 40 to 44 years, the rising trend with advancing maternal age continued with caesarean rates of 55.2% for those who had private status in hospital compared with 45.6% for those who had public status.



The caesarean rate of 18.8% for Indigenous mothers was less than that for all mothers (21.1%). For the 6,918 Indigenous mothers who had public and 319 mothers who had private status, the caesarean rates were 17.8% and 28.2%, respectively. These are comparable with the overall rate of 18.3% for public status, but slightly higher than the 27.3% for private status among all mothers.

Various other factors that influence caesarean rates include multiple pregnancy, breech presentation and the baby's birthweight (Table A27, Figure 18). The caesarean rate of 47.5% for twins was more than twice that for singleton births (20.6%); for other multiple births, the caesarean rate was 90.6%. Most babies (81.2%) presenting in the breech position in singleton pregnancies were born by caesarean section.

Caesarean rates were high for mothers of low birthweight babies in singleton pregnancies, particularly for babies weighing 1,000–1,499 g (55.9%) and 1,500–1,999 g (47.2%). For singleton births of 2,500 g and over, mothers who had private status in hospital had a caesarean rate of 26.1%, 53% higher than the rate of 17.1% for those who were public patients.



2.16 Perineal repair after delivery

Most States and Territories collected information on perineal repair after delivery, performed either following episiotomy or for suturing of a perineal laceration. Because of differences in the methods of data collection, these figures should be interpreted cautiously. Repair of an episiotomy was notified in 20.5% of confinements in South Australia, 18.6% in Western Australia and 16.4% in Victoria. Suturing of perineal lacerations was performed in 26.5% of confinements in Western Australia, 26.0% in the Australian Capital Territory and 25.8% in the Northern Territory (Table A28). Data for New South Wales did not distinguish between episiotomy and suturing.

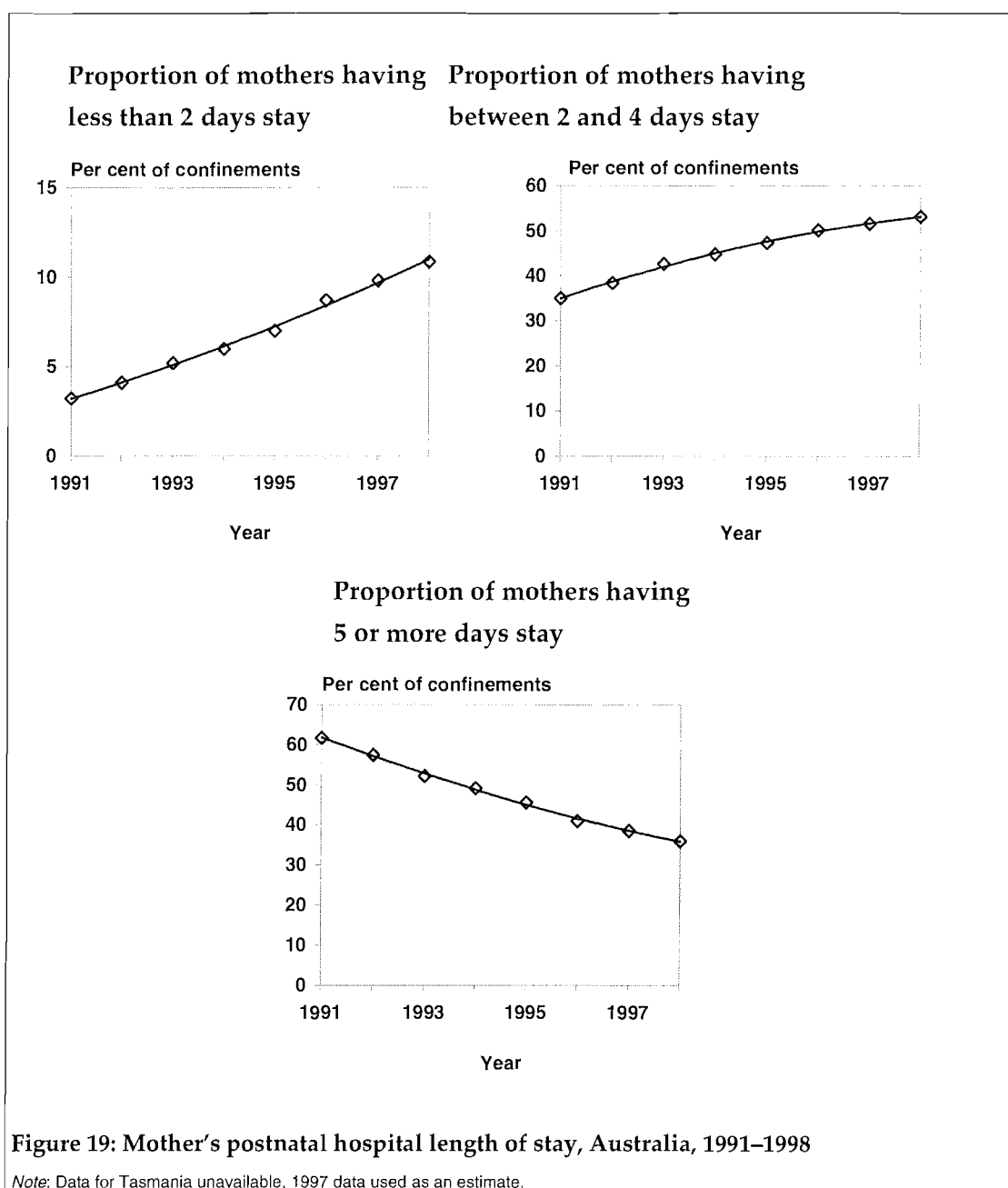
2.17 Mother's length of stay in hospital

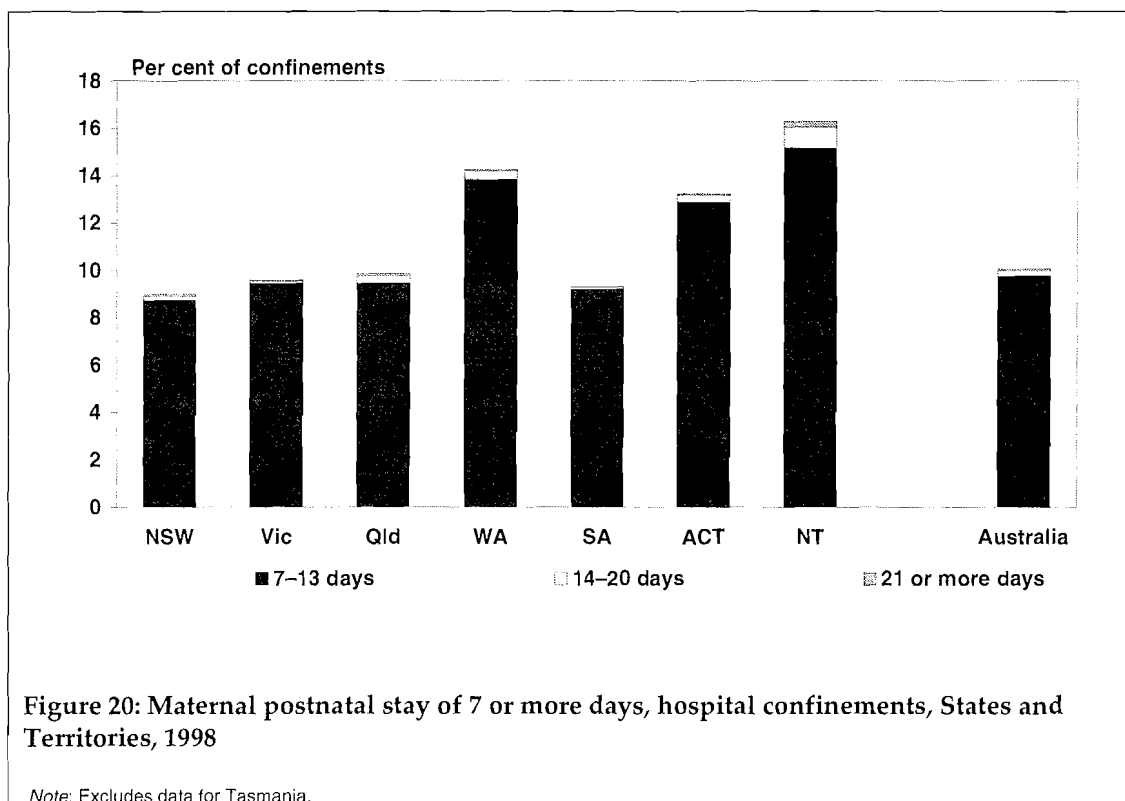
Most women gave birth either on the day of admission to hospital (62.2%) or on the following day (30.7%) (Table A29). About 1 in 69 women were hospitalised for at least 7 days immediately before delivery.

The length of the mother's postnatal stay in hospital may be influenced by factors such as the type of delivery, maternal medical and obstetric complications, neonatal morbidity, and specific hospital policies of early discharge. The final date of discharge of women transferred to other hospitals was not known, so these women were excluded from the calculation of length of postnatal stay. The average duration of postnatal stay was 4.0 days, having steadily declined from the average of 5.3 days in 1991. Postnatal stay in hospital was slightly longer on average in Western

Australia (4.2 days) and the Northern Territory (4.5 days) than in the other States (Table A30).

The trend towards shorter postnatal stays in hospital is reflected by the higher proportion of mothers who were discharged less than 5 days after giving birth. In 1998, 10.9% of mothers were discharged less than 2 days after delivery while 53.1% of mothers were discharged between 2 and 4 days after delivery. This compares with 3.2% and 35.0%, respectively in 1991 (Figure 19). Relatively more mothers in Queensland (68.1%), New South Wales (65.8%), and the Australian Capital Territory (62.6%) had stays of less than 5 days in 1998. Longer lengths of stay of 7 or more days were relatively more common in Western Australia (14.3%), the Australian Capital Territory (13.2%) and the Northern Territory (16.3%) (Table A30, Figure 20).





In selected States and Territories, mothers who had private status in hospital had an average postnatal stay of 5.2 days, compared with 3.4 days for those who had public status (Table A31). Data for Tasmania and the Northern Territory were not available for these comparisons.

Factors associated with periods of postnatal hospitalisation of less than 5 days were younger maternal age, higher parity, Indigenous status and spontaneous delivery (Table A32). There were also marked differences in postnatal stays between public and private categories. The proportion of hospitalised mothers with a postnatal stay of less than 5 days was 33.6% for those with private status in hospital compared to 77.5% for mothers with public status (Table A32). Differences between public and private categories were apparent for all maternal ages, parity, Indigenous status, type of delivery and size of hospital groups (Tables A33, A34). For mothers having their first baby, 68.5% in the public category stayed for less than 5 days compared with only 22.4% in the private category.

2.18 Mothers' mode of separation from hospital

Most mothers who gave birth in hospitals were discharged to their homes but 3.0% of mothers were transferred to other hospitals (Table A35), usually for continuing care in a hospital located nearer to their place of residence or sometimes for further treatment of complications. These transfers between hospitals were more likely to occur in New South Wales and South Australia than in the other States and Territories.

2.19 Maternal mortality

The perinatal collections are incomplete sources of maternal deaths as any deaths occurring after discharge from the hospital where the birth occurred are not recorded in these data systems. The few maternal deaths associated with spontaneous or induced abortion or with ectopic pregnancy are also excluded from the perinatal collections. Fourteen maternal deaths were reported through the State and Territory perinatal collections in 1998.

The last published maternal mortality rate in Australia was 10.9 per 100,000 confinements (1991–1993 triennium). The next report on maternal deaths in Australia for the triennium, 1994–1996, is due for release in early 2001.

3 Babies

3.1 Introduction

This chapter provides data on the characteristics of the 255,522 total births reported in 1998 to the perinatal collections; and includes birth status, sex, gestational age, birthweight, length of hospital stay and separation mode from hospital.

3.2 Baby's birth status

Babies are recorded as liveborn or stillborn (fetal deaths) on perinatal notification forms. There is a separate requirement for legal registration of stillbirths and liveborn babies dying within 28 days of birth. The Australian Bureau of Statistics now publishes annual data on perinatal deaths (ABS 1999) using the 400 g birthweight or at least 20 weeks gestation criteria for legal registration of births. The legal criteria for registration of births and notification in the perinatal collections differ slightly from the World Health Organization (WHO) definitions and include additional babies whose birthweight is less than 500 g but who meet the criteria of at least 20 weeks gestation or 400 g or more birthweight. As noted previously, there were an estimated 253,771 live births and 1,751 fetal deaths in 1998, giving a total of 255,522 births (Table A1).

3.3 Baby's month of birth

A changing seasonal pattern of births was evident in Australia up to the 1970s, the earlier peak of births in September being replaced by a bimodal pattern of peaks in February/March and September (Mathers & Harris 1983). The bimodal pattern of peaks in late summer and spring has continued in recent years. In 1998, of the estimated 255,522 births in Australia, most births occurred in the months of March and July to October (Table A36). When adjustment is made for the number of days in the month by deriving a standardised index, the bimodal pattern seen in recent years is not so evident, with the peak months for births being September/October and the low months November and December (Figure 21).



3.4 Baby's sex

Male births exceeded female births in all States and Territories (Table A37). The national sex ratio was 105.4 male births per 100 female births; for singleton births it was 105.4, for twins, 107.8 and for other multiple births, 114.8.

3.5 Baby's gestational age

Preterm birth before 37 weeks gestation accounts for a high proportion of perinatal deaths. It is associated with many neonatal problems that cause significant morbidity in newborn babies and may sometimes be associated with long-term disabilities (National Health and Medical Research Council 1996). The number of births in Australia for each week of gestational age increased from 197 at 20 weeks to 88,058 at 40 weeks (Table A38, Figure 22). Preterm births were classified according to the criteria of the WHO into groups at 20–27 weeks, 28–31 weeks, and 32–36 weeks (Figure 23). Amongst all births, 7.5% were preterm, with most of the preterm births at 32–36 weeks. Approximately 1 in 5 preterm births were at earlier gestational ages.

Preterm birth occurred in 49.4% of twins and in 96.2% of triplet births, much higher than the proportion of 6.1% among singleton births (Table A39). The difference in gestational age distribution between singleton and multiple births is even more pronounced when babies of less than 32 weeks' gestation are considered. One in ten twin births and nearly one-third (28.9%) of triplet births were in this high-risk group compared with only 1 in 100 (1.2%) for singleton births.

Differences in the manner in which gestational age was estimated may have been a factor contributing to variations in preterm births among the States and Territories.

The highest proportion of preterm births was 10.7% in the Northern Territory (Table A40).

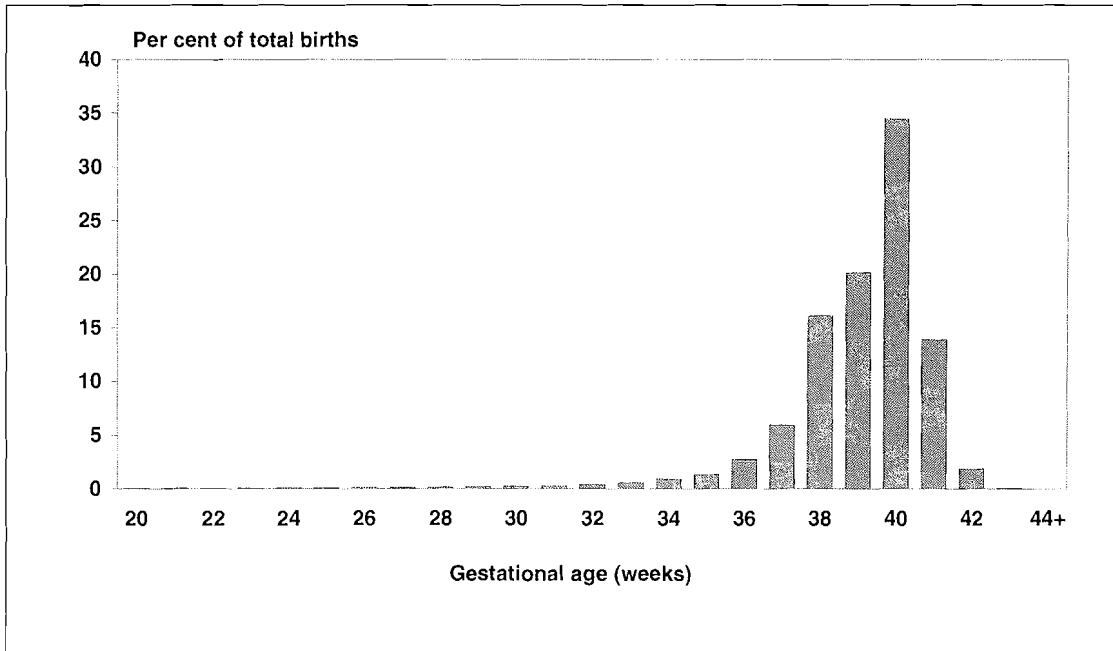


Figure 22: Distribution of births by gestational age, Australia, 1998

Note: Data for Tasmania unavailable, 1997 data used as an estimate.

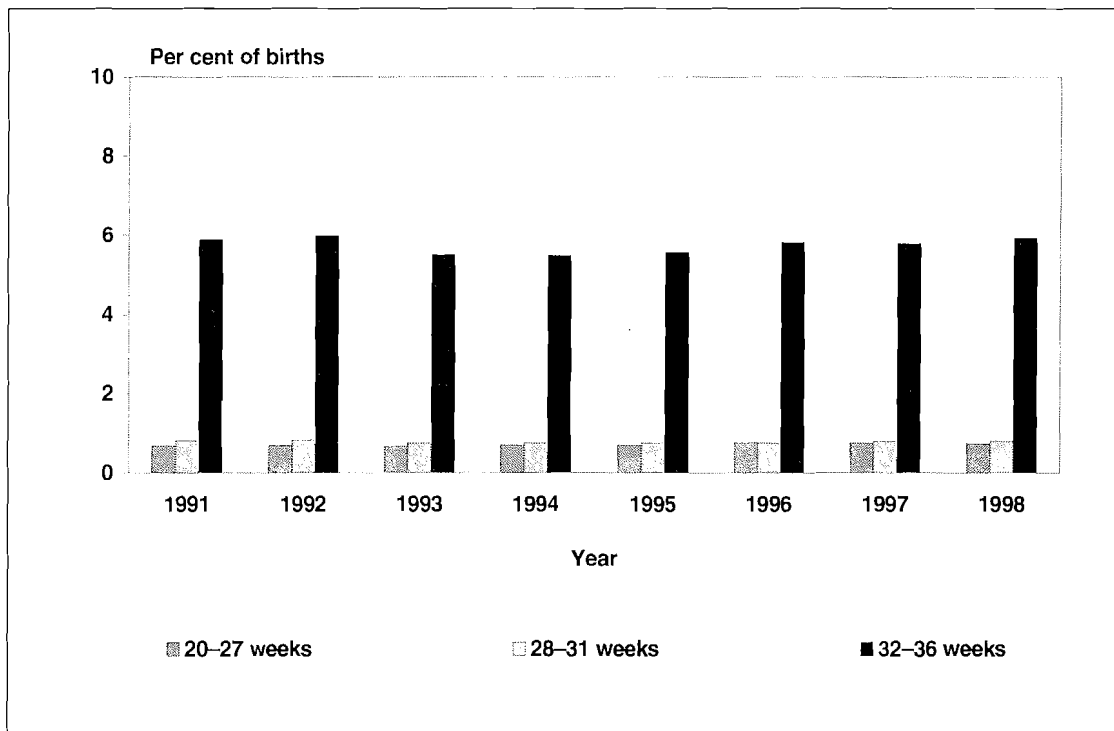


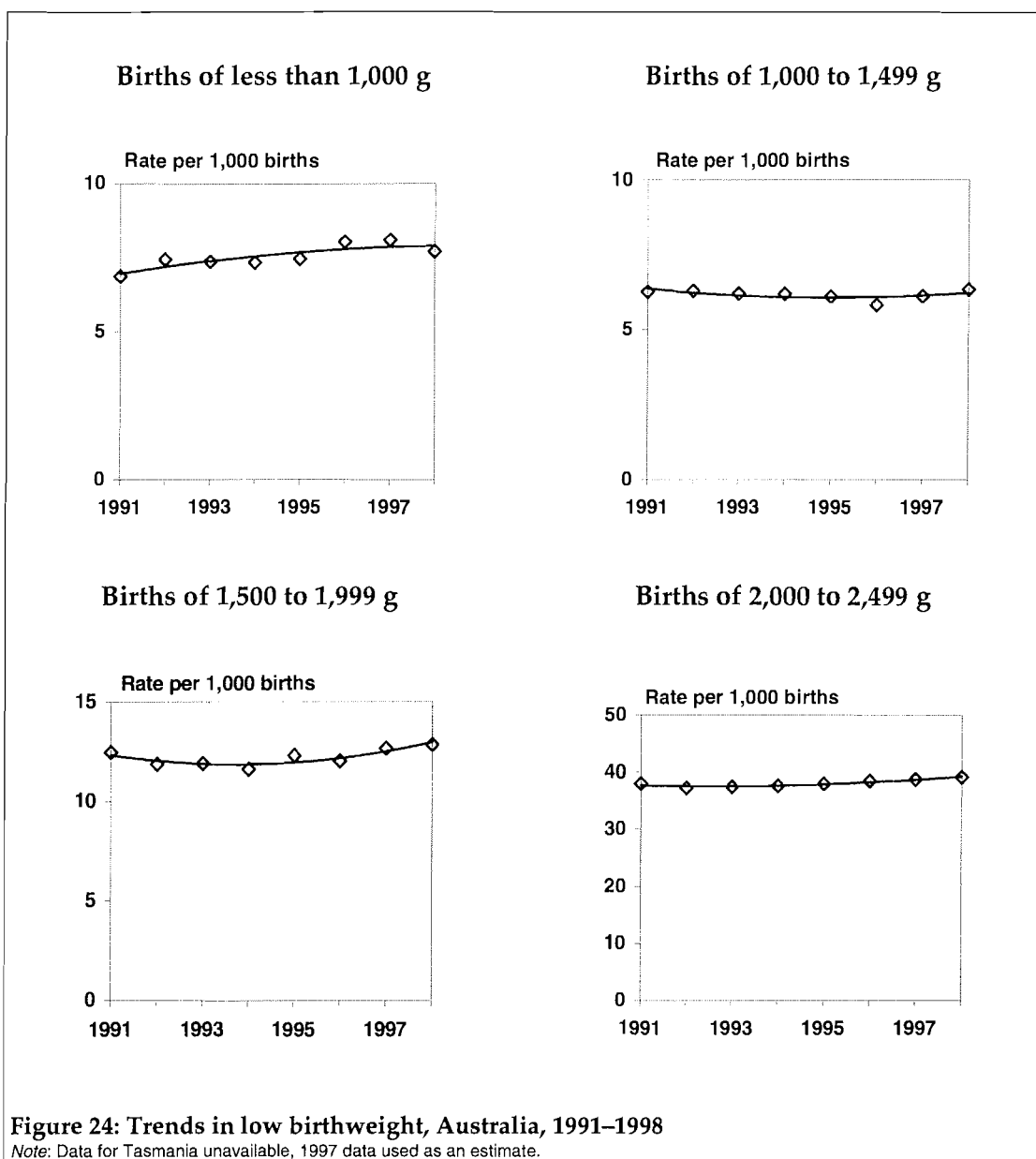
Figure 23: Preterm births, Australia, 1991-1998

Note: Data for Tasmania unavailable, 1997 data used as an estimate

3.6 Baby's birthweight

The baby's birthweight is a key indicator of health status. Babies are defined as low birthweight if their birthweight is less than 2,500 g. Within this category, those weighing less than 1,500 g are designated as very low birthweight and those less than 1,000 g as extremely low birthweight.

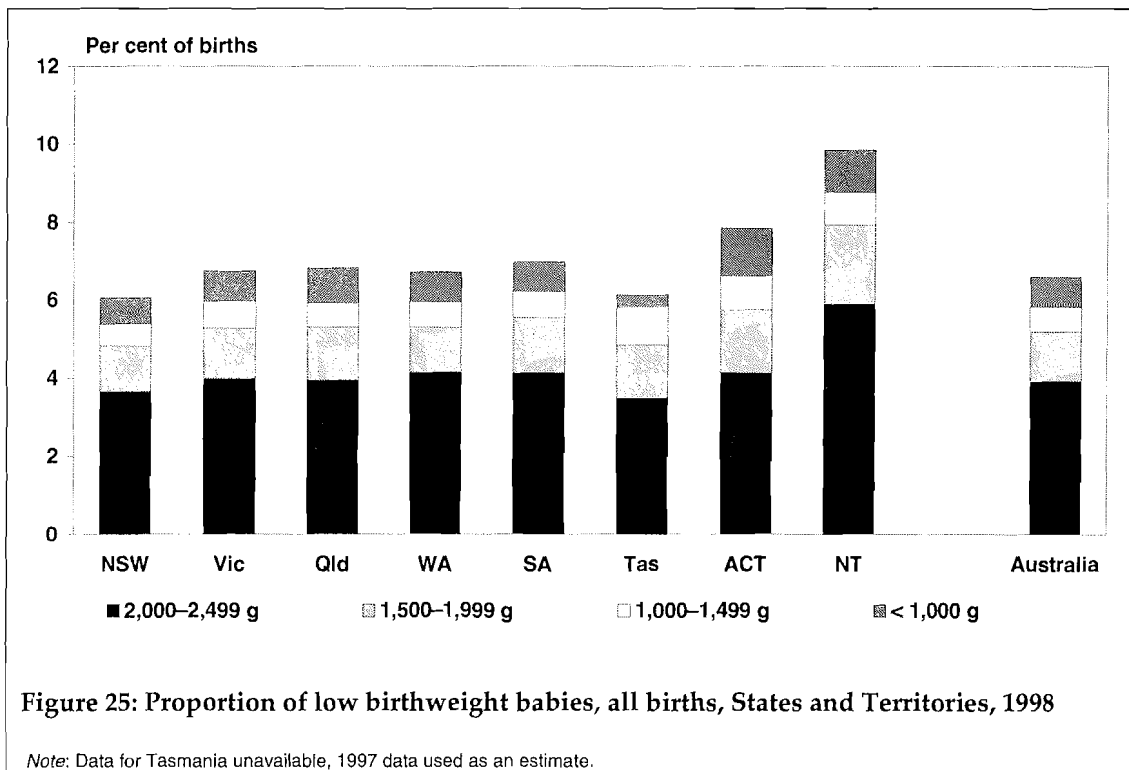
In 1998, there were 16,854 (6.6%) babies of low birthweight, which was unchanged from 1997. The 3,588 very low birthweight babies comprised 1.4% of all births in 1998 and the 1,969 extremely low birthweight babies, 0.8% (Table A41). There was some increase in the proportion of extremely low (less than 1,000 g) birthweight babies between 1991 and 1998, but little change in the proportion of babies in the other categories of low birthweight (Figure 24).

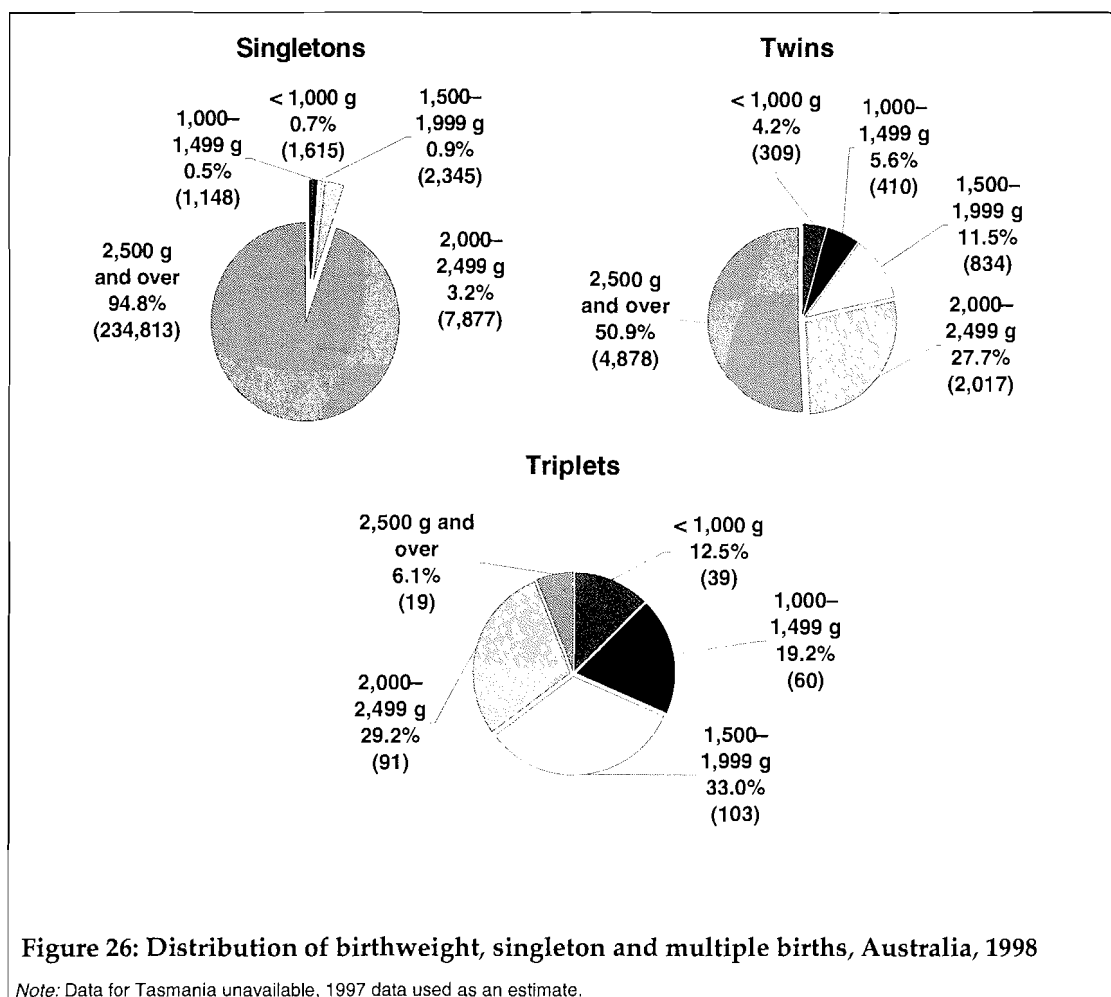


The mean birthweight of all liveborn and stillborn babies in Australia in 1998 was 3,363 g and showed relatively little variation among the different States and Territories, except for a lower average of 3,244 g in the Northern Territory where there was also the highest proportion of low birthweight babies (9.9%) (Table A41, Figure 25).

The mean birthweight of liveborn babies was 3,376 g (Table A42). Low birthweight occurred in 6.1% of liveborn babies and in 75.4% of stillborn babies. More than half (50.2%) of the stillborn babies had a birthweight of less than 1,000 g.

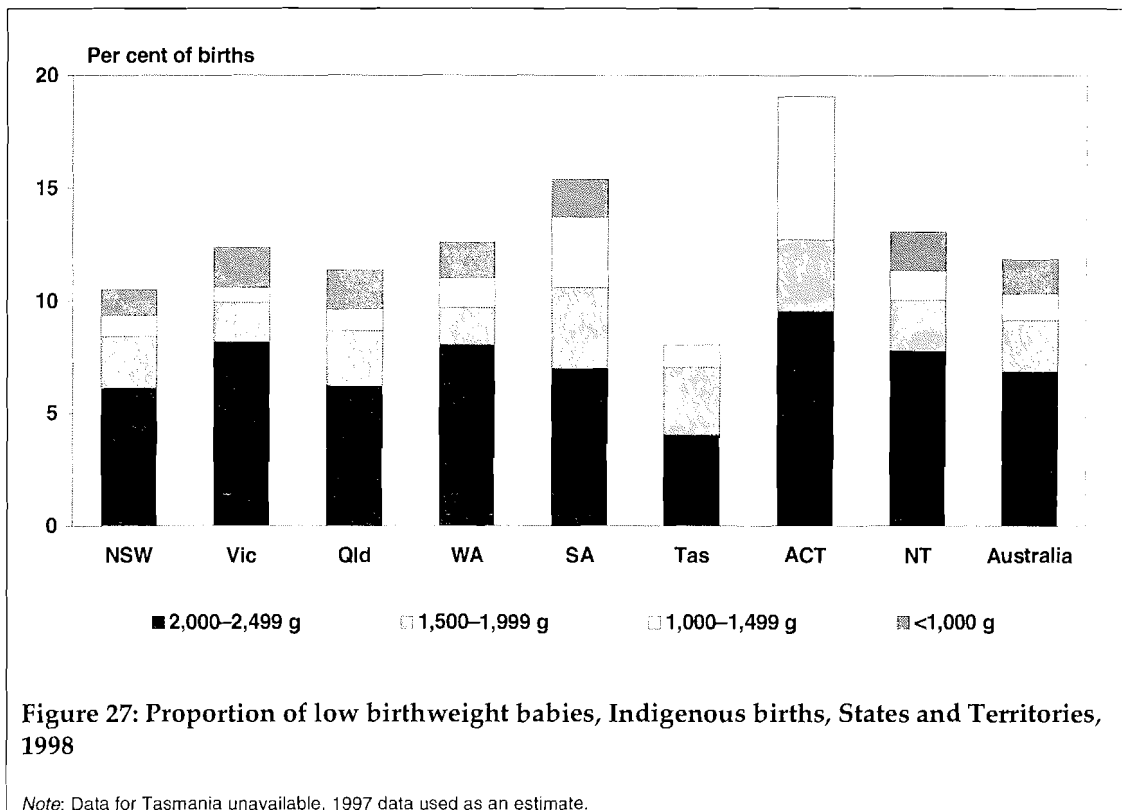
In twins, the proportion of low birthweight was 49.1%, almost ten times higher than in singleton births (5.2%); in triplets, this proportion was 93.9% and in other multiple births, 100% (Table A43, Figure 26). The mean birthweight was 3,393 g in singletons, 2,407 g in twins, 1,745 g in triplets, and 923 g for other multiple births.





Male babies were less likely to be low birthweight (6.2%) than were females (7.0%) (Table A44). In the higher birthweight categories, there were relatively more males in the groups with birthweights of 3,500–3,999 g and over. The mean birthweight of males was 3,420 g, which was 117 g higher than that of females (3,303 g).

The mean birthweight of live and stillborn babies of Indigenous mothers in 1998 was 3,169 g. This was 194 g less than the national average of 3,363 g for all births. The proportion of low birthweight in babies of Indigenous mothers was 11.8% (Table A45), nearly twice that of 6.6% in all babies. The mean birthweight of babies of Indigenous mothers, and the proportion with low birthweight, varied markedly among the States and Territories. Low birthweight was more likely among babies of Indigenous mothers in the Australian Capital Territory (19.0%), South Australia (15.4%) and the Northern Territory (13.1%) (Figure 27).



There were relatively small differences in the proportion of low birthweight babies according to the mother's country of birth. Overall, 6.4% of babies of Australian-born non-Indigenous mothers were low birthweight. Low birthweight babies were slightly more common for mothers born in Italy and India (Table A46, Figure 28). Mothers born in China, the former Yugoslavia and Lebanon were less likely to have babies of low birthweight.

Mothers aged 30–34 years had the lowest proportion of low birthweight babies (6.0%); the proportion was higher among babies of younger and older mothers (Table A46).

Women having their first baby, and those with four or more previous children, were more likely than other parity groups to have a low birthweight baby, while those giving birth for the second or third time were least likely to do so (Table A46).

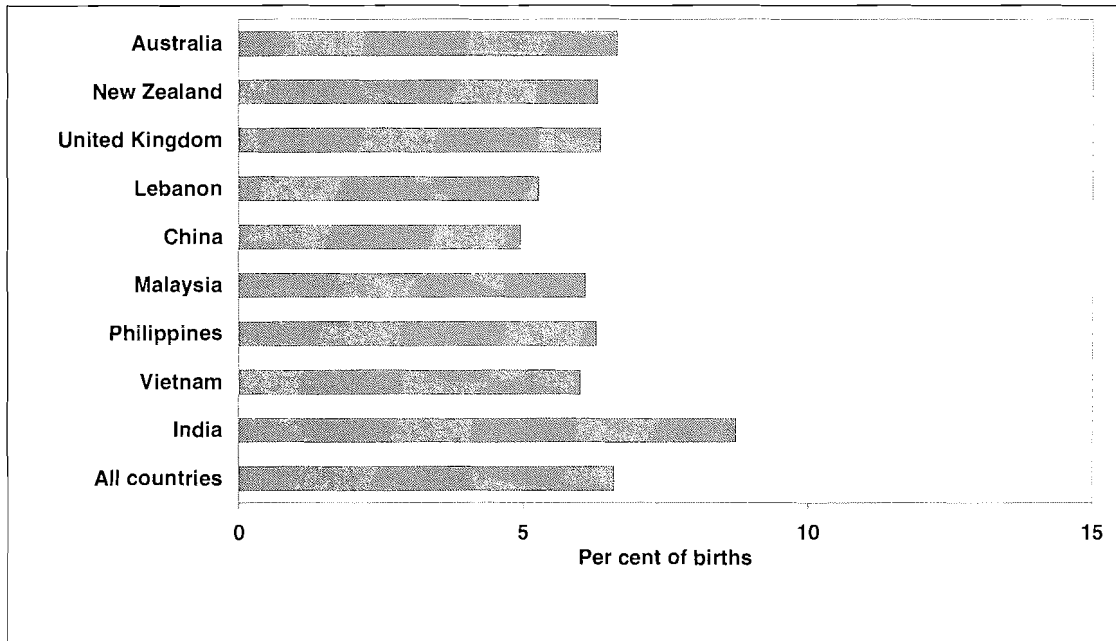


Figure 28: Low birthweight rates, selected maternal countries of birth, 1998

Note: Data for Tasmania unavailable, 1997 data used as an estimate.

The proportion of low birthweight among babies born to single mothers (10.1%) was considerably higher than for babies born to married or de facto mothers (6.4%) (Table A46).

The proportion of low birthweight babies was higher in mothers who were public patients (6.8%) compared to mothers who were private patients (5.3%) (Table A46, Figure 29).

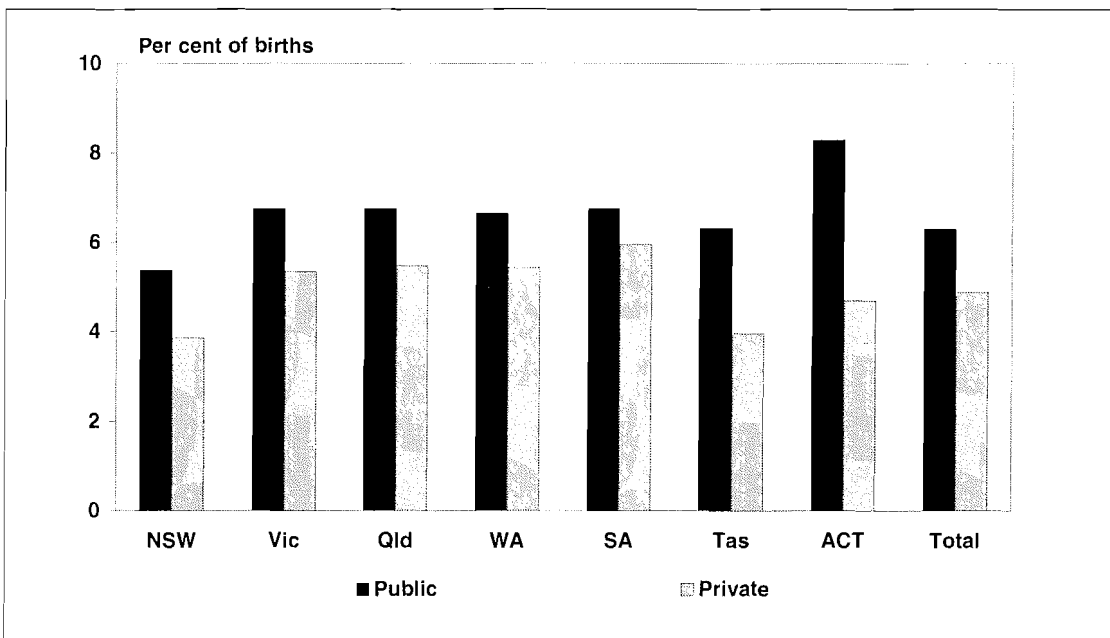


Figure 29: Low birthweight by maternal accommodation status, selected States and Territories, 1998

Notes: Data exclude Northern Territory
Data for Tasmania unavailable, 1997 data used as an estimate.

Women giving birth at home and in birth centres have usually been selected to exclude those with major risk factors for low birthweight. This appears to be reflected in the lower proportion of low birthweight babies in home births (3.4%), and in birth centres (1.0%), than in hospital births (6.7%) (Table A46). On the other hand, there was a high proportion of low birthweight babies among those born before arrival in hospital (14.5%) and elsewhere (31.0%).

The proportion of various categories of low birthweight babies, especially those weighing less than 1,500 g, who were born in larger hospitals that have adequate staffing and facilities provides an indicator of the effectiveness of regionalisation of perinatal care. This proportion was high in all regions except the Northern Territory which has relatively few births, only one large maternity unit, and a relatively high proportion of births to Indigenous mothers in remote locations (Table A47).

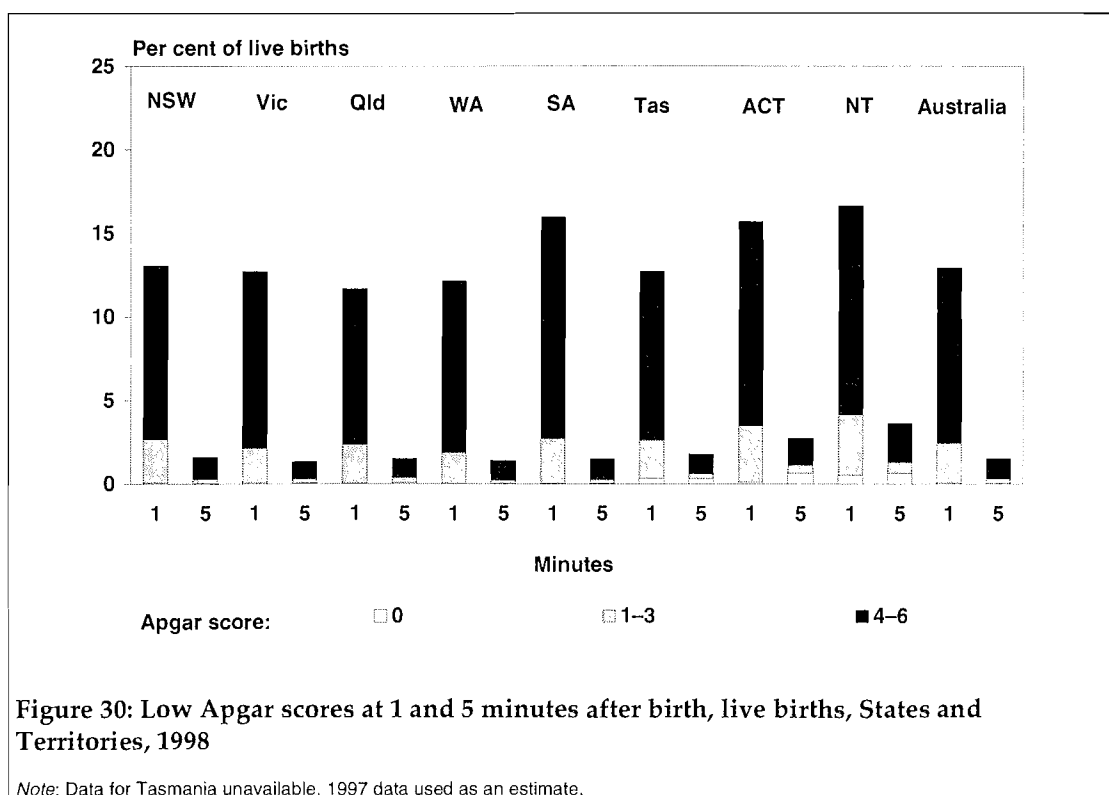
More than four-fifths (81.8%) of the highest risk babies weighing 500–999 g were born in hospitals that had more than 2,000 confinements annually, and another 8.4% were born in hospitals with 1,001–2,000 confinements annually. Victoria (18.8%) and Northern Territory (18.8%) had relatively more babies in this birthweight group born in hospitals with fewer than 1,000 confinements annually. In Victoria and the Northern Territory, a relatively higher proportion of babies weighing 1,500–1,999 g were born in hospitals with less than 1,000 confinements annually.

3.7 Apgar scores

Apgar scores are clinical indicators of the baby's condition shortly after birth, based on assessment of the heart rate, breathing, colour, muscle tone, and reflex irritability. Between 0 and 2 points are given for each of these five characteristics and the total score may vary between 0 and 10. The Apgar score is routinely assessed at 1 and 5 minutes after birth, and subsequently at 5-minute intervals if it is still low at 5 minutes.

Consistent with the usual convention for grouping Apgar scores, the distribution in each State and Territory was compared (Tables A48, A49, Figure 30). In all States and Territories, the distribution of 1-minute and 5-minute Apgar scores is similar. Low Apgar scores of 1–3 were recorded at 1 minute in 2.4% of live births and at 5 minutes in 0.3%.

Low Apgar scores of less than 4 were strongly associated with the baby's birthweight. Babies from singleton and multiple births within the same birthweight categories had similar Apgar scores (Table A50).



3.8 Resuscitation at birth

Recording of the type of resuscitation given to babies immediately after birth varies markedly among the States and Territories. A breakdown of this information was not available for New South Wales in 1998. Ventilatory assistance by intermittent positive pressure respiration (IPPR) through a bag and mask, or after intubation was recorded for 8.2% of liveborn babies in Queensland, 6.5% in Western Australia, increasing to 14.9% in Victoria and 13.2% in Tasmania. Excluding New South Wales where this information was not available, IPPR was given to 7.3% of all live births (Table A51). Endotracheal intubation was recorded for 0.6% of liveborn babies in Queensland, 1.1% in Victoria, 1.7% in Western Australia, 1.3% in the Australian Capital Territory. Because of differences in the methods of data collection, these figures should be interpreted cautiously.

3.9 Baby's length of stay in hospital

Babies who died or were transferred to another hospital after birth were excluded from the data used to calculate length of stay. The majority of babies (86.7%) remained in their hospital of birth for less than 7 days (Table A52). More babies had relatively short stays of less than 5 days in hospital in 1998 than in the previous 5 years. In 1998, 61.3% of babies stayed in hospital for period of less than 5 days compared with only 37.0% in 1991. This trend occurred in all States and Territories but the national data did not include New South Wales in 1991 and 1992. In 1998, relatively more babies born in New South Wales (62.0%) and Queensland (65.9%) were in the short-stay group.

Duration of hospitalisation for 28 or more days occurred for 1.1% of babies. As the period of hospitalisation of babies transferred from their hospital of birth to another hospital is not included here, except for South Australia, these figures underestimate the proportion of babies staying in hospital for long periods.

The baby's gestational age and birthweight are usually the main factors influencing the duration of hospitalisation (Table A53). Twins and other babies from multiple births usually have longer stays than singleton babies. Babies born to Indigenous mothers were more likely to be discharged relatively early from hospital. This finding is consistent with the preference of Indigenous mothers for early discharge from hospital and also with their higher risk of having low birthweight babies. Babies with a gestational age of less than 32 weeks, or a birthweight less than 1,500 g, were more likely to have short periods of stay of less than 3 days in their hospital of birth because of higher risks of neonatal death or transfer to other hospitals.

3.10 Baby's mode of separation from hospital

A total of 4.1% of babies were transferred to another hospital from their hospital of birth (Table A54). Although the States and Territories record the hospital to which the baby is transferred on their perinatal forms, the type of hospital is not presently included in the data provided for the national report. Therefore it is not possible to compare the proportion of babies transferred for further treatment of neonatal conditions with other reasons for transfer.

If a baby dies at home within 28 days of birth, or dies after being transferred to another hospital, this death may not be included in the perinatal collection unless a registered neonatal death has been linked with its perinatal form. The data on mode of separation of the baby are therefore an incomplete source of information on neonatal deaths and cannot be used to determine national neonatal death rates.

4 Perinatal mortality

4.1 Definitions

There are different legal and statistical definitions in Australia for registering and reporting perinatal deaths. For legal purposes, all fetal and neonatal deaths of at least 20 weeks gestation or at least 400 g birthweight are registered. In the past, the Australian Bureau of Statistics (ABS) published annual data on perinatal deaths in *Causes of Death, Australia 1996* and previous publications, based on recommendations of the World Health Organization (WHO) for reporting national perinatal statistics. These were that fetal deaths are included if the birthweight is at least 500 g or, when birthweight is not available, if the gestational age is at least 22 weeks, and there is no evidence of life after birth. Commencing with the *Causes of Death, Australia 1997* publication and continued in *Causes of Deaths, Australia 1998*, the ABS now also publishes data on perinatal deaths at the lower inclusion criteria of 400 g, or when birthweight is unavailable, a gestational age of at least 20 weeks. The ABS data for neonatal deaths include liveborn babies dying within 28 days of birth and are based on the same criteria of birthweight or gestational age as for fetal deaths. ABS death data presented in this chapter is from *Causes of Death, Australia 1998* unless otherwise specified.

The lower limit inclusion criteria has been adopted because this recognises the availability of reliable 400 g/20 weeks data from all State and Territory Registrars of Births, Deaths and Marriages and recommendations from major users that the ABS adopt the legal requirement for registration of perinatal deaths as the statistical standard (ABS 1999).

WHO recommendations differ from this standard and include only early neonatal deaths occurring in the first 7 days and not all neonatal deaths up to 28 days, as reported by ABS. WHO has also recommended that for international comparisons, countries should report data based on lower limits of 1,000 g or, when birthweight is not available, a gestational age of at least 28 weeks, excluding births and fetal and neonatal deaths that do not meet these criteria (Table A55).

Perinatal death rates vary markedly according to which definition is used (Table A55). In the period from 1996 to 1998, the perinatal death rate for babies of at least 20 weeks or 400 g (8.3 per 1,000 births) was almost double the estimated rate of 4.8 per 1,000 births based on the WHO definition for international comparisons. Using the criteria of 400 g/20 weeks for national data, the 1998 perinatal death rate of 8.3 per 1,000 births was 73% higher than the estimated rate of 4.8 per 1,000 births based on the WHO criteria for international comparisons.

Unless otherwise specified, fetal, neonatal and perinatal death rates in this report are based on the ABS definition using a lower limit of 400 g, or 20 weeks when birthweight was unknown, and include neonatal deaths within 28 days of birth. Annual data are based on the year of registration. Data for the years prior to 1992 were given in the report for 1993 (Lancaster et al. 1996).

4.2 Trends in fetal, neonatal and perinatal deaths

Depending on when the fetal heart stopped beating, fetal deaths can be grouped as antepartum deaths, when the heartbeat ceased before labour commenced; intrapartum deaths, when the heartbeat ceased during labour; and unknown deaths, when it was not known whether the heartbeat ceased before or during labour. There is another small group of registered perinatal deaths for which it was not known whether the heartbeat ceased before or after birth. The ABS includes this group with the fetal deaths and the practice has been followed in this report, including them with the intrapartum fetal deaths.

In the period between 1973 and 1998, the fetal death rate has more than halved from 11.1 to 5.3 per 1,000 births (Table A56, Figure 31). The fall during this period of 69.4% in intrapartum fetal death rates was greater than the decline of 42.9% for antepartum fetal death rates (Figure 32). Unknown type of fetal death rates declined 27.2% between 1973 and 1996, but then jumped from 0.8 per 1,000 births in 1996 to 1.2 per 1,000 births in 1997. However, in 1998, rates have continued the decreasing trend with 0.6 per 1,000 births. As a result of these decreasing rates, antepartum fetal deaths increased as a proportion of all fetal deaths from 63.8% in 1973 to 76.6% in 1998, and intrapartum fetal deaths decreased from 36.2% in 1973 to 23.4% of all fetal deaths in 1998.

The neonatal death rate declined even more sharply than the fetal death rate, falling by 74.1% from 11.6 per 1,000 live births in 1973 to 3.0 per 1,000 live births in 1998 (Table A57, Figure 33). Initially, the early neonatal death rate for deaths within 7 days of birth fell more rapidly than the rate of late neonatal deaths that occurred in the second to fourth weeks after birth, however, the rates have all plateaued in recent years.

Based on the lower legal and, now ABS definition, the national perinatal mortality rate declined by 63.3%, from 22.6 per 1,000 births in 1973 to 8.3 per 1,000 births in 1998 (Table A58, Figure 31).

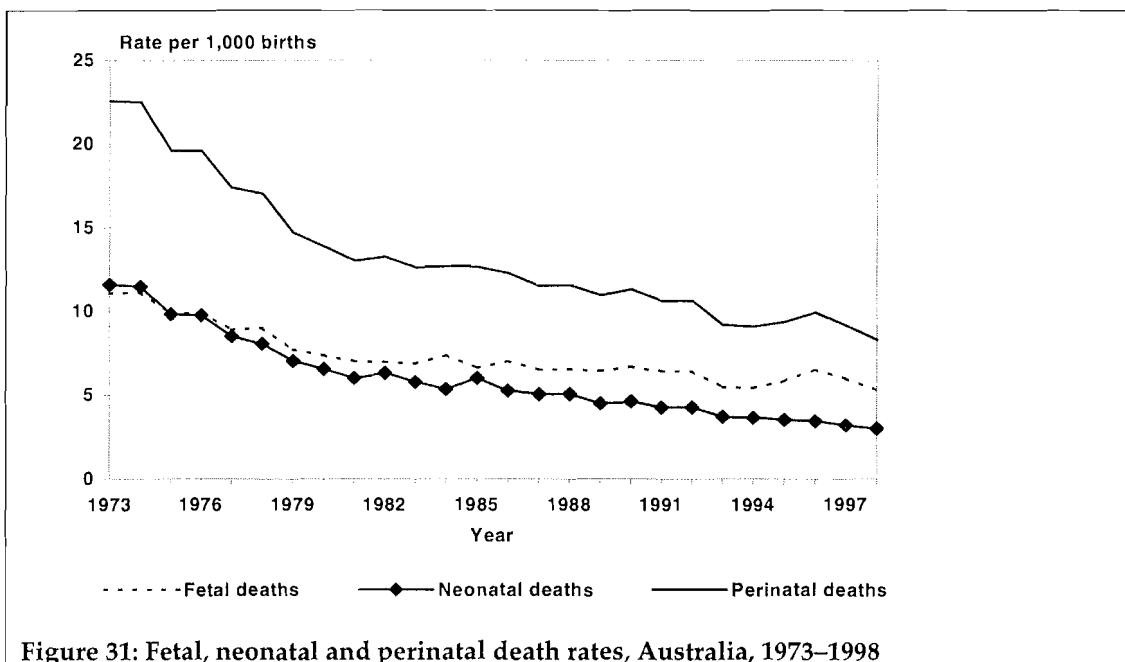


Figure 31: Fetal, neonatal and perinatal death rates, Australia, 1973–1998

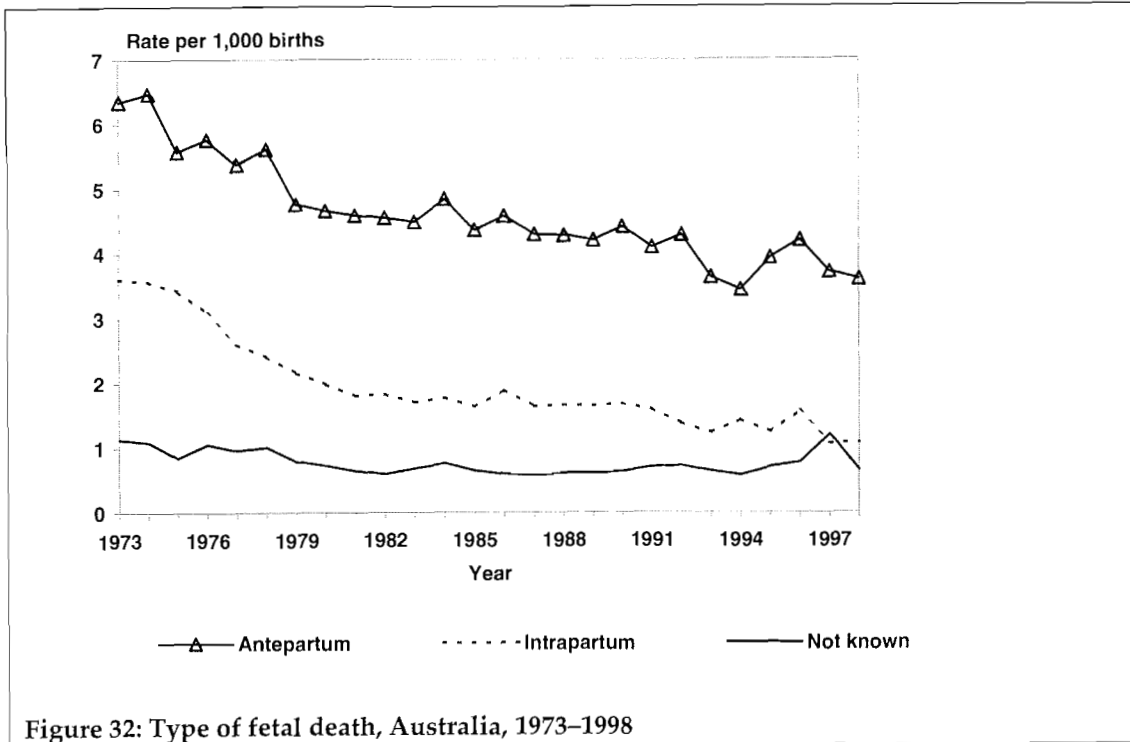


Figure 32: Type of fetal death, Australia, 1973–1998

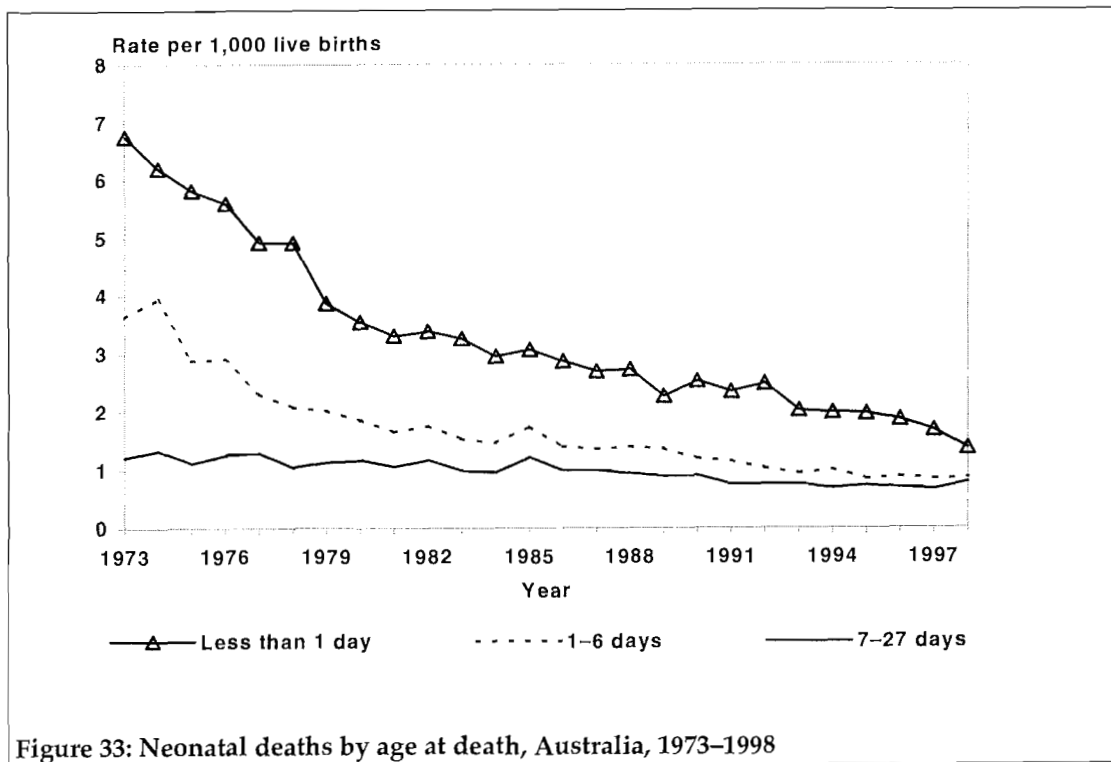


Figure 33: Neonatal deaths by age at death, Australia, 1973–1998

4.3 Perinatal deaths by State and Territory of residence

Except for higher rates in the Northern Territory and the Australian Capital Territory, there were relatively small differences in perinatal death rates among the States and Territories (Table A59, Figure 34). In the 3-year period from 1996 to 1998, Victoria, Western Australia and South Australia had the lowest perinatal death rates. In this 3-year period, at least 90% of perinatal deaths were registered in the State and Territory of mothers' usual residence (Table A60).

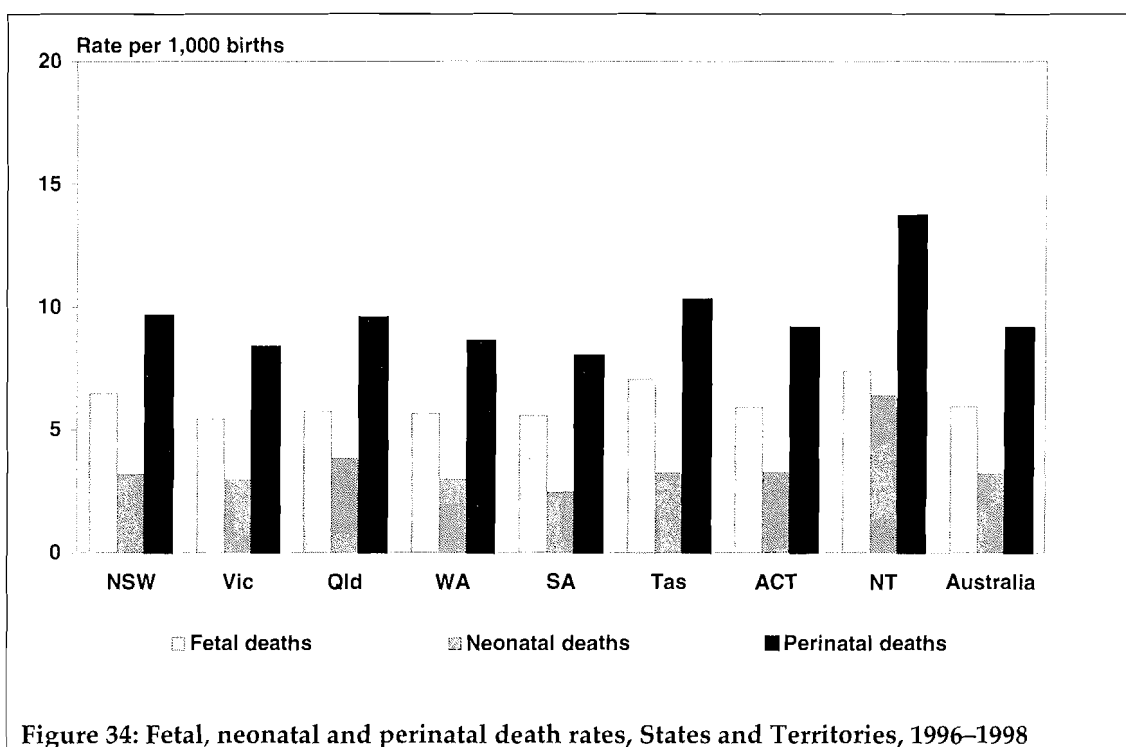
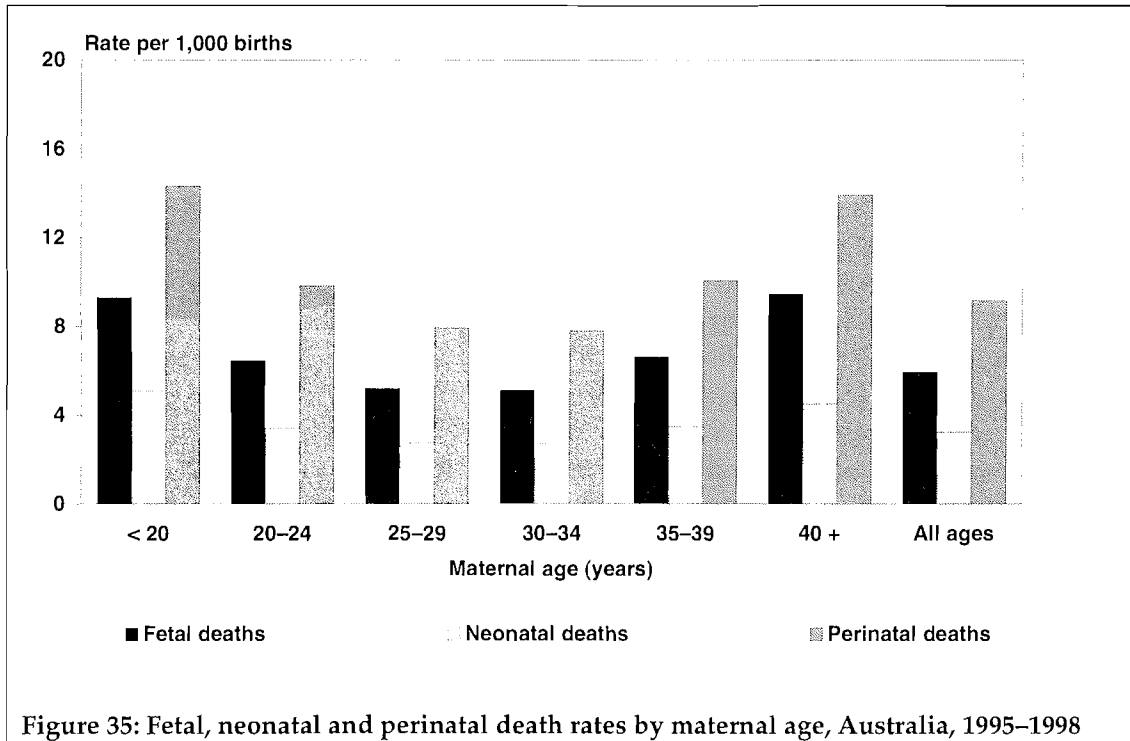


Figure 34: Fetal, neonatal and perinatal death rates, States and Territories, 1996–1998

4.4 Perinatal deaths by maternal age

The perinatal death rate was significantly higher for babies with younger mothers aged less than 20 years and older mothers aged 40 years or more than for mothers aged 25–29 years, which had the lowest rate of 7.8 per 1,000 births in the period from 1996 to 1998 (Table A61, Figure 35).



4.5 Perinatal deaths by plurality

Perinatal death rates are higher for multiple than for singleton births (Table A62). The number of perinatal deaths among triplet and higher order multiple births is relatively small each year so data were analysed for the 3-year period of 1996 to 1998.

There were 6,958 perinatal deaths in 1996-1998; 683 (9.8%) occurred in twins and 69 (1.0%) in other multiple births, so multiple births accounted for 10.8% of all perinatal deaths. The perinatal death rate of twins for the period 1996-1998 was 3.9 times higher, and of other multiple births 8.6 times higher, than that of singleton births (Table A62), mainly due to their increased occurrence of preterm birth and low birthweight.

4.6 Perinatal deaths by baby's sex

Perinatal death rates for males are consistently higher than for females. In 1996-1998, the rate for males was 15.3% above that for females (Table A63). The difference in rates between the sexes was slightly greater for neonatal deaths than for fetal deaths. The neonatal death rate for males was 24.1% higher than for females; the fetal death rate was 10.7% higher for males.

4.7 Proportionate perinatal death rates by gestational age

The duration of pregnancy is recorded in completed weeks on perinatal death certificates, based either on the gestational age (calculated using the date of the first day of the last menstrual period and the baby's date of birth), or on clinical assessment. As information about the gestational age distribution of all births between 1973 and 1998 was lacking, fetal, neonatal and perinatal deaths in categories of gestational age are expressed as proportionate death rates. The denominator for calculating proportionate death rates is the total number of births rather than the number of births in a particular gestational age (or, see below, birthweight) category.

In 1973, preterm births of less than 37 weeks accounted for 58.9% of fetal deaths with stated gestational ages and those less than 28 weeks for 23.1%. In 1998, these proportions had increased to 69.2% and 38.5%, respectively (Table A64, Figure 36). Many countries still have a lower limit of 28 weeks for registering fetal deaths, thereby excluding about one-third of fetal deaths included in the Australian data.

The distribution of neonatal deaths by gestational age was similar to that for fetal deaths but there were relatively more neonatal deaths of less than 28 weeks in 1998 than in 1973. The proportion in this group increased from 26.8% in 1973 to 45.1% in 1998 while the proportion of all neonatal deaths of known gestational age that were preterm was 69.2% in 1973 and 68.3% in 1998 (Table A65, Figure 37).

Between 1973 and 1998, there were substantial falls in the proportionate perinatal death rates in all gestational age groups, but the decline for deaths of less than 28 weeks was not as marked as for deaths in the other gestational age groups. In 1998, 40.3% of perinatal deaths were less than 28 weeks gestation (Table A66, Figure 38).

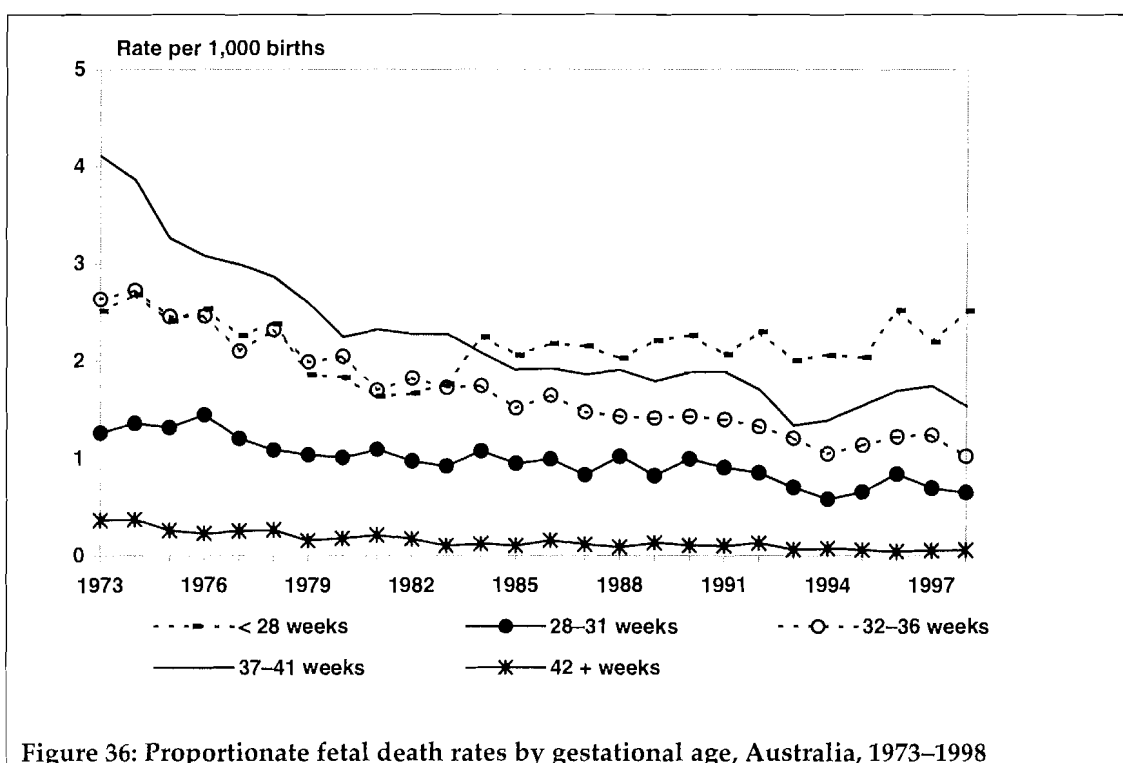
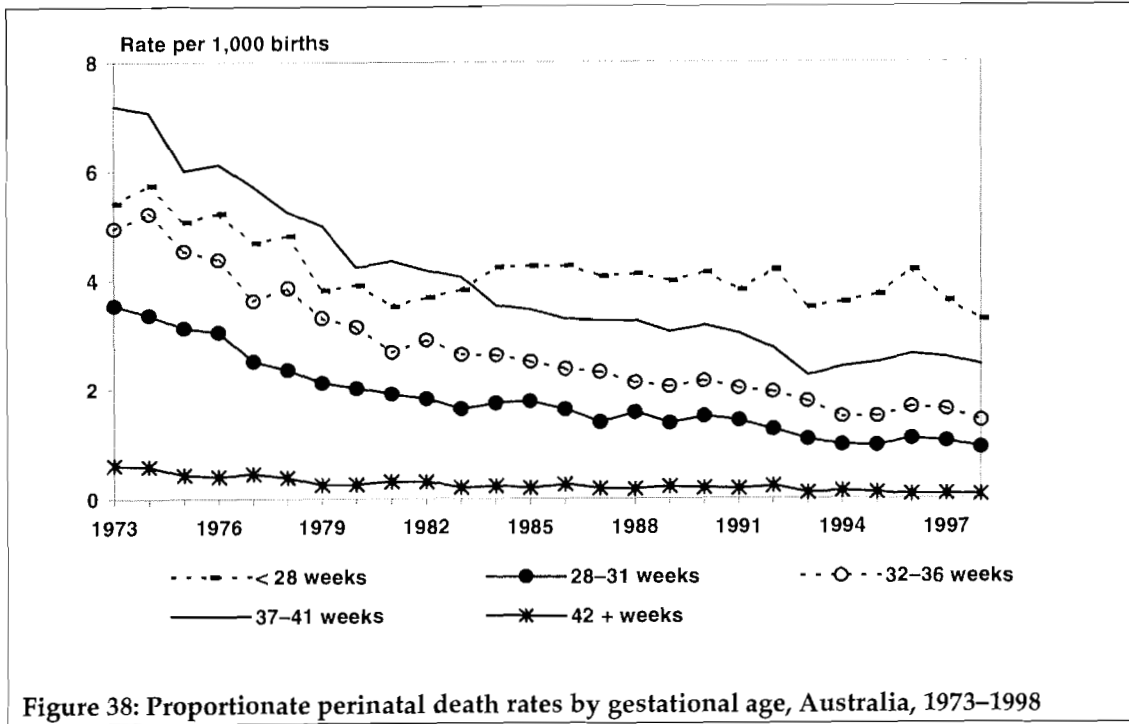
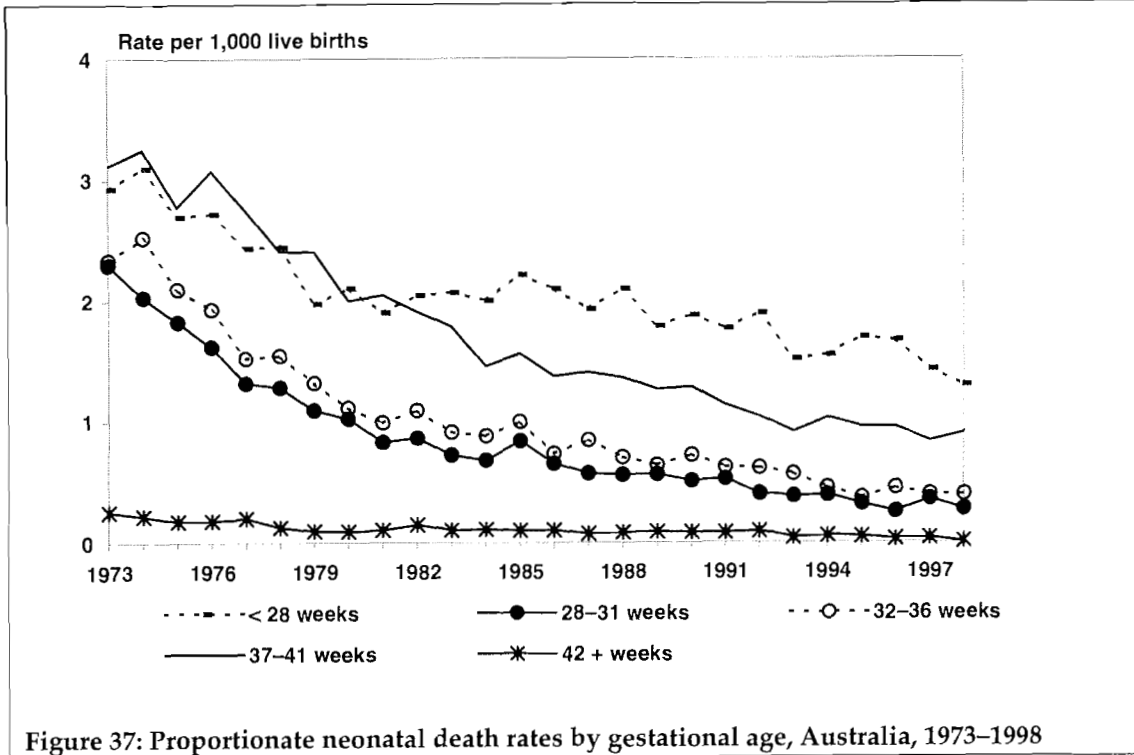


Figure 36: Proportionate fetal death rates by gestational age, Australia, 1973-1998



4.8 Proportionate perinatal death rates by birthweight

As for those deaths tabulated in gestational age groups, the fetal, neonatal and perinatal death rates by birthweight for the period 1973 to 1998 are expressed as proportionate death rates. In 1973, low birthweight babies of less than 2,500 g accounted for 64.1% of fetal deaths with stated birthweights and those weighing less than 1,000 g for 27.1% (Figure 39). In 1998, these proportions had increased to 69.4% and 42.2%, respectively (Table A67).

The decline in the proportionate neonatal death rate was much greater for babies weighing 1,000–2,499 g than for those in lighter or heavier birthweight groups (Table A68, Figure 40). The rate for babies of 1,000–2,499 g fell from 4.7 per 1,000 live births in 1973 to 0.7 per 1,000 live births in 1998. For babies weighing less than 1,000 g the proportionate death rate declined from 3.0 to 1.3 per 1,000 live births in the same period, while for those weighing 2,500 g and over, it declined from 2.8 per 1,000 in 1973 to 0.9 per 1,000 live births in 1998.

Although there were substantial falls in the proportionate perinatal death rates in all birthweight groups, the greatest decline of 75.3% was for babies weighing 1,000–2,499 g, particularly reflecting the decline in neonatal deaths in this birthweight group (Table A69, Figure 41).

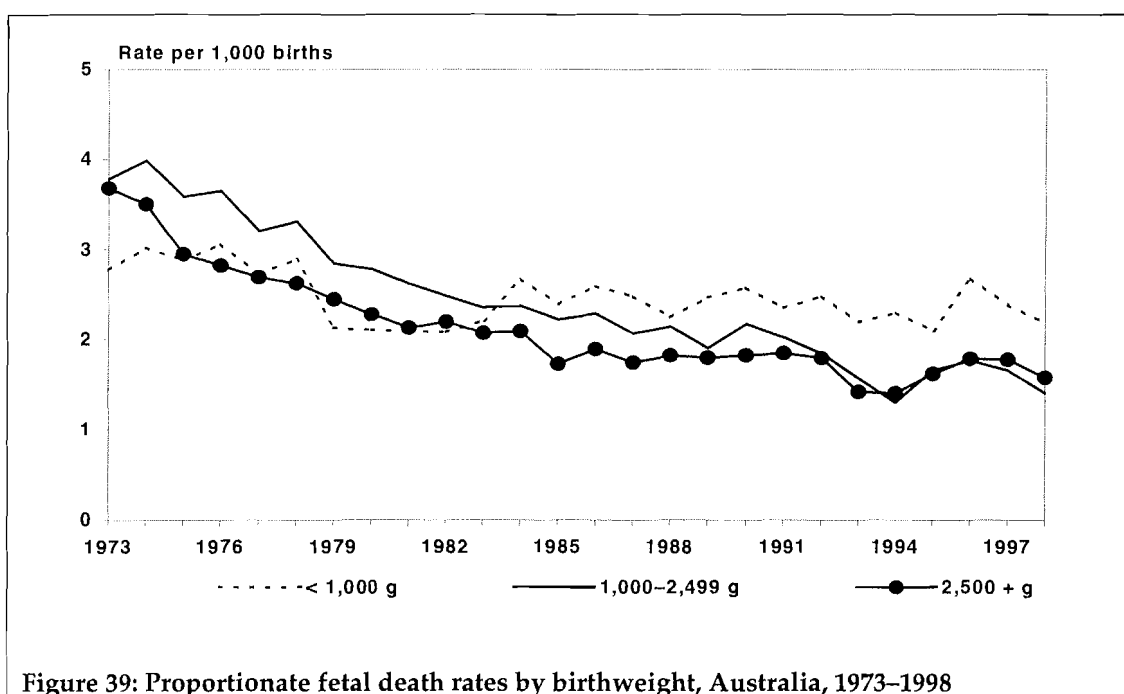


Figure 39: Proportionate fetal death rates by birthweight, Australia, 1973–1998

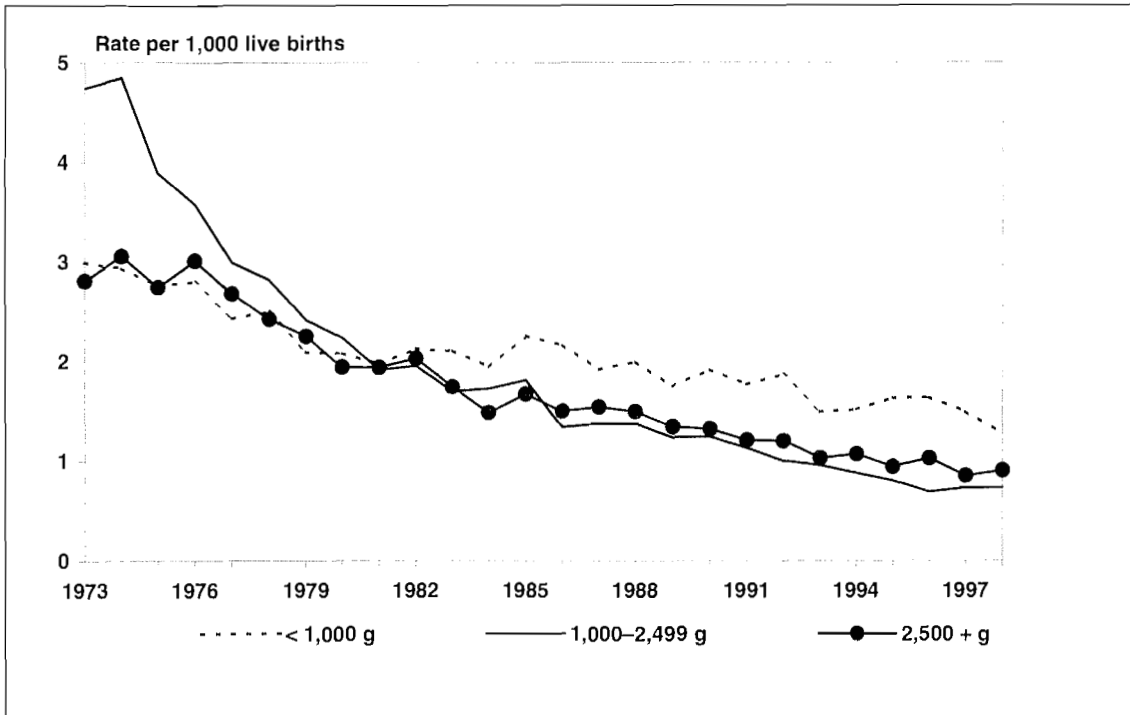


Figure 40: Proportionate neonatal death rates by birthweight, Australia, 1973-1998

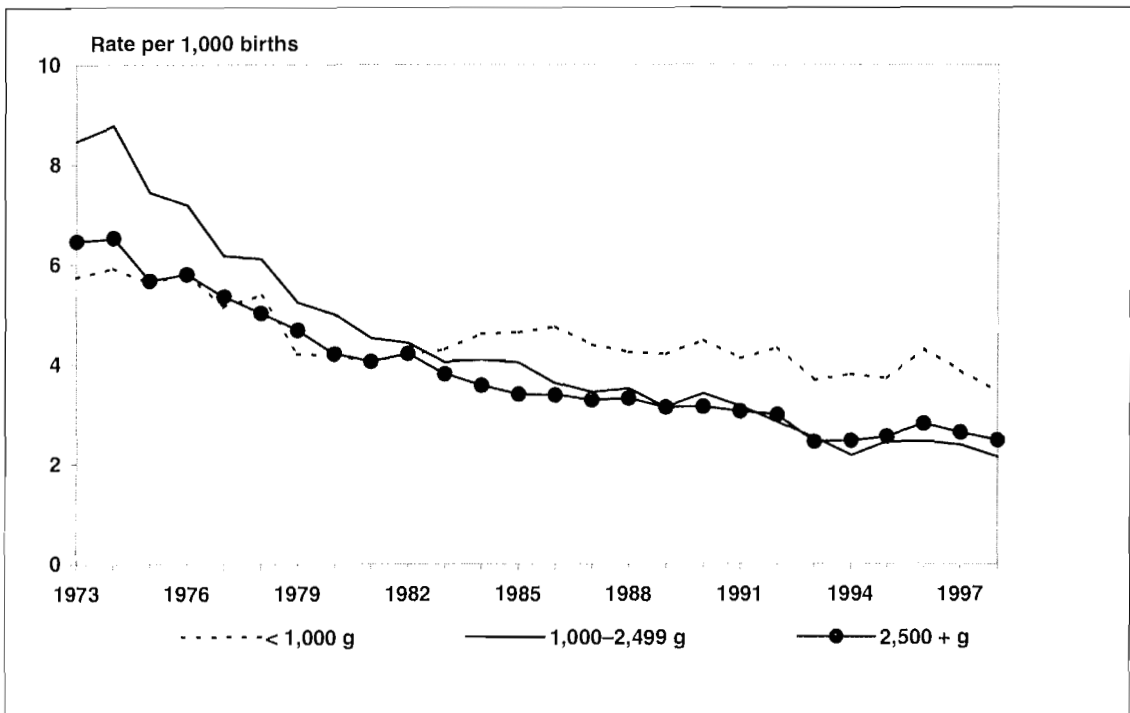


Figure 41: Proportionate perinatal death rates by birthweight, Australia, 1973-1998

4.9 Fetal deaths in State and Territory perinatal data collections

As noted in previous sections, fetal deaths are included in the State and Territory perinatal collections if the birthweight is at least 400 g or the gestational age is 20 weeks and over. Unlike perinatal death registration data collected by ABS, information which may affect fetal death rates such as maternal parity, Indigenous and patient status are collected for most births in the perinatal collections.

In 1998, there were 1,751 fetal deaths notified to the perinatal collections, resulting in a fetal death rate of 6.9 per 1,000 births, 30.0% higher than the rate of 5.3 per 1,000 in the ABS registration data. The variations in fetal death rate with maternal age showed a pattern similar to that for perinatal deaths (see Section 4.4), ranging from 5.9 per 1,000 births for babies of mothers aged 25 to 29 years to 11.9 per 1,000 for babies of mothers aged 40 years and over (Table A70).

The fetal death rate of babies born to Indigenous mothers was 11.7 per 1,000 births, almost twice the rate of 6.7 per 1,000 in the non-Indigenous population (Table A71).

Fetal death was more likely among first-born babies (7.9 per 1,000 births) than among babies whose mothers already had one child (5.2 per 1,000 births) (Table A72). With higher parity, the fetal death rate increased to a maximum of 10.3 per 1,000 births for those with four or more previous children.

The fetal death rate of twins (20.4 per 1,000 births) and of babies born in other multiple births (40.2 per 1,000 births) was much higher than that of singleton babies (6.4 per 1,000 births) (Table A73).

Babies of single mothers (11.8 per 1,000 births) and of mothers who were widowed, divorced or separated (7.3 per 1,000 births) had higher fetal death rates than babies of mothers who were married or living in a de facto relationship (6.2 per 1,000 births) (Table A74). Data from New South Wales was excluded from these results.

Fetal death rates were higher for mothers who had public status in hospital accommodation (7.1 per 1,000 births) than for those who had private status in hospital accommodation (5.3 per 1,000 births) (Table A75).

4.10 Neonatal and perinatal deaths in State and Territory perinatal data collections

The continuing decline in fetal, neonatal and perinatal death rates noted in previous sections has been influenced by changes in the characteristics of pregnant women and their babies and by the quality of care during pregnancy, labour and the postnatal period. As the increased risk of perinatal death associated with maternal factors and complications arising during pregnancy is often mediated through higher rates of preterm birth and low birthweight, it is important to take account of these variables in analysing perinatal outcomes such as fetal and neonatal death. It may be difficult to obtain sufficiently accurate information on gestational age for population-based analyses, so most studies have concentrated on birthweight-specific outcomes.

Birthweight is not recorded on birth registration forms in most States and Territories but this information is obtained from the forms completed by midwives and other

staff for the perinatal data collections. These collections should also have complete data on fetal deaths, but ascertainment of neonatal deaths is likely to be incomplete for neonatal deaths occurring among babies transferred to another hospital, readmitted to hospital, or dying at home. This deficiency can be overcome by linking perinatal death registrations to their birth records in the perinatal collections, but this linkage has not yet been achieved in all States and Territories. An advantage of the perinatal death certificates is that they enable more reliable distinction between fetal and neonatal deaths because the certifier is required to specify when the heartbeat ceased in relation to the onset of labour or to birth.

The data on perinatal deaths published by the ABS are based on the year of registration rather than on the year of birth. When analysing perinatal death rates it is preferable that both the deaths and the births should include only those babies born in a particular year so that the numerator and denominator have the same year of birth. By merging data files on perinatal death registrations for two successive years, it is possible to obtain near complete perinatal deaths by year of birth for the first of those two years. The disadvantage of such analyses is that publication of reports based on year-of-birth cohorts is delayed and some late registrations of deaths are not included. Missing information on the birthweight of some babies is an additional problem in analysing birthweight-specific death rates. As mentioned earlier the baby's outcome is recorded only from the hospital of birth in the State and Territory data collections. Thus, some neonatal deaths within 28 days of birth of babies transferred to another hospital, those readmitted to hospital, and those dying at home are excluded in the perinatal data collections but covered in the ABS data based on registrations of all perinatal deaths.

No meaningful comparison of perinatal death rates between the two collections could be done for this 1998 report, as perinatal death registration data for 1999 were not available at the time of publication.

Neonatal and perinatal death rates based upon State and Territory perinatal collection data, though incompletely reported, varied between States and Territories (Table A76). Low neonatal death rates were reported for New South Wales, Western Australia and South Australia, while higher rates were reported for Northern Territory and the Australian Capital Territory. Total perinatal death rates were lowest in New South Wales, Western Australia and South Australia and highest in Queensland, the Australian Capital Territory and the Northern Territory.

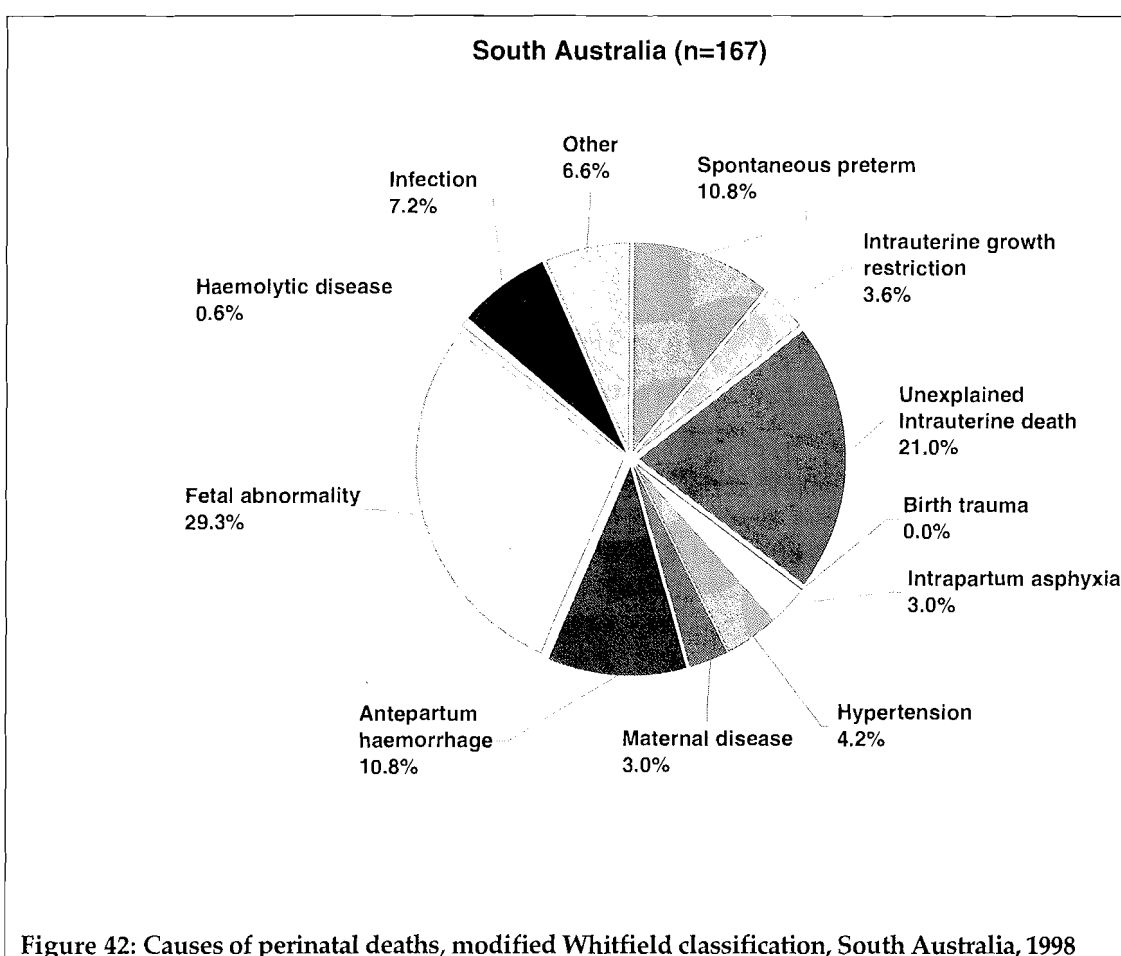
4.11 Causes of perinatal deaths

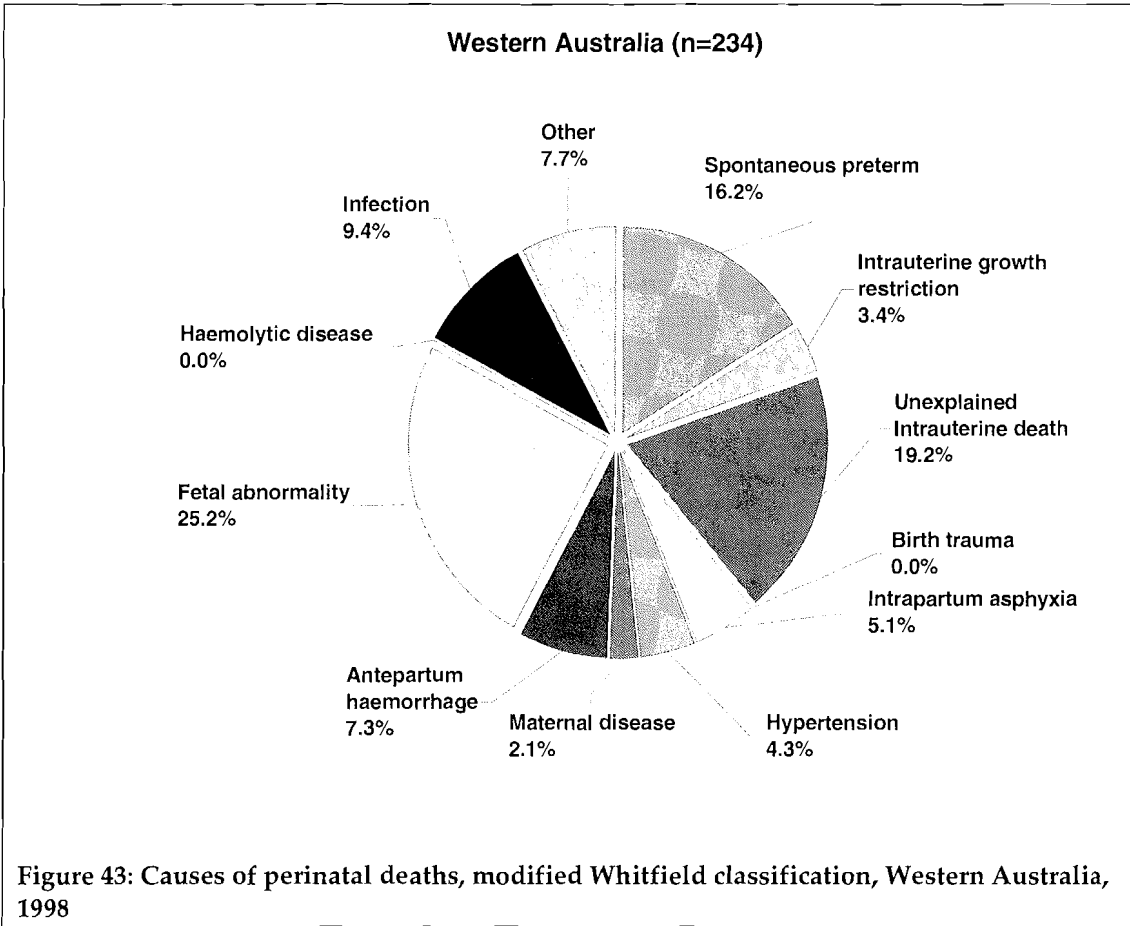
It is widely recognised that the International Classification of Diseases (ICD-9 and ICD-10) does not adequately emphasise those causes of perinatal death that may be preventable. As a result, other classifications that specify various antecedent maternal conditions, pregnancy complications and fetal abnormalities have been developed (Whitfield et al. 1986). In Australia there is no national consensus on a standard classification system. Several States (New South Wales from 1998, Queensland, Western Australia, South Australia and Tasmania) have used the Whitfield classification, or local modifications, in their reports on the causes of perinatal deaths. The main categories in the Whitfield classification are: spontaneous preterm; intrauterine growth restriction; unexplained intrauterine death; birth trauma; intrapartum asphyxia; hypertension; maternal disease; antepartum haemorrhage; fetal abnormality; haemolytic disease; infection; and other. South

Australia provided data on these categories separately for babies born preterm (less than 37 weeks gestation) and at term.

This report includes data from two States that have used the Whitfield classification, Western Australia and South Australia. (Table A77). The main causes of perinatal deaths based on the Whitfield classification were spontaneous preterm birth, unexplained intrauterine fetal death, and fetal abnormality. These three groups of causes accounted for at least half of all perinatal deaths in both States in 1998 (Figures 42, 43). Antepartum haemorrhage and infection were also significant causes of death.

Multiple pregnancy is included in the spontaneous preterm category of the Whitfield classification, but other perinatal deaths associated with multiple pregnancy may be classified as intrauterine growth restriction, or as twin-to-twin transfusion in the 'other' category.





Appendix: tables

Table A1: Confinements and births, States and Territories, 1998

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Fetal deaths	595	406	341	164	121	51	46	27	1,751
Live births	85,710*	61,685	47,822	25,513	18,612	6,238	4,691	3,500	253,771
All births	86,305	62,091	48,163	25,677	18,733	6,289	4,737	3,527	255,522

* Includes 118 births in NSW with 'not stated' birth status.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A2: Place of birth, all confinements, States and Territories, 1998

Place of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Hospital	82,044	60,744	46,777	24,690	17,374	5,948	4,212	3,377	245,166
Birth centre	2,514	-	281	400	954	92	389	1	4,631
Home	147	99	171	102	36	22	41	39	657
Born before arrival	366	228	221	99	56	43	3	-	1,016
Other	-	-	-	-	-	9	-	71	80
Not stated	1	-	-	-	-	99	-	-	100
All places of birth	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Hospital	96.4	99.5	98.6	97.6	94.3	97.3	90.7	96.8	97.5
Birth centre	3.0	-	0.6	1.6	5.2	1.5	8.4	0.0	1.8
Home	0.2	0.2	0.4	0.4	0.2	0.4	0.9	1.1	0.3
Born before arrival	0.4	0.4	0.5	0.4	0.3	0.7	0.1	-	0.4
Other	-	-	-	-	-	0.1	-	2.0	0.0
All places of birth	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A3: Distribution of maternity units by size, States and Territories, 1998

Number of confinements annually	NSW	Vic	Qld ^(a)	WA	SA ^(b)	Tas	ACT	NT	Australia
Number									
1-100	48	55	63	32	42	13	-	1	254
101- 500	49	35	31	16	21	-	1	2	155
501-1,000	25	14	10	5	3	3	1	2	63
1,001-2,000	9	12	10	3	3	2	1	1	41
2,001 and over	14	7	5	2	2	-	1	-	31
All hospitals	145	123	119	58	71	18	4	6	544
Per cent									
1-100	33.1	44.7	52.9	55.2	59.2	72.2	-	16.7	46.7
101- 500	33.8	28.5	26.1	27.6	29.6	-	25.0	33.3	28.5
501-1,000	17.2	11.4	8.4	8.6	4.2	16.7	25.0	33.3	11.6
1,001-2,000	6.2	9.8	8.4	5.2	4.2	11.1	25.0	16.7	7.5
2,001 and over	9.7	5.7	4.2	3.4	2.8	-	25.0	-	5.7
All hospitals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes one tertiary level hospital of less than 2,000 confinements.

(b) Data from 'Pregnancy Outcome in South Australia 1998'

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A4: Distribution of confinements by size of maternity unit, States and Territories, 1998

Number of confinements annually	NSW	Vic	Qld ^(a)	WA	SA	Tas	ACT	NT	Australia
Number									
1-100	1,091	1,445	1,226	682	1,064	250	-	46	5,804
101- 500	11,938	9,471	8,067	4,016	4,872	-	307	471	39,142
501-1,000	19,089	10,269	7,207	3,735	2,017	2,322	905	1,421	46,965
1,001-2,000	12,608	16,827	14,422	3,600	4,094	3,511	1,038	1,440	57,540
2,001 and over	40,198	22,960	16,353	13,156	6,337	-	2,354	-	101,358
All hospitals	84,924	60,972	47,275	25,189	18,384	6,083	4,604	3,378	250,809
Per cent									
1-100	1.3	2.4	2.6	2.7	5.8	4.1	-	1.4	2.3
101- 500	14.1	15.5	17.1	15.9	26.5	-	6.7	13.9	15.6
501-1,000	22.5	16.8	15.2	14.8	11.0	38.2	19.7	42.1	18.7
1,001-2,000	14.8	27.6	30.5	14.3	22.3	57.7	22.5	42.6	22.9
2,001 and over	47.3	37.7	34.6	52.2	34.5	-	51.1	-	40.4
All hospitals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes one tertiary level hospital of less than 2,000 confinements.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A5: Maternal age, all confinements, States and Territories, 1998

Maternal age (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mean age (years)	28.9	29.6	28.2	28.6	28.8	27.6	29.5	26.8	28.9
	Number								
Less than 16	130	49	116	79	37	18	4	64	497
16	318	168	308	135	101	52	12	83	1,177
17	777	366	574	287	174	102	35	99	2,414
18	1,207	618	862	428	254	153	57	109	3,688
19	1,686	881	1,225	590	374	196	63	129	5,144
Less than 20	4,118	2,082	3,085	1,519	940	521	171	484	12,920
20–24	14,261	8,048	9,205	4,326	3,028	1,309	645	800	41,622
25–29	27,759	19,760	15,634	8,216	6,167	2,094	1,495	1,070	82,195
30–34	25,014	20,445	13,010	7,383	5,525	1,598	1,494	732	75,201
35–39	11,745	9,223	5,588	3,304	2,368	594	709	348	33,879
40–44	2,026	1,458	898	516	375	89	125	49	5,536
45 and over	68	53	30	27	17	3	6	4	208
Not stated	81	2	-	-	-	5	-	1	89
All ages	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
	Per cent								
Less than 16	0.2	0.1	0.2	0.3	0.2	0.3	0.1	1.8	0.2
16	0.4	0.3	0.6	0.5	0.5	0.8	0.3	2.4	0.5
17	0.9	0.6	1.2	1.1	0.9	1.6	0.8	2.8	1.0
18	1.4	1.0	1.8	1.7	1.4	2.5	1.2	3.1	1.5
19	2.0	1.4	2.6	2.3	2.0	3.2	1.4	3.7	2.0
Less than 20	4.8	3.4	6.5	6.0	5.1	8.4	3.7	13.9	5.1
20–24	16.8	13.2	19.4	17.1	16.4	21.1	13.9	22.9	16.5
25–29	32.7	32.4	32.9	32.5	33.5	33.7	32.2	30.7	32.7
30–34	29.4	33.5	27.4	29.2	30.0	25.7	32.2	21.0	29.9
35–39	13.8	15.1	11.8	13.1	12.9	9.6	15.3	10.0	13.5
40–44	2.4	2.4	1.9	2.0	2.0	1.4	2.7	1.4	2.2
45 and over	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A6: Mother's parity, all confinements, States and Territories, 1998

Parity	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
None	34,376	24,510	18,510	10,118	7,337	2,521	1,897	1,518	100,787
One	28,951	21,478	15,708	8,527	6,485	2,089	1,654	571	85,463
Two	13,658	9,874	7,916	4,043	3,044	973	714	376	40,598
Three	5,039	3,400	3,164	1,556	993	409	257	223	15,041
Four or more	2,998	1,807	2,151	1,047	557	220	123	172	9,075
Not stated	50	2	1	-	4	1	-	628	686
All parities	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
None	40.4	40.1	39.0	40.0	39.8	40.6	40.8	53.1	40.2
One	34.1	35.2	33.1	33.7	35.2	33.6	35.6	20.0	34.1
Two	16.1	16.2	16.7	16.0	16.5	15.7	15.4	13.1	16.2
Three	5.9	5.6	6.7	6.2	5.4	6.6	5.5	7.8	6.0
Four or more	3.5	3.0	4.5	4.1	3.0	3.5	2.6	6.0	3.6
All parities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A7: Distribution of confinements by maternal age and parity, Australia, 1998

Parity	Maternal age (years)						Not stated	All ages
	Less than 20	20-24	25-29	30-34	35-39	40 and over		
Number								
None	10,473	22,260	35,547	23,258	7,980	1,235	34	100,787
One	2,108	13,393	28,563	28,233	11,524	1,616	26	85,463
Two	242	4,347	11,944	14,996	7,840	1,215	14	40,598
Three	31	1,116	4,069	5,396	3,664	759	6	15,041
Four or more	4	336	1,878	3,149	2,801	904	3	9,075
Not stated	64	170	194	169	70	15	4	686
All parities	12,922	41,622	82,195	75,201	33,879	5,744	87	251,650
Per cent								
None	81.5	53.7	43.3	31.0	23.6	21.6	41.0	40.2
One	16.4	32.3	34.8	37.6	34.1	28.2	31.3	34.1
Two	1.9	10.5	14.6	20.0	23.2	21.2	16.9	16.2
Three	0.2	2.7	5.0	7.2	10.8	13.2	7.2	6.0
Four or more	0.0	0.8	2.3	4.2	8.3	15.8	3.6	3.6
All parities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A8: Marital status, all confinements, States and Territories, 1998

Marital status	Vic	Qld	WA	SA	Tas ^(a)	ACT	NT	Total ^(b)
Number								
Married/de facto	53,473	41,059	22,830	15,967	5,071	4,167	2,352	144,919
Single	6,769	5,786	2,084	2,138	893	416	871	18,957
Widowed, divorced, or separated	741	603	274	314	117	58	65	2,172
Not stated/other	88	2	103	1	132	4	200	530
All marital status	61,071	47,450	25,291	18,420	6,213	4,645	3,488	166,578
Per cent								
Married/de facto	87.7	86.5	90.3	86.7	83.4	89.8	71.5	58.5
Single	11.1	12.2	8.2	11.6	14.7	9.0	26.5	7.6
Widowed, divorced, or separated	1.2	1.3	1.1	1.7	1.9	1.2	2.0	0.9
All marital status	100.0	100.0	99.6	100.0	100.0	100.0	100.0	67.0

(a) De facto coded with single marital status.

(b) Data exclude New South Wales.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A9: Marital status of teenage mothers, Australia, 1998

Maternal age (years)	All confinements ^(a)	Married/de facto		Single ^(b)		Other	
		Number	Per cent	Number	Per cent	Number	Per cent
Less than 16	367	46	12.5	309	84.2	12	3.3
16	859	250	29.1	595	69.3	14	1.6
17	1,637	607	37.1	1,006	61.5	24	1.5
18	2,481	1,129	45.5	1,324	53.4	28	1.1
19	3,458	1,860	53.8	1,558	45.1	40	1.2
Less than 20	8,802	3,892	44.2	4,792	54.4	118	1.3

(a) Data exclude New South Wales

(b) Data for Tasmania include de facto status.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A10: Indigenous status of mothers, all confinements, States and Territories, 1998

Indigenous status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Non-Indigenous	82,787	60,626	44,713	23,784	18,008	6,017	4,582	2,240	242,757
Aboriginal or Torres Strait Islander	2,043	445	2,731	1,504	412	196	63	1,248	8,642
Not stated	242	-	6	3	-	-	-	-	251
All confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Non-Indigenous	97.6	99.3	94.2	94.1	97.8	96.8	98.6	64.2	96.6
Aboriginal or Torres Strait Islander	2.4	0.7	5.8	5.9	2.2	3.2	1.4	35.8	3.4
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A11: Distribution of confinements of Indigenous mothers by maternal age and parity, Australia, 1998

Parity	Maternal age (years)							All ages
	Less than 20	20-24	25-29	30-34	35-39	40 and over	Not stated	
Number								
None	1,275	703	336	143	37	4	3	2,501
One	440	873	478	206	63	10	1	2,071
Two	80	627	534	239	63	12	-	1,555
Three	10	305	459	210	77	5	2	1,068
Four or more	3	129	504	443	194	37	-	1,310
Not stated	31	47	30	18	9	-	-	137
All parities	1,839	2,684	2,341	1,259	443	70	6	8,642
Per cent								
None	70.5	26.7	14.5	11.5	8.5	5.9	-	29.4
One	24.3	33.1	20.7	16.6	14.5	14.7	-	24.4
Two	4.4	23.8	23.1	19.3	14.5	17.6	-	18.3
Three	0.6	11.6	19.9	16.9	17.7	7.4	-	12.6
Four or more	0.2	4.9	21.8	35.7	44.7	54.4	-	15.4
All parities	100.0	100.0	100.0	100.0	100.0	100.0	-	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A12: Confinements of Indigenous mothers by maternal age, States and Territories, 1998

Maternal age (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mean age (years)	24.8	26.1	25.1	24.1	24.7	25.1	25.0	23.4	24.7
	Number								
Less than 20	389	54	505	382	87	38	10	374	1,839
20-24	657	133	838	466	130	54	19	387	2,684
25-29	587	133	755	379	105	57	23	302	2,341
30-34	292	92	455	190	63	37	8	122	1,259
35-39	94	31	152	74	27	9	2	54	443
40 and over	19	2	26	13	-	1	1	8	70
Not stated	5	-	-	-	-	-	-	1	6
All confinements	2,043	445	2,731	1,504	412	196	63	1,248	8,642
	Per cent								
Less than 20	19.1	12.1	18.5	25.4	21.1	19.4	15.9	30.0	21.3
20-24	32.2	29.9	30.7	31.0	31.6	27.6	30.2	31.0	31.1
25-29	28.8	29.9	27.6	25.2	25.5	29.1	36.5	24.2	27.1
30-34	14.3	20.7	16.7	12.6	15.3	18.9	12.7	9.8	14.6
35-39	4.6	7.0	5.6	4.9	6.6	4.6	3.2	4.3	5.1
40 and over	0.9	0.4	1.0	0.9	-	0.5	1.6	0.6	0.8
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A13: Maternal country of birth, all confinements, States and Territories, 1998

Country of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Australia	62,606	46,650	39,670	17,685	15,504	5,800	3,765	2,972	194,652
New Zealand	1,762	935	2,046	867	187	52	59	51	5,959
United Kingdom	2,471	2,135	1,567	2,213	1,066	156	157	97	9,862
Italy	230	275	37	63	50	2	12	1	670
Former Yugoslavia	659	684	119	100	77	4	1	-	1,644
Other Europe and former USSR	1,779	1,618	711	562	362	44	111	50	5,237
Lebanon	1,942	625	32	25	41	2	9	3	2,679
Other Middle East and North Africa	1,441	1,024	103	137	70	14	11	19	2,819
China	1,892	789	134	104	64	6	46	7	3,042
Hong Kong	433	178	77	39	17	1	7	-	752
India	634	470	85	139	62	6	32	3	1,431
Malaysia	259	285	106	203	59	8	19	7	946
Philippines	1,308	563	438	147	140	19	35	47	2,697
Vietnam	1,462	1,362	276	229	260	1	54	12	3,656
Other Asia	2,614	1,612	613	480	226	30	141	118	5,834
Northern America	520	332	232	153	84	20	52	29	1,422
South and Central America, and the Caribbean	681	337	141	66	39	6	23	11	1,304
Africa (excluding North Africa)	599	620	225	317	65	11	27	6	1,870
Other countries	1,607	470	834	73	47	21	70	29	3,151
Not stated	173	107	4	1,689	-	10	14	26	2,023
All countries	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Australia	73.7	76.5	83.6	74.9	84.2	93.5	81.3	85.8	78.0
New Zealand	2.1	1.5	4.3	3.7	1.0	0.8	1.3	1.5	2.4
United Kingdom	2.9	3.5	3.3	9.4	5.8	2.5	3.4	2.8	4.0
Italy	0.3	0.5	0.1	0.3	0.3	0.0	0.3	0.0	0.3
Former Yugoslavia	0.8	1.1	0.3	0.4	0.4	0.1	0.0	-	0.7
Other Europe and former USSR	2.1	2.7	1.5	2.4	2.0	0.7	2.4	1.4	2.1
Lebanon	2.3	1.0	0.1	0.1	0.2	0.0	0.2	0.1	1.1
Other Middle East and North Africa	1.7	1.7	0.2	0.6	0.4	0.2	0.2	0.5	1.1
China	2.2	1.3	0.3	0.4	0.3	0.1	1.0	0.2	1.2
Hong Kong	0.5	0.3	0.2	0.2	0.1	0.0	0.2	-	0.3
India	0.7	0.8	0.2	0.6	0.3	0.1	0.7	0.1	0.6
Malaysia	0.3	0.5	0.2	0.9	0.3	0.1	0.4	0.2	0.4
Philippines	1.5	0.9	0.9	0.6	0.8	0.3	0.8	1.4	1.1
Vietnam	1.7	2.2	0.6	1.0	1.4	0.0	1.2	0.3	1.5
Other Asia	3.1	2.6	1.3	2.0	1.2	0.5	3.0	3.4	2.3
Northern America	0.6	0.5	0.5	0.6	0.5	0.3	1.1	0.8	0.6
South and Central America, and the Caribbean	0.8	0.6	0.3	0.3	0.2	0.1	0.5	0.3	0.5
Africa (excluding North Africa)	0.7	1.0	0.5	1.3	0.4	0.2	0.6	0.2	0.7
Other countries	1.9	0.8	1.8	0.3	0.3	0.3	1.5	0.8	1.3
All countries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A14: Maternal age distribution by selected country of birth, all confinements, Australia, 1998

Country of birth	Maternal age (years)							All ages
	Less than 20	20–24	25–29	30–34	35–39	40 and over	Not stated	
	Number							
Australia	11,645	34,451	66,029	55,663	23,137	3,661	66	194,652
New Zealand	299	1,134	1,702	1,739	930	154	1	5,959
United Kingdom	140	623	2,266	4,133	2,338	360	2	9,862
Italy	4	25	116	297	184	44	0	670
Former Yugoslavia	25	215	542	578	235	49	0	1,644
Lebanon	96	684	837	659	342	61	0	2,679
China	5	143	720	1,169	827	177	1	3,042
Hong Kong	4	23	134	315	238	38	0	752
India	3	155	521	511	209	32	0	1,431
Malaysia	8	57	244	376	216	45	0	946
Philippines	93	343	667	836	614	142	2	2,697
Vietnam	76	577	1,277	1,017	551	158	0	3,656
Other countries	424	2,880	6,489	7,311	3,757	765	11	21,637
Not stated	100	312	651	597	301	58	4	2,023
All countries	12,922	41,622	82,195	75,201	33,879	5,744	87	251,650
	Per cent							
Australia	6.0	17.7	33.9	28.6	11.9	1.9	-	100.0
New Zealand	5.0	19.0	28.6	29.2	15.6	2.6	-	100.0
United Kingdom	1.4	6.3	23.0	41.9	23.7	3.7	-	100.0
Italy	0.6	3.7	17.3	44.3	27.5	6.6	-	100.0
Former Yugoslavia	1.5	13.1	33.0	35.2	14.3	3.0	-	100.0
Lebanon	3.6	25.5	31.2	24.6	12.8	2.3	-	100.0
China	0.2	4.7	23.7	38.4	27.2	5.8	-	100.0
Hong Kong	0.5	3.1	17.8	41.9	31.6	5.1	-	100.0
India	0.2	10.8	36.4	35.7	14.6	2.2	-	100.0
Malaysia	0.8	6.0	25.8	39.7	22.8	4.8	-	100.0
Philippines	3.4	12.7	24.7	31.0	22.8	5.3	-	100.0
Vietnam	2.1	15.8	34.9	27.8	15.1	4.3	-	100.0
Other countries	2.0	13.3	30.0	33.8	17.4	3.5	-	100.0
All countries	5.1	16.5	32.7	29.9	13.5	2.3	-	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A15: Marital status of mother by selected country of birth, all confinements, Australia, 1998

Country of birth	All confinements ^(a)	Married /de facto		Single		Other	
		Number	Per cent	Number	Per cent	Number	Per cent
Australia	132,046	113,525	86.0	16,446	12.5	2,075	1.6
New Zealand	4,197	3,518	83.8	591	14.1	88	2.1
United Kingdom	7,391	6,832	92.4	442	6.0	117	1.6
Italy	440	415	94.3	19	4.3	6	1.4
Former Yugoslavia	985	928	94.2	39	4.0	18	1.8
Lebanon	737	722	98.0	5	0.7	10	1.4
China	1,150	1,095	95.2	43	3.7	12	1.0
Hong Kong	319	303	95.0	13	4.1	3	0.9
India	797	777	97.5	13	1.6	7	0.9
Malaysia	687	650	94.6	25	3.6	12	1.7
Philippines	1,389	1,240	89.3	108	7.8	41	3.0
Vietnam	2,194	1,822	83.0	305	13.9	67	3.1
Other countries	12,396	11,430	92.2	767	6.2	199	1.6
Not stated	1,850	1,662	89.8	141	7.6	47	2.5
All countries	166,578	144,919	87.0	18,957	11.4	2,702	1.6

(a) Data exclude New South Wales.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A16: Mother's accommodation status, all confinements, selected States and Territories, 1998

Status in hospital	NSW	VIC	Qld ^(a)	WA	SA	Tas	ACT	Total ^(b)
Number								
Public	58,213	41,409	32,265	17,095	12,976	4,370	3,226	169,554
Private	25,422	19,662	15,010	6,927	5,444	1,817	1,410	75,692
Not stated/other	1,437	-	175	1,269	-	26	9	2,916
All classifications	85,072	61,071	47,450	25,291	18,420	6,213	4,645	248162
Per cent								
Public	69.6	67.8	68.2	71.2	70.4	70.6	69.6	69.6
Private	30.4	32.2	31.8	28.8	29.6	29.4	30.4	30.4
All classifications	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Not stated/other category include homebirths.

(b) Data exclude Northern Territory.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A17: Duration of pregnancy, all confinements, States and Territories, 1998

Duration of pregnancy (weeks)	Number								
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mean (weeks)	39.1	39.0	39.0	38.9	39.0	39.2	39.0	38.7	39.0
	Number								
20-27	533	391	370	171	121	49	47	40	1,722
28-31	533	442	354	193	144	46	58	35	1,805
32-36	4,271	3,277	2,697	1,454	1,060	289	255	279	13,582
37-41	77,846	55,892	43,021	23,137	16,815	5,619	4,151	3,049	229,530
42 and over	1,871	1,058	1,003	336	280	209	132	45	4,934
Not stated	18	11	5	-	-	1	2	40	77
All confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
	Per cent								
20-27	0.6	0.6	0.8	0.7	0.7	0.8	1.0	1.2	0.7
28-31	0.6	0.7	0.7	0.8	0.8	0.7	1.2	1.0	0.7
32-36	5.0	5.4	5.7	5.7	5.8	4.7	5.5	8.1	5.4
37-41	91.5	91.5	90.7	91.5	91.3	90.5	89.4	88.4	91.2
42 and over	2.2	1.7	2.1	1.3	1.5	3.4	2.8	1.3	2.0
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A18: Duration of pregnancy by maternal age, all confinements, Australia, 1998

Duration of pregnancy (weeks)	Maternal age (years)							Not stated	All ages
	Less than 20	20-24	25-29	30-34	35-39	40 and over			
	Number								
20-27	143	292	497	443	285	62	-	1,722	
28-31	133	353	541	465	260	51	-	1,805	
32-36	894	2,340	4,133	3,701	2,065	448	3	13,584	
37-41	11,458	37,725	75,360	69,157	30,673	5,080	79	229,532	
42 and over	282	895	1,646	1,418	589	101	-	4,934	
Not stated	12	17	18	17	7	2	2	75	
All confinements	12,922	41,622	82,195	75,201	33,879	5,744	87	251,650	
	Per cent								
20-27	1.1	0.7	0.6	0.6	0.8	1.1	0.0	0.7	
28-31	1.0	0.8	0.7	0.6	0.8	0.9	0.0	0.7	
32-36	6.9	5.6	5.0	4.9	6.1	7.8	3.5	5.4	
37-41	88.8	90.7	91.7	92.0	90.6	88.5	92.9	91.2	
42 and over	2.2	2.2	2.0	1.9	1.7	1.8	3.5	2.0	
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A19: Plurality, all confinements, States and Territories, 1998

Plurality	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Singleton	83,869	60,088	46,763	24,915	18,110	6,147	4,555	3,449	247,896
Twin	1,174	946	662	366	307	63	88	39	3,645
Triplet	28	37	24	10	3	-	2	-	104
Quadruplet	1	-	1	-	-	-	-	-	2
Not stated	-	-	-	-	-	3	-	-	3
All confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Singleton	98.6	98.4	98.6	98.5	98.3	98.9	98.1	98.9	98.5
Twin	1.4	1.5	1.4	1.4	1.7	1.0	1.9	1.1	1.4
Triplet	0.0	0.1	0.1	0.0	0.0	-	0.0	-	0.0
Quadruplet	0.0	-	0.0	-	-	-	-	-	0.0
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A20: Plurality by maternal age, Australia, 1998

Plurality	Maternal age (years)							All ages
	Less than 20	20-24	25-29	30-34	35-39	40 and over	Not stated	
Number								
Singleton	12,829	41,202	81,101	73,909	33,139	5,629	87	247,896
Twin	91	409	1,071	1,254	709	111	-	3,645
Triplet	1	10	20	38	31	4	-	104
Quadruplet	-	-	2	-	-	-	-	2
All confinements	12,922	41,622	82,195	75,201	33,879	5,744	87	251,650
Per cent								
Singleton	99.3	99.0	98.7	98.3	97.8	98.0	100.0	98.5
Twin	0.7	1.0	1.3	1.7	2.1	1.9	-	1.4
Triplet	0.0	0.0	0.0	0.1	0.1	0.1	-	0.0
Quadruplet	-	-	0.0	-	-	-	-	0.0
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A21: Onset of labour, all confinements, States and Territories, 1998

Onset of labour	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Spontaneous	55,689	37,255	29,845	14,184	11,178	3,968	3,091	2,380	157,590
—no augmentation	39,266	30,046	17,177	8,069	6,951	2,956	2,447	1,758	108,670
—augmentation	16,423	7,209	12,668	6,115	4,227	1,012	644	622	48,920
Induced	20,562	16,417	11,484	7,395	5,034	1,582	1,023	707	64,204
—medical only	7,893	6,609	4,993	na	1,982	574	399	355	22,805*
—surgical only	1,462	1,667	1,485	na	633	185	82	59	5,573*
—combined	11,069	8,141	4,957	na	2,419	650	542	285	28,063*
—other	138	-	49	na	-	173	-	8	360*
No labour	8,800	7,399	6,118	3,712	2,208	663	531	389	29,820
Not stated	21	-	3	-	-	-	-	12	36
All confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Spontaneous	65.5	61.0	62.9	56.1	60.7	63.9	66.5	68.5	62.6
—no augmentation	46.2	49.2	36.2	31.9	37.7	47.6	52.7	50.6	43.2
—augmentation	19.3	11.8	26.7	24.2	22.9	16.3	13.9	17.9	19.4
Induced	24.2	26.9	24.2	29.2	27.3	25.5	22.0	20.3	25.5
—medical only	9.3	10.8	10.5	na	10.8	9.2	8.6	10.2	10.1*
—surgical only	1.7	2.7	3.1	na	3.4	3.0	1.8	1.7	2.5*
—combined	13.0	13.3	10.4	na	13.1	10.5	11.7	8.2	12.4*
—other	0.2	-	0.1	na	-	2.8	-	0.2	0.2*
No labour	10.3	12.1	12.9	14.7	12.0	10.7	11.4	11.2	11.9
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Data exclude WA.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A22: Presentation at delivery, all confinements, States and Territories, 1998

Presentation	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Vertex	80,885	57,791	45,144	24,013	17,328	5,823	4,350	3,245	238,579
Breech	3,626	2,652	2,101	1,055	737	270	236	158	10,835
Other	500	447	201	223	329	31	17	30	1,778
Not stated	61	181	4	-	26	89	42	55	458
All confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Vertex	95.1	94.9	95.1	94.9	94.2	95.1	94.5	94.5	95.0
Breech	4.3	4.4	4.4	4.2	4.0	4.4	5.1	4.6	4.3
Other	0.6	0.7	0.4	0.9	1.8	0.5	0.4	0.9	0.7
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A23: Method of birth, all confinements, States and Territories, 1998

Method of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Spontaneous vaginal ^(a)	59,097	39,845	32,168	15,794	11,570	4,353	3,158	2,442	168,427
Forceps	4,478	5,529	2,146	1,241	1,513	408	366	189	15,870
Vacuum extraction	4,453	2,360	2,071	2,206	863	162	207	-	12,322
Vaginal breech	805	507	272	145	75	44	32	43	1,923
Caesarean section	16,216	12,825	10,777	5,905	4,398	1,224	872	771	52,988
—elective	8,800	7,399	na	3,270	1,847	578	531	na	22,425*
—emergency	7,412	5,426	na	2,635	2,551	640	341	na	19,005*
—other	4	-	na	-	-	6	-	na	10*
Other	-	5	14	-	-	-	10	6	35
Not stated	23	-	2	-	1	22	-	37	85
All types of delivery	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Per cent									
Spontaneous vertex	69.5	65.2	67.8	62.4	62.8	70.3	68.0	70.8	67.0
Forceps	5.3	9.1	4.5	4.9	8.2	6.6	7.9	5.5	6.3
Vacuum extraction	5.2	3.9	4.4	8.7	4.7	2.6	4.5	-	4.9
Vaginal breech	0.9	0.8	0.6	0.6	0.4	0.7	0.7	1.2	0.8
Caesarean section	19.1	21.0	22.7	23.3	23.9	19.8	18.8	22.3	21.1
—elective	10.3	12.1	na	12.9	10.0	9.3	11.4	na	11.2*
—emergency	8.7	8.9	na	10.4	13.8	10.3	7.3	na	9.5*
—other	0.0	-	na	-	-	0.1	-	na	0.0*
Other	-	0.0	0.0	-	-	-	0.2	0.2	0.0
All types of delivery	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Field name changed from 'Spontaneous Vertex' in accordance with *National Health Data Dictionary v9.0, 2000*

* Elective and emergency caesarean section data exclude Queensland and the Northern Territory. The total caesarean section rate include all States and Territories.

Notes: Title changed from 'Type of Delivery' in accordance with *National Health Data Dictionary v9.0, 2000*

Data for Tasmania unavailable, 1997 data used as estimate.

Table A24: Caesarean rates by maternal age and accommodation status in hospital, States and Territories, 1998

Hospital status/ Maternal age (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Public^(a)	Number								
Less than 20	405	245	352	180	137	63	10	na	1,392
20-24	1,543	1,010	1,206	629	515	195	74	na	5,172
25-29	3,155	2,544	1,944	1,077	962	257	156	na	10,095
30-34	2,791	2,469	1,583	1,011	775	182	182	na	8,993
35-39	1,511	1,223	736	522	364	61	83	na	4,500
40 and over	352	253	148	86	66	10	18	na	933
Not stated	4	-	-	-	-	-	-	na	4
All ages	9,761	7,744	5,969	3,505	2,819	768	523	na	31,089
Private^(a)									
Less than 20	26	15	25	2	6	1	3	na	78
20-24	236	119	252	72	61	22	10	na	772
25-29	1,615	1,181	1,447	553	450	143	86	na	5,475
30-34	2,460	2,225	1,896	921	640	193	130	na	8,465
35-39	1,547	1,263	1,018	477	361	75	98	na	4,839
40 and over	363	278	170	120	61	13	20	na	1,025
Not stated	8	-	-	-	-	-	-	na	8
All ages	6,255	5,081	4,808	2,145	1,579	447	347	na	20,662
Public^(a)	Caesarean rate (per cent)								
Less than 20	10.5	12.2	11.8	12.6	15.2	12.7	6.1	na	11.8
20-24	12.3	13.7	14.8	16.5	18.7	16.8	12.5	na	14.2
25-29	16.2	17.7	18.4	19.0	21.5	18.0	14.0	na	17.7
30-34	19.2	20.8	22.1	24.7	23.6	19.9	20.4	na	21.0
35-39	23.0	24.4	25.6	28.7	27.2	19.6	21.2	na	24.6
40 and over	29.7	30.7	30.1	31.0	28.9	18.2	24.0	na	29.7
All ages	16.8	18.7	18.5	20.5	21.7	17.6	16.2	na	18.3
Private^(a)									
Less than 20	13.9	19.2	22.9	6.7	15.8	4.5	42.9	na	16.6
20-24	16.0	17.0	24.7	21.6	21.9	15.3	19.6	na	19.3
25-29	20.6	21.9	29.0	25.8	26.5	21.6	22.6	na	23.7
30-34	24.5	25.9	32.7	31.8	28.6	28.5	21.8	na	27.4
35-39	31.1	30.0	38.1	36.8	35.0	27.2	30.8	na	32.7
40 and over	41.9	40.5	40.3	52.9	37.2	36.1	35.7	na	41.7
All ages	24.6	25.8	32.0	31.0	29.0	24.6	24.6	na	27.3
All confinements									
Less than 20	10.7	12.5	12.2	12.4	15.2	12.5	7.6	21.6	12.3
20-24	12.6	14.0	15.8	16.8	19.0	16.7	13.0	19.3	14.8
25-29	17.4	18.9	21.7	20.7	22.9	19.3	16.3	22.0	19.4
30-34	21.3	23.0	26.7	27.4	25.6	23.7	21.0	24.4	23.7
35-39	26.3	27.0	31.4	31.8	30.6	23.2	25.5	27.3	28.1
40 and over	34.7	35.1	34.3	40.7	32.4	25.0	29.0	20.8	34.8
All ages	19.1	21.0	22.7	23.3	23.9	19.8	18.8	22.3	21.1

(a) Data exclude Northern Territory.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A25: Caesarean rates by maternal age, parity and public accommodation status in hospital, Australia, 1998

Maternal age (years)	Parity				Parity			
	None	One	Two +	Total ^(a)	None	One	Two +	Total ^(a)
	Number				Rate (per cent)			
Less than 20	1,157	209	26	1,392	12.0	10.9	10.3	11.8
20–24	3,005	1,506	661	5,172	15.8	12.5	12.4	14.2
25–29	4,516	3,252	2,327	10,095	20.5	16.2	15.6	17.7
30–34	3,076	3,112	2,805	8,993	26.3	20.8	17.4	21.0
35–39	1,254	1,446	1,800	4,500	32.9	25.8	20.2	24.6
40 and over	252	255	426	933	45.6	33.6	23.3	29.7
Not stated	1	2	1	4	5.6	15.4	7.1	8.9
Total^(a)	13,261	9,782	8,046	31,089	19.9	17.6	17.0	18.3

(a) Data exclude Northern Territory.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A26: Caesarean rates by maternal age, parity and private accommodation status in hospital, Australia, 1998

Maternal age (years)	Parity				Parity			
	None	One	Two +	Total ^(a)	None	One	Two +	Total ^(a)
	Number				Rate (per cent)			
Less than 20	71	6	1	78	17.6	10.5	10.0	16.6
20–24	554	182	36	772	20.0	18.1	16.4	19.3
25–29	3,184	1,806	485	5,475	25.1	22.6	20.1	23.7
30–34	3,441	3,382	1,642	8,465	31.2	26.3	23.5	27.4
35–39	1,535	1,887	1,417	4,839	39.2	32.8	27.7	32.7
40 and over	356	356	313	1,025	55.2	43.0	31.7	41.7
Not stated	3	4	1	8	25.0	50.0	16.7	30.8
Total^(a)	9,144	7,623	3,895	20,662	29.1	26.8	24.7	27.3

(a) Data exclude Northern Territory.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A27: Caesarean rates by parity, plurality, breech presentation and birthweight, States and Territories, 1998

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Parity	Number								
Primipara	7,133	5,576	4,537	2,508	1,943	548	366	396	23,007
Multipara	9,071	7,249	6,239	3,397	2,455	676	506	261	29,854
Not stated	12	-	1	-	-	-	-	114	127
All parity	16,216	12,825	10,777	5,905	4,398	1,224	872	771	52,988
Plurality									
Singleton	15,720	12,323	10,413	5,700	4,227	1,196	835	748	51,162
Twin	472	467	341	195	168	28	36	23	1,730
Other multiple	24	35	23	10	3	-	1	-	96
All confinements	16,216	12,825	10,777	5,905	4,398	1,224	872	771	52,988
Breech presentation in singleton births	2,622	1,958	1,684	830	615	210	176	116	8,211
Birthweight (singleton births)									
Less than 500 g	6	6	3	4	1	-	-	-	20
500–999 g	105	102	83	38	32	8	9	6	383
1,000–1,499 g	177	170	119	69	50	22	20	14	641
1,500–1,999 g	310	270	255	100	91	35	28	19	1,108
2,000–2,499 g	701	543	491	282	206	58	31	50	2,362
2,500 g and over ^(a)	14,413	11,231	9,462	5,207	3,847	1,071	747	659	46,637
—public	8,584	na	5,110	3,063	2,415	649	435	na	26,953
—private	5,656	na	4,352	1,918	1,432	414	311	na	18,617
—other	-	na	-	23	-	1	-	na	24
Not stated	8	1	-	-	-	2	-	-	11
All singleton births	15,720	12,323	10,413	5,700	4,227	1,196	835	748	51,162
Parity	Caesarean rate (per cent)								
Primipara	20.7	22.7	24.5	24.8	26.5	21.7	19.3	26.1	22.8
Multipara	17.9	19.8	21.6	22.4	22.2	18.3	18.4	19.4	19.9
All parity	19.1	21.0	22.7	23.3	23.9	19.7	18.8	22.1	21.1
Plurality									
Singleton	18.7	20.5	22.3	22.9	23.3	19.5	18.3	21.7	20.6
Twin	40.2	49.4	51.5	53.3	54.7	44.4	40.9	59.0	47.5
Other multiple	82.8	94.6	92.0	100.0	100.0	-	50.0	-	90.6
All confinements	19.1	21.0	22.7	23.3	23.9	19.7	18.8	22.1	21.1
Breech presentation in singleton births	77.3	79.7	85.7	84.2	89.5	82.0	81.1	77.3	81.2
Birthweight (singleton births)									
Less than 500 g	3.6	4.4	2.3	6.7	2.4	-	-	-	3.6
500–999 g	32.8	40.5	38.2	33.3	42.1	53.3	25.0	27.3	36.4
1,000–1,499 g	52.8	55.9	58.9	57.5	64.9	44.0	64.5	51.9	55.9
1,500–1,999 g	42.2	47.9	52.7	51.5	48.4	50.0	48.3	35.8	47.2
2,000–2,499 g	28.2	28.5	32.0	33.0	35.3	32.4	21.5	27.5	30.0
2,500 g and over ^(a)	18.1	19.7	21.4	22.1	22.4	18.4	17.5	21.1	19.9
—public	15.8	na	17.1	19.3	20.1	16.0	14.8	na	17.1
—private	23.5	na	30.8	29.4	28.0	23.8	23.4	na	26.1
All singleton births	18.7	20.5	22.3	22.9	23.3	19.5	18.3	21.7	20.6

(a) Data include hospital status 'not stated' and 'other'.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A28: Perineal repair after delivery, States and Territories, 1998

Perineal repair	NSW ^(a)	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Type	Number								
None	71,356	37,179	29,595	13,130	10,829	2,029	3,079	2,020	169,217
Sutured laceration	13,716	13,871	11,636	6,704	3,808	1,145	1,206	771	52,857
Episiotomy	-	10,021	5,967	4,708	3,783	869	360	199	25,907
Other	-	-	246	749	-	2,170	-	-	3,165
Not stated	-	-	6	-	-	-	-	498	504
Total confinements	85,072	61,071	47,450	25,291	18,420	6,213	4,645	3,488	251,650
Type	Per cent								
None	83.9	60.9	62.4	51.9	58.8	32.7	66.3	67.6	67.1
Sutured laceration	16.1	22.7	24.5	26.5	20.7	18.4	26.0	25.8	21.0
Episiotomy	-	16.4	12.6	18.6	20.5	14.0	7.8	6.7	10.3
Other	-	-	0.5	3.0	-	34.9	-	-	1.3
Total confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) New South Wales data for sutured laceration include both sutured laceration and episiotomy as their data collection does not distinguish between these two procedures.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A29: Length of mother's antenatal stay in hospital, States and Territories, 1998

Length of stay	NSW	Vic	Qld	WA	SA	ACT	NT	Total ^(a)
Mean length of stay (days)	0.7	0.6	0.7	0.8	0.8	0.7	1.0	0.7
	Number							
Less than 1 day	50,831	39,922	29,754	14,034	10,994	2,781	1,963	154,007
1 day	26,058	17,445	13,974	8,335	5,935	1,488	1,010	75,911
2-6 days	5,309	2,702	2,667	1,312	1,091	262	302	14,045
7-13 days	758	386	380	211	173	43	57	2,079
14-20 days	210	127	144	83	59	11	27	680
21-27 days	82	64	69	39	25	8	9	305
28 or more days	138	98	64	51	51	8	10	499
Not stated	1,172	-	2	1,025	-	-	-	2,267
All confinements	84,558	60,744	47,054	25,090	18,328	4,601	3,378	249,793
	Per cent							
Less than 1 day	61.0	65.7	63.2	58.3	60.0	60.4	58.1	62.2
1 day	31.2	28.7	29.7	34.6	32.4	32.3	29.9	30.7
2-6 days	6.4	4.4	5.7	5.5	6.0	5.7	8.9	5.7
7-13 days	0.9	0.6	0.8	0.9	0.9	0.9	1.7	0.8
14-20 days	0.3	0.2	0.3	0.3	0.3	0.2	0.8	0.3
21-27 days	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.1
28 or more days	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.2
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Data for Tasmania excluded.

Table A30: Length of mother's postnatal stay in hospital, all hospital confinements, selected States and Territories, 1998

Length of stay ^(a)	NSW	Vic	Qld	WA	SA	ACT	NT	Total ^(b)
Mean length of stay (days)	3.9	4.1	3.8	4.2	4.0	4.0	4.5	4.0
	Number							
Less than 1 day	2,007	683	1,100	622	338	142	53	5,241
1 day	7,888	3,333	5,253	1,883	1,238	471	258	20,994
2 days	12,450	7,220	8,073	3,474	2,717	594	412	35,738
3 days	14,770	13,045	8,966	4,261	3,239	874	576	46,734
4 days	15,429	12,686	8,061	4,235	3,166	734	604	46,020
5 days	12,648	11,074	6,310	3,825	3,867	610	573	39,881
6 days	7,619	6,062	3,934	2,398	1,442	474	350	22,872
7-13 days	6,999	5,663	4,376	3,339	1,627	578	512	23,648
14-20 days	133	59	148	88	15	14	30	507
21-27 days	31	14	36	10	3	1	6	102
28 or more days	44	6	3	3	2	2	2	110
Not stated	1,183	2	1	1,051	-	-	-	2,258
All hospital confinements	81,201	59,847	46,261	25,189	17,654	4,494	3,376	244,105
	Per cent							
Less than 1 day	2.5	1.1	2.4	2.6	1.9	3.2	1.6	2.2
1 day	9.9	5.6	11.4	7.8	7.0	10.5	7.6	8.7
2 days	15.6	12.1	17.5	14.4	15.4	13.2	12.2	14.8
3 days	18.5	21.8	19.4	17.7	18.3	19.4	17.1	19.3
4 days	19.3	21.2	17.4	17.5	17.9	16.3	17.9	19.0
5 days	15.8	18.5	13.6	15.8	21.9	13.6	17.0	16.5
6 days	9.5	10.1	8.5	9.9	8.2	10.5	10.4	9.5
7-13 days	8.7	9.5	9.5	13.8	9.2	12.9	15.2	9.8
14-20 days	0.2	0.1	0.3	0.4	0.1	0.3	0.9	0.2
21-27 days	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
28 or more days	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
All hospital confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Length of mother's stay in hospital or birth centre of birth only. Transfers, home births and length of stay 'not stated' are excluded.

(b) Data for Tasmania excluded.

Table A31: Mother's length of postnatal stay by accommodation status, hospital confinements, selected States and Territories, 1998

Status in hospital/ Length of postnatal stay ^(a)	NSW	VIC	Qld	WA	SA ^(c)	ACT	Total ^(b)
Public	56,545	40,583	31,424	17,095	12,458	3,132	165,506
Mean length of stay (days)	3.4	3.5	3.0	3.5	3.4	3.2	3.4
Per cent							
1 day or less	15.0	9.0	19.2	13.9	11.8	18.5	14.1
2 days	19.5	16.6	23.7	19.0	20.7	17.5	19.5
3 days	21.9	29.5	24.0	22.3	23.9	24.9	24.4
4 days	19.1	22.1	16.8	19.2	18.6	17.4	19.3
5 days	12.3	13.1	8.6	13.9	14.7	10.8	12.1
6 days	6.5	5.6	3.7	6.1	5.7	6.4	5.6
7 or more days	5.6	4.1	3.9	5.6	4.6	4.5	4.9
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private	23,392	19,262	14,836	6,927	5,196	1,353	72,733
Mean length of stay (days)	4.9	5.3	5.3	5.9	5.2	5.8	5.2
Per cent							
1 day or less	5.8	1.8	2.1	1.4	2.0	2.1	3.4
2 days	5.9	2.5	4.2	2.9	2.7	3.4	4.1
3 days	10.1	5.6	9.5	6.3	5.1	6.8	7.9
4 days	19.7	19.4	18.8	13.5	16.3	13.8	18.4
5 days	24.3	29.9	24.4	20.7	39.1	20.0	26.4
6 days	16.9	19.8	18.6	19.5	14.1	20.3	18.1
7 or more days	17.3	21.1	22.4	35.6	20.7	33.6	21.6
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Length of mother's stay in hospital or birth centre of birth only. Transfers, home births and length of stay 'not stated' are excluded.

(b) Data exclude Tasmania and Northern Territory.

(c) South Australia data include entire postnatal length of stay under care.

Table A32: Length of mother's postnatal stay in hospital by age, parity, Indigenous status, accommodation status, type of delivery, and size of hospital, selected States and Territories, 1998

Characteristic ^(a)	Confinements	0-2 days	3-4 days	5-6 days	7-8 days	9-10 days	11-13 days	14 or more days
		Per cent						
All confinements^(b)	235,785	25.5	38.4	25.9	7.7	1.6	0.5	0.3
Maternal age								
Less than 20	11,882	34.0	44.9	16.0	3.2	0.8	0.5	0.5
20-24	38,878	36.8	42.0	16.5	3.4	0.8	0.4	0.2
25-29	77,075	26.1	39.4	25.6	6.9	1.2	0.5	0.2
30-34	70,666	20.6	36.6	30.4	9.6	1.8	0.6	0.3
35-39	31,872	19.1	34.5	31.3	11.2	2.7	0.8	0.4
40 and over	5,350	19.0	31.8	30.6	13.0	3.6	1.3	0.7
Not stated	62	33.9	25.8	33.9	6.5	-	-	-
Parity								
None	94,498	15.1	38.5	32.1	10.9	2.3	0.8	0.4
One	80,206	29.6	38.8	23.8	6.1	1.1	0.4	0.2
Two or three	51,976	35.1	38.5	19.9	4.8	1.0	0.4	0.2
Four or more	8,431	44.2	33.7	15.6	4.4	1.2	0.5	0.3
Not stated	674	32.3	39.8	19.4	4.3	1.3	1.8	1.0
Indigenous status								
Indigenous	7,859	38.8	35.2	16.4	5.6	1.6	1.5	1.0
Non-Indigenous	227,926	25.1	38.6	26.3	7.8	1.6	0.5	0.3
Hospital accommodation status^(c)								
Public	161,237	33.7	43.8	17.7	3.5	0.8	0.4	0.2
Private	70,966	7.2	26.4	44.6	17.2	3.2	0.9	0.4
Other	206	47.6	26.7	19.9	3.4	1.5	0.5	0.5
Type of delivery								
Spontaneous cephalic	157,764	34.6	42.5	18.7	3.2	0.6	0.2	0.1
Caesarean section	49,579	3.3	25.7	43.7	20.7	4.3	1.5	0.7
Other	28,442	14.0	38.1	35.3	9.9	2.0	0.5	0.3
Size of hospital								
1-100	5,175	23.7	41.0	26.7	7.1	1.1	0.3	0.1
101-500	37,309	19.5	39.4	29.8	8.8	1.6	0.6	0.3
501-1,000	42,811	17.6	35.3	33.2	10.9	2.1	0.6	0.3
1,001-2,000	52,015	27.9	38.5	24.9	6.8	1.2	0.5	0.2
2,001 and over	98,475	30.1	39.3	21.9	6.4	1.5	0.6	0.3

(a) Length of mother's stay in hospital or birth centre of birth only. Transfers, home births and length of stay 'not stated' are excluded.

(b) Data exclude Tasmania.

(c) Data exclude Northern Territory.

Table A33: Length of mother's postnatal stay for public accommodation status in hospital by age, parity, Indigenous status, type of delivery, and size of hospital, selected States and Territories, 1998

Characteristic ^(a)	Confinements	0-2 days	3-4 days	5-6 days	7-8 days	9-10 days	11-13 days	14 or more days
		Per cent						
Confinements^(b)	161,237	33.7	43.8	17.7	3.5	0.8	0.4	0.2
Maternal age								
Less than 20	10,984	35.2	45.7	15.0	2.8	0.6	0.4	0.4
20-24	34,350	39.4	42.9	14.1	2.5	0.6	0.3	0.2
25-29	54,367	33.5	44.4	17.6	3.3	0.7	0.3	0.2
30-34	40,887	30.9	44.3	19.5	3.8	0.9	0.3	0.2
35-39	17,603	29.2	42.5	21.3	5.1	1.2	0.5	0.2
40 and over	3,008	28.4	38.8	24.3	5.9	1.3	0.9	0.3
Not stated	38	50.0	31.6	15.8	2.6	-	-	-
Parity								
None	63,384	20.3	48.2	24.6	5.1	1.1	0.5	0.3
One	52,925	40.5	42.6	13.5	2.4	0.6	0.3	0.2
Two or three	37,831	43.6	40.0	13.1	2.4	0.5	0.2	0.2
Four or more	7,068	48.8	34.4	12.3	2.9	0.8	0.5	0.3
Not stated	29	34.5	55.2	10.3	-	-	-	-
Indigenous Status								
Indigenous	6,401	43.9	35.7	13.3	4.0	1.2	1.1	0.8
Non-Indigenous	154,836	33.2	44.2	17.9	3.4	0.8	0.3	0.2
Type of delivery								
Spontaneous vaginal	116,061	42.7	44.6	10.2	1.7	0.4	0.2	0.1
Caesarean section	29,144	4.6	37.2	45.0	9.6	2.1	1.0	0.5
Other	16,032	20.7	50.2	22.3	5.0	1.2	0.4	0.2
Size of hospital								
1-100	4,381	25.2	43.5	25.1	5.3	0.7	0.2	0.1
101-500	24,844	26.3	45.1	22.5	4.6	0.8	0.4	0.3
501-1,000	20,336	29.8	46.1	19.2	3.6	0.8	0.3	0.2
1,001-2,000	36,198	36.7	43.5	15.8	2.8	0.7	0.3	0.2
2,001 and over	75,478	36.1	43.0	16.2	3.3	0.8	0.4	0.2

(a) Length of mother's stay in hospital or birth centre of birth only. Transfers, home births and length of stay 'not stated' are excluded.

(b) Data exclude Tasmania and Northern Territory.

Table A34: Length of mother's postnatal stay for private accommodation status in hospital by age, parity, Indigenous status, type of delivery, and size of hospital, selected States and Territories, 1998

Characteristic ^(a)	Confinements	0-2 days	3-4 days	5-6 days	7-8 days	9-10 days	11-13 days	14 or more days
		Per cent						
Confinements^(b)	70,966	7.2	26.4	44.6	17.2	3.2	0.9	0.4
Maternal age								
Less than 20	434	24.4	38.7	29.0	6.0	0.7	-	1.2
20-24	3,719	15.4	34.5	37.3	10.1	1.8	0.5	0.3
25-29	21,586	7.6	27.3	45.6	16.1	2.4	0.7	0.3
30-34	28,996	6.1	25.7	45.9	17.9	3.2	0.9	0.4
35-39	13,920	6.3	24.6	43.9	19.0	4.5	1.1	0.5
40 and over	2,287	6.5	22.8	38.9	22.5	6.5	1.7	1.1
Not stated	24	8.3	16.7	62.5	12.5	-	-	-
Parity								
None	29,562	4.3	18.1	48.0	23.4	4.5	1.3	0.5
One	26,664	7.8	31.4	44.2	13.6	2.2	0.6	0.3
Two or three	13,534	11.5	34.6	39.2	11.4	2.5	0.6	0.3
Four or more	1,188	18.3	30.6	34.0	12.5	3.5	0.8	0.4
Not stated	18	22.2	16.7	50.0	11.1	-	-	-
Indigenous status								
Indigenous	286	11.2	28.3	41.3	15.4	3.1	0.3	0.3
Non-Indigenous	70,680	7.2	26.4	44.7	17.2	3.2	0.9	0.4
Type of delivery								
Spontaneous vaginal	39,207	10.8	36.4	43.5	7.6	1.2	0.3	0.2
Caesarean section	19,621	1.4	9.0	42.0	37.2	7.4	2.1	0.9
Other	12,138	5.0	22.3	52.5	16.2	3.0	0.7	0.3
Size of hospital								
1-100	747	13.0	26.5	37.8	18.2	3.5	0.8	0.3
101-500	11,964	5.7	27.4	45.1	17.5	3.2	0.8	0.4
501-1,000	21,037	6.0	25.1	46.6	17.8	3.2	0.9	0.4
1,001-2,000	14,346	5.1	26.4	48.3	17.0	2.3	0.6	0.3
2,001 and over	22,872	10.2	27.1	40.6	16.7	3.8	1.2	0.5

(a) Length of mother's stay in hospital or birth centre of birth only. Transfers, home births and length of stay 'not stated' are excluded.

(b) Data exclude Tasmania and Northern Territory.

Table A35: Mode of separation of mother, all hospital confinements, selected States and Territories, 1998

Mode of separation	NSW	Vic	Qld	SA	Tas	ACT	NT	Total ^(a)
Number								
Discharge home	81,168	59,844	46,260	17,652	5,702	4,494	3,373	218,493
Transfer to another hospital	3,723	1,125	1,014	730	-	110	2	6,704
Died	9	3	-	2	-	-	-	14
Other	-	-	-	-	54	-	-	54
Not stated	24	-	1	-	327	-	3	355
All confinements	84,924	60,972	47,275	18,384	6,083	4,604	3,378	225,620
Per cent								
Discharge home	95.6	98.1	97.9	96.0	99.1	97.6	99.9	97.0
Transfer to another hospital	4.4	1.8	2.1	4.0	-	2.4	0.1	3.0
Died	0.0	0.0	-	0.0	-	-	-	0.0
Other	-	-	-	-	0.9	-	-	0.0
All confinements	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Data exclude Western Australia.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A36: Infant's month of birth, all births, States and Territories, 1998

Month of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
January	7,146	5,069	4,012	2,093	1,597	516	421	306	21,160
February	6,597	4,759	3,784	1,980	1,497	500	359	295	19,771
March	7,528	5,131	4,283	2,204	1,618	551	415	341	22,071
April	7,140	4,967	4,200	2,198	1,551	510	383	321	21,270
May	7,139	5,096	4,095	2,197	1,588	545	386	317	21,363
June	7,158	5,123	3,920	2,146	1,481	500	375	301	21,004
July	7,531	5,336	4,289	2,151	1,550	562	425	302	22,146
August	7,189	5,303	4,123	2,129	1,513	516	380	288	21,441
September	7,492	5,470	4,061	2,195	1,724	525	388	272	22,127
October	7,472	5,615	3,988	2,281	1,638	541	391	281	22,207
November	6,738	5,074	3,661	2,064	1,490	489	440	255	20,211
December	7,175	5,148	3,747	2,039	1,486	534	374	247	20,750
All births	86,305	62,091	48,163	25,677	18,733	6,289	4,737	3,527*	255,522
Per cent									
January	8.3	8.2	8.3	8.2	8.5	8.2	8.9	8.7	8.3
February	7.6	7.7	7.9	7.7	8.0	8.0	7.6	8.4	7.7
March	8.7	8.3	8.9	8.6	8.6	8.8	8.8	9.7	8.6
April	8.3	8.0	8.7	8.6	8.3	8.1	8.1	9.1	8.3
May	8.3	8.2	8.5	8.6	8.5	8.7	8.1	9.0	8.4
June	8.3	8.3	8.1	8.4	7.9	8.0	7.9	8.5	8.2
July	8.7	8.6	8.9	8.4	8.3	8.9	9.0	8.6	8.7
August	8.3	8.5	8.6	8.3	8.1	8.2	8.0	8.2	8.4
September	8.7	8.8	8.4	8.5	9.2	8.3	8.2	7.7	8.7
October	8.7	9.0	8.3	8.9	8.7	8.6	8.3	8.0	8.7
November	7.8	8.2	7.6	8.0	8.0	7.8	9.3	7.2	7.9
December	8.3	8.3	7.8	7.9	7.9	8.5	7.9	7.0	8.1
All births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Data include one baby with date of birth 'not stated'.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A37: Baby's sex by plurality, all births, States and Territories, 1998

Baby's sex	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
All births									
Male	44,283	32,043	24,659	13,092	9,482	3,294	2,409	1,840	131,102
Female	41,960	30,043	23,493	12,585	9,251	2,994	2,328	1,685	124,339
Indeterminate	14	5	11	-	-	1	-	1	32
Not stated	48	-	-	-	-	-	-	1	49
All births	86,305	62,091	48,163	25,677	18,733	6,289	4,737	3,527	255,522
Sex ratio	105.5	106.7	105.0	104.0	102.5	110.0	103.5	109.2	105.4
Singletons									
Male	43,005	30,968	23,932	12,718	9,169	3,232	2,324	1,803	127,151
Female	40,804	29,116	22,821	12,197	8,941	2,927	2,231	1,644	120,681
Indeterminate	14	4	10	-	-	1	-	1	30
Not stated	46	-	-	-	-	-	-	1	47
Sex ratio	105.4	106.4	104.9	104.3	102.6	110.4	104.2	109.7	105.4
Twins									
Male	1,231	1,015	691	355	306	61	83	37	3,779
Female	1,115	876	632	377	308	65	93	41	3,507
Indeterminate	-	1	1	-	-	-	-	-	2
Not stated	2	-	-	-	-	-	-	-	2
Sex ratio	110.4	115.9	109.3	94.2	99.4	93.8	89.2	90.2	107.8
Other multiple births									
Male	47	60	36	19	7	-	2	-	171
Female	41	51	40	11	2	-	4	-	149
Indeterminate	-	-	-	-	-	-	-	-	-
Not stated	-	-	-	-	-	-	-	-	-
Sex ratio	114.6	117.6	90.0	172.7	350.0	-	50.0	-	114.8
Per cent									
All births									
Male	51.3	51.6	51.2	51.0	50.6	52.4	50.9	52.2	51.3
Female	48.6	48.4	48.8	49.0	49.4	47.6	49.1	47.8	48.7
Indeterminate	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0
All births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Singletons									
Male	51.3	51.5	51.2	51.0	50.6	52.5	51.0	52.3	51.3
Female	48.7	48.5	48.8	49.0	49.4	47.5	49.0	47.7	48.7
Twins									
Male	52.5	53.6	52.2	48.5	49.8	48.4	47.2	47.4	51.9
Female	47.5	46.3	47.7	51.5	50.2	51.6	52.8	52.6	48.1
Other multiple births									
Male	53.4	54.1	47.4	-	-	-	-	-	53.4
Female	46.6	45.9	52.6	-	-	-	-	-	46.6

Notes: Percentages not reported for cells less than 20.

Data for Tasmania unavailable, 1997 data used as estimate.

Table A38: Baby's gestational age, live births and fetal deaths, Australia, 1998

Gestational age (weeks)	Live births		Fetal deaths		All births	
	Number	Per cent	Number	Per cent	Number	Per cent
20	45	0.0	152	8.7	197	0.1
21	66	0.0	177	10.1	243	0.1
22	66	0.0	157	9.0	223	0.1
23	86	0.0	117	6.7	203	0.1
24	149	0.1	85	4.9	234	0.1
25	164	0.1	62	3.5	226	0.1
26	232	0.1	51	2.9	283	0.1
27	254	0.1	32	1.8	286	0.1
28	344	0.1	49	2.8	393	0.2
29	388	0.2	38	2.2	426	0.2
30	543	0.2	57	3.3	600	0.2
31	597	0.2	46	2.6	643	0.3
32	934	0.4	59	3.4	993	0.4
33	1,307	0.5	55	3.1	1,362	0.5
34	2,303	0.9	60	3.4	2,363	0.9
35	3,375	1.3	63	3.6	3,438	1.3
36	6,948	2.7	61	3.5	7,009	2.7
37	15,102	6.0	80	4.6	15,182	5.9
38	41,157	16.2	100	5.7	41,257	16.2
39	51,282	20.2	77	4.4	51,359	20.1
40	87,952	34.7	106	6.1	88,058	34.5
41	35,486	14.0	49	2.8	35,535	13.9
42	4,778	1.9	14	0.8	4,792	1.9
43	131	0.1	1	0.1	132	0.1
44 and over	10	0.0	-	-	10	0.0
Not stated	72	-	3	-	75	-
All births	253,771	100.0	1,751	100.0	255,522	100.0
Preterm Births						
20-27	1,062	0.4	833	47.7	1,895	0.7
28-31	1,872	0.7	190	10.9	2,062	0.8
32-36	14,867	5.9	298	17.0	15,165	5.9
All preterm births	17,801	7.0	1,321	75.6	19,122	7.5

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A39: Baby's gestational age by plurality, all births, Australia, 1998

Gestational age (weeks)	Singletons		Twins		Triplets		All births	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20-27	1,562	0.6	296	4.1	33	10.6	1,895	0.7
28-31	1,568	0.6	433	5.9	57	18.3	2,062	0.8
32-36	12,085	4.9	2,870	39.4	210	67.3	15,165	5.9
37-41	227,686	91.9	3,691	50.6	12	3.8	231,391	90.6
42 and over	4,933	2.0	-	-	-	-	4,934	1.9
Not stated	75	-	-	-	-	-	75	-
All births	247,909	100.0	7,290	100.0	312	100.0	255,522	100.0
20-36 weeks	15,215	6.1	3,599	49.4	300	96.2	19,122	7.5
Mean gestational age (weeks)								
20+ weeks	39.1		35.5		32.6		39.0	

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A40: Duration of pregnancy, preterm births, States and Territories, 1998

Duration of pregnancy (weeks)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mean (weeks)	33.3	33.3	33.1	33.4	33.4	32.9	32.7	33.0	33.3
Number									
20-27	588	435	409	184	134	53	51	41	1,895
28-31	607	513	412	221	161	49	63	36	2,062
32-36	4,758	3,688	2,975	1,632	1,201	319	291	301	15,165
All preterm births	5,953	4,636	3,796	2,037	1,496	421	405	378	19,122
Per cent of total births									
20-27	0.7	0.7	0.8	0.7	0.7	0.8	1.1	1.2	0.7
28-31	0.7	0.8	0.9	0.9	0.9	0.8	1.3	1.0	0.8
32-36	5.5	5.9	6.2	6.4	6.4	5.1	6.1	8.5	5.9
All preterm births	6.9	7.5	7.9	7.9	8.0	6.7	8.5	10.7	7.5

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A41: Baby's birthweight, all births, States and Territories, 1998

Birthweight (g)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mean birthweight (g)	3,373	3,356	3,369	3,346	3,356	3,399	3,354	3,244	3,363
	Number								
Less than 500	190	163	154	70	47	-	14	15	653
500-999	398	321	284	130	95	21	44	23	1,316
1,000-1,499	481	426	294	163	125	60	41	29	1,619
1,500-1,999	1,017	805	661	299	266	86	77	71	3,282
2,000-2,499	3,147	2,477	1,899	1,065	775	219	196	206	9,984
2,500-2,999	12,810	9,519	6,888	4,062	2,810	858	683	649	38,279
3,000-3,499	30,974	22,073	16,802	9,325	6,662	2,122	1,586	1,279	90,823
3,500-3,999	26,818	18,905	15,149	7,675	5,715	2,093	1,507	881	78,743
4,000-4,499	8,807	6,274	5,124	2,471	1,904	699	494	287	26,060
4,500 and over	1,597	1,115	902	417	334	129	95	51	4,640
Not stated	66	13	6	-	-	2	-	36	123
All births	86,305	62,091	48,163	25,677	18,733	6,289	4,737	3,527	255,522
Less than 1,000	588	484	438	200	142	21	58	38	1,969
Less than 1,500	1,069	910	732	363	267	81	99	67	3,588
Less than 2,500	5,233	4,192	3,292	1,727	1,308	386	372	344	16,854
	Per cent								
Less than 500	0.2	0.3	0.3	0.3	0.3	-	0.3	0.4	0.3
500-999	0.5	0.5	0.6	0.5	0.5	0.3	0.9	0.7	0.5
1,000-1,499	0.6	0.7	0.6	0.6	0.7	1.0	0.9	0.8	0.6
1,500-1,999	1.2	1.3	1.4	1.2	1.4	1.4	1.6	2.0	1.3
2,000-2,499	3.6	4.0	3.9	4.1	4.1	3.5	4.1	5.9	3.9
2,500-2,999	14.9	15.3	14.3	15.8	15.0	13.6	14.4	18.6	15.0
3,000-3,499	35.9	35.6	34.9	36.3	35.6	33.8	33.5	36.6	35.6
3,500-3,999	31.1	30.5	31.5	29.9	30.5	33.3	31.8	25.2	30.8
4,000-4,499	10.2	10.1	10.6	9.6	10.2	11.1	10.4	8.2	10.2
4,500 and over	1.9	1.8	1.9	1.6	1.8	2.1	2.0	1.5	1.8
All births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 1,000	0.7	0.8	0.9	0.8	0.8	0.3	1.2	1.1	0.8
Less than 1,500	1.2	1.5	1.5	1.4	1.4	1.3	2.1	1.9	1.4
Less than 2,500	6.1	6.8	6.8	6.7	7.0	6.1	7.9	9.9	6.6

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A42: Baby's birthweight, live births and fetal deaths, Australia, 1998

Birthweight (g)	Live births		Fetal deaths		All births	
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	166	0.1	487	28.3	653	0.3
500-999	939	0.4	377	21.9	1,316	0.5
1,000-1,499	1,457	0.6	162	9.4	1,619	0.6
1,500-1,999	3,132	1.2	150	8.7	3,282	1.3
2,000-2,499	9,862	3.9	122	7.1	9,984	3.9
2,500-2,999	38,111	15.0	168	9.8	38,279	15.0
3,000-3,499	90,680	35.7	143	8.3	90,823	35.6
3,500-3,999	78,674	31.0	69	4.0	78,743	30.8
4,000-4,499	26,032	10.3	28	1.6	26,060	10.2
4,500 and over	4,624	1.8	16	0.9	4,640	1.8
Not stated	94	-	29	-	123	-
All births	253,771	100.0	1,751	100.0	255,522	100.0
Less than 1,000	1,105	0.4	864	50.2	1,969	0.8
Less than 1,500	2,562	1.0	1,026	59.6	3,588	1.4
Less than 2,500	15,556	6.1	1,298	75.4	16,854	6.6
Mean birthweight (g)						
All birthweights	3,376		1,478		3,363	

Notes: Birthweights 'Less than 1500 g' and 'Less than 2500 g' are cumulative.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A43: Baby's birthweight by plurality, all births, Australia, 1998

Birthweight (g)	Singletons		Twins		Triplets		Other multiple births	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	562	0.2	83	1.1	8	2.6	-	-
500-999	1,052	0.4	226	3.1	31	9.9	7	87.5
1,000-1,499	1,148	0.5	410	5.6	60	19.2	1	12.5
1,500-1,999	2,345	0.9	834	11.5	103	33.0	-	-
2,000-2,499	7,876	3.2	2,017	27.7	91	29.2	-	-
2,500-2,999	35,713	14.4	2,549	35.0	17	5.4	-	-
3,000-3,499	89,795	36.2	1,024	14.1	2	0.6	-	-
3,500-3,999	78,613	31.7	130	1.8	-	-	-	-
4,000-4,499	26,054	10.5	5	0.1	-	-	-	-
4,500 and over	4,640	1.9	-	-	-	-	-	-
Not stated	111	-	12	-	-	-	-	-
All births	247,909	100.0	7,290	100.0	312	100.0	8	100.0
Less than 1,000	1,614	0.7	309	4.2	39	12.5	7	87.5
Less than 1,500	2,762	1.1	719	9.9	99	31.7	8	100.0
Less than 2,500	12,983	5.2	3,570	49.1	293	93.9	8	100.0
Mean birthweight (g)								
All birthweights	3,393		2,407		1,745		923	

Notes: Birthweights 'Less than 1500 g' and 'Less than 2500 g' are cumulative.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A44: Baby's birthweight by sex, all births, Australia, 1998

Birthweight (g)	Male		Female		Indeterminate / Not stated	
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 500	328	0.3	311	0.3	14	18.9
500–999	712	0.5	602	0.5	2	2.7
1,000–1,499	892	0.7	726	0.6	1	1.4
1,500–1,999	1,658	1.3	1,623	1.3	1	1.4
2,000–2,499	4,588	3.5	5,393	4.3	3	4.1
2,500–2,999	16,667	12.7	21,603	17.4	9	12.2
3,000–3,499	43,437	33.1	47,366	38.1	20	27.0
3,500–3,999	43,271	33.0	35,457	28.5	15	20.3
4,000–4,499	16,296	12.4	9,755	7.8	9	12.2
4,500 and over	3,192	2.4	1,448	1.2	-	-
Not stated	61	-	55	-	7	-
All births	131,102	100.0	124,339	100.0	81	100.0
Less than 1,000	1,040	0.8	913	0.7	16	21.6
Less than 1,500	1,932	1.5	1,639	1.3	17	23.0
Less than 2,500	8,178	6.3	8,655	7.0	21	28.4
Mean birthweight (g)						
All birthweights	3,420		3,303		2,690	

Notes: Birthweights 'Less than 1500 g' and 'Less than 2500 g' are cumulative.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A45: Birthweight of babies of Indigenous mothers, States and Territories, 1998

Birthweight (g)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mean birthweight (g)	3,193	3,166	3,198	3,135	3,110	3,315	3,045	3,106	3,169
	Number								
Less than 500	7	1	15	6	1	-	-	9	39
500-999	17	7	33	18	6	-	-	12	93
1,000-1,499	19	3	26	20	13	2	4	16	103
1,500-1,999	48	8	68	25	15	6	2	28	200
2,000-2,499	126	37	171	122	29	8	6	95	594
2,500-2,999	461	111	547	386	86	31	16	302	1,940
3,000-3,499	691	150	979	515	143	71	20	446	3,015
3,500-3,999	532	96	670	311	88	63	9	222	1,991
4,000-4,499	137	33	208	91	30	14	6	84	603
4,500 and over	29	7	40	23	5	4	-	12	120
Not stated	1	-	-	-	-	-	-	30	31
All births	2,068	453	2,757	1,517	416	199	63	1,256	8,729
Less than 1,000	24	8	48	24	7	-	-	21	132
Less than 1,500	43	11	74	44	20	2	4	37	235
Less than 2,500	217	56	313	191	64	16	12	160	1,029
	Per cent								
Less than 500	0.3	0.2	0.5	0.4	0.2	-	-	0.7	0.4
500-999	0.8	1.5	1.2	1.2	1.4	-	-	1.0	1.1
1,000-1,499	0.9	0.7	0.9	1.3	3.1	1.0	6.3	1.3	1.2
1,500-1,999	2.3	1.8	2.5	1.6	3.6	3.0	3.2	2.3	2.3
2,000-2,499	6.1	8.2	6.2	8.0	7.0	4.0	9.5	7.7	6.8
2,500-2,999	22.3	24.5	19.8	25.4	20.7	15.6	25.4	24.6	22.3
3,000-3,499	33.4	33.1	35.5	33.9	34.4	35.7	31.7	36.4	34.7
3,500-3,999	25.7	21.2	24.3	20.5	21.2	31.7	14.3	18.1	22.9
4,000-4,499	6.6	7.3	7.5	6.0	7.2	7.0	9.5	6.9	6.9
4,500 and over	1.4	1.5	1.5	1.5	1.2	2.0	-	1.0	1.4
All births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 1,000	1.2	1.8	1.7	1.6	1.7	-	-	1.7	1.5
Less than 1,500	2.1	2.4	2.7	2.9	4.8	1.0	6.3	3.0	2.7
Less than 2,500	10.5	12.4	11.4	12.6	15.4	8.0	19.0	13.1	11.8

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A46: Distribution of birthweight by mother's Indigenous status, country of birth, age, parity, marital status, public and private accommodation status, and place of birth, Australia, 1998

Characteristic	Less than 1,000 g		Less than 1,500 g		Less than 2,500 g		2,500 g and over	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Indigenous status								
Indigenous	132	1.5	235	2.7	1,029	11.8	7,669	88.2
Non-Indigenous	1,837	0.7	3,353	1.4	15,825	6.4	230,876	93.6
Maternal country of birth								
Australia	1,515	0.8	2,813	1.4	13,131	6.6	184,502	93.4
New Zealand	46	0.8	84	1.4	380	6.3	5,656	93.7
United Kingdom	70	0.7	135	1.3	638	6.4	9,407	93.6
Italy	3	0.4	9	1.3	52	7.6	636	92.4
Former Yugoslavia	13	0.8	22	1.3	98	5.7	1,611	94.3
Lebanon	17	0.6	27	1.0	143	5.3	2,575	94.7
China	18	0.6	29	0.9	152	4.9	2,920	95.1
Hong Kong	3	0.4	6	0.8	50	6.6	708	93.4
India	12	0.8	22	1.5	126	8.7	1,316	91.3
Malaysia	5	0.5	10	1.0	58	6.1	896	93.9
Philippines	19	0.7	35	1.3	171	6.3	2,550	93.7
Vietnam	19	0.5	32	0.9	221	6.0	3,460	94.0
Other countries	198	0.9	308	1.4	1,454	6.6	20,432	93.4
Not stated	31	1.5	56	2.7	180	8.8	1,876	91.2
Maternal age (years)								
Less than 16	11	2.2	16	3.2	62	12.4	436	87.6
16-19	139	1.1	246	2.0	1,094	8.8	11,406	91.2
20-24	334	0.8	643	1.5	2,900	6.9	39,135	93.1
25-29	561	0.7	1,026	1.2	5,085	6.1	78,193	93.9
30-34	511	0.7	958	1.3	4,597	6.0	71,905	94.0
35-39	350	1.0	588	1.7	2,589	7.5	32,053	92.5
40 and over	63	1.1	111	1.9	522	8.9	5,338	91.1
Not stated	-	-	-	-	5	6.0	79	94.0
Parity								
None	909	0.9	1,739	1.7	8,048	7.9	94,245	92.1
One	508	0.6	886	1.0	4,519	5.2	82,227	94.8
Two	293	0.7	516	1.3	2,371	5.8	38,811	94.2
Three	139	0.9	237	1.6	1,021	6.7	14,244	93.3
Four or more	116	1.3	206	2.2	846	9.2	8,376	90.8
Not stated	4	0.6	4	0.6	49	7.1	642	92.9
Marital status^(a)								
Married/de facto	1,101	0.7	2,029	1.4	9,422	6.4	137,887	93.6
Single	250	1.3	429	2.2	1,926	10.1	17,215	89.9
Other	30	1.1	61	2.3	273	10.1	2,437	89.9
Hospital status^(b)								
Public	1,372	0.8	2,506	1.5	11,629	6.8	159,429	93.2
Private	437	0.6	797	1.0	4,052	5.3	72,643	94.7
Place of birth								
Hospital	1,935	0.8	3,525	1.4	16,615	6.7	232,319	93.3
Birth centre	5	0.1	8	0.2	46	1.0	4,587	99.0
Home	1	0.2	1	0.2	22	3.4	633	96.6
Born before arrival	25	2.5	48	4.7	148	14.5	870	85.5
Other	3	5.2	5	8.6	18	31.0	40	69.0
Not stated	-	-	1	1.0	5	5.0	96	95.0

(a) Data exclude New South Wales.

(b) Data exclude Northern Territory.

Notes: Birthweights 'Less than 1500 g', 'Less than 2500 g' and '2500 g and over' are cumulative.

Data for Tasmania unavailable, 1997 data used as estimate.

Table A47: Proportion of liveborn low birthweight infants born in hospitals of different sizes, States and Territories, 1998

Low birthweight category/Hospital size	NSW	Vic	Qld ^(a)	WA	SA	Tas	ACT	NT	Australia
Birthweight: 500–999 g									
Number of births	264	240	209	91	62	16	29	16	927
	Per cent								
1–100 confinements	0.4	0.4	2.4	2.2	1.6	-	-	-	1.1
101–500 confinements	1.5	2.1	2.9	3.3	3.2	-	-	-	2.2
501–1,000 confinements	4.5	16.3	2.9	1.1	-	-	-	18.8	6.6
1,001–2,000 confinements	1.5	1.3	18.7	-	4.8	100.0	-	81.3	8.4
2,001 and over confinements	92.0	80.0	73.2	93.4	90.3	-	100.0	-	81.8
All births: 500–999 g	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Birthweight: 1,000–1,499 g									
Number of births	426	382	268	144	118	37	36	24	1,435
	Per cent								
1–100 confinements	0.5	0.8	-	-	0.8	2.7	-	-	0.5
101–500 confinements	2.1	1.8	3.4	2.8	3.4	-	2.8	-	2.4
501–1,000 confinements	5.6	14.7	5.6	-	1.7	13.5	-	37.5	7.7
1,001–2,000 confinements	2.6	5.8	21.6	-	6.8	83.8	2.8	62.5	10.2
2,001 and over confinements	89.2	77.0	69.4	97.2	87.3	-	94.4	-	79.2
All births: 1,000–1,499 g	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Birthweight: 1,500–1,999 g									
Number of births	934	770	635	286	257	73	74	69	3,098
	Per cent								
1–100 confinements	0.1	0.4	1.1	0.3	2.3	-	-	-	0.6
101–500 confinements	5.7	5.8	6.3	4.9	6.2	-	2.7	2.9	5.6
501–1,000 confinements	11.9	17.9	12.1	3.1	4.3	13.7	8.1	39.1	12.6
1,001–2,000 confinements	7.8	17.4	26.8	2.4	23.0	86.3	6.8	58.0	17.8
2,001 and over confinements	74.5	58.4	53.7	89.2	64.2	-	82.4	-	63.5
All births: 1,500–1,999 g	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes one tertiary level hospital of less than 2,000 confinements.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A48: Baby's Apgar score at 1 minute, live births, States and Territories, 1998

Apgar score	NSW	VIC	Qld	WA	SA	Tas	ACT	NT	Total
Number									
All live births	85,592	61,685	47,822	25,513	18,612	6,238	4,691	3,500	253,653
Per cent									
0	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.5	0.1
1-3	2.6	2.1	2.3	1.8	2.7	2.3	3.4	3.6	2.4
4-6	10.4	10.6	9.3	10.3	13.3	10.1	12.2	12.5	10.5
7-10	86.9	87.3	88.3	87.9	84.0	87.3	84.3	83.3	87.0
All live births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A49: Baby's Apgar score at 5 minutes, live births, States and Territories, 1998

Apgar score	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
All live births	85,592	61,685	47,822	25,513	18,612	6,238	4,691	3,500	253,653
Per cent									
0	0.0	0.0	0.1	0.0	0.0	0.3	0.1	0.6	0.1
1-3	0.2	0.3	0.3	0.2	0.2	0.3	0.5	0.7	0.3
4-6	1.4	1.0	1.1	1.2	1.3	1.2	1.6	2.3	1.2
7-10	98.4	98.7	98.5	98.6	98.5	98.2	97.8	96.4	98.5
All live births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A50: Apgar scores at 1 and 5 minutes by birthweight and plurality, live births, Australia, 1998

Apgar score ^(a)	Less than 1,000 g	1,000–1,499 g	1,500–1,999 g	2,000–2,499 g	2,500 g and over	Not stated
Singleton live births						
Apgar score: 1 minute						
Live births	841	996	2,189	7,743	234,369	89
Per cent						
0	1.1	0.5	0.4	0.1	0.0	4.3
1–3	44.5	17.5	10.3	5.0	1.9	10.9
4–6	34.3	32.9	23.3	15.4	9.9	13.0
7–10	20.0	49.1	66.0	79.6	88.2	71.7
Apgar score: 5 minutes						
Live births	841	996	2,189	7,743	234,369	89
Per cent						
0	4.0	0.3	0.1	0.2	0.0	2.2
1–3	21.4	2.6	1.6	0.4	0.1	6.5
4–6	16.2	10.1	5.4	2.7	1.0	15.2
7–10	58.4	87.0	92.9	96.7	98.8	76.1
Multiple live births						
Apgar score: 1 minute						
Live births	251	441	918	2,096	3,712	5
Per cent						
0	0.8	0.2	0.2	0.0	0.1	-
1–3	44.8	8.6	4.4	4.2	2.6	-
4–6	30.0	33.3	19.7	15.1	12.3	-
7–10	24.4	57.8	75.8	80.7	85.0	100.0
Apgar score: 5 minutes						
Live births	251	441	918	2,096	3,712	5
Per cent						
0	3.6	-	-	-	0.0	-
1–3	14.8	0.2	0.4	0.2	0.3	-
4–6	14.8	7.1	2.0	2.1	1.0	-
7–10	66.8	92.7	97.6	97.8	98.7	100.0

(a) Table excludes Apgar scores 'not stated'.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A51: Resuscitation at birth, active measures, live births, selected States and Territories, 1998

Resuscitation at birth	Vic	Qld	WA ^(a)	SA	Tas	ACT	NT	Total ^(b)
Type	Number							
None	51,782	43,600	11,489	16,564	5,366	4,082	3,141	136,024
Bag and Mask/IPPR	9,212	3,601	1,658	1,796	814	503	359	17,943
Intubation	691	293	444	118	45	63	-	1,654
Bag/mask/IPPR & Intubation	-	326	-	134	13	43	-	516
Other	-	-	11,922	-	-	-	-	11,922
Not stated	-	2	-	-	-	-	-	2
Total live births^(c)	61,685	47,822	25,513	18,612	6,238	4,691	3,500	168,061
Type	Per cent							
None	83.9	91.2	45.0	89.0	86.0	87.0	89.7	53.6
Bag and Mask/IPPR	14.9	7.5	6.5	9.6	13.0	10.7	10.3	7.1
Intubation	1.1	0.6	1.7	0.6	0.7	1.3	-	0.7
Bag/mask/IPPR & Intubation	-	0.7	-	0.7	0.2	0.9	-	0.2
Other	-	-	46.7	-	-	-	-	38.4
Total live births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Other category includes Suction only, Oxygen therapy and External Cardiac Massage.

(b) Data exclude New South Wales.

(c) Total methods may exceed total live births as more than method may have been applied for each baby.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A52: Length of baby's stay in hospital, live births, States and Territories, 1998

Length of stay ^(a)	NSW	Vic	Qld	WA	SA ^(b)	ACT	NT	Total ^(c)
Mean length of stay (days)	4.5	4.8	4.4	4.9	5.5	4.9	4.8	4.7
Number								
Less than 1 day	3,025	1,051	935	770	323	213	146	6,751
1 day	7,379	3,498	5,001	1,874	1,159	456	362	20,377
2 days	11,542	7,191	7,817	3,471	2,625	586	440	34,454
3 days	14,820	12,753	8,713	4,279	3,183	862	563	46,160
4 days	16,180	12,253	7,784	4,329	3,211	716	557	46,128
5 days	13,717	10,815	6,094	3,923	3,862	585	485	40,433
6 days	8,368	5,962	3,848	2,511	1,489	464	276	23,494
7-13 days	8,338	6,367	4,562	3,648	1,863	621	426	26,372
14-20 days	828	690	475	237	281	58	59	2,682
21-27 days	392	347	275	118	207	24	40	1,432
28 or more days	752	660	427	251	374	65	39	2,661
Not stated	106	-	1,718	-	-	-	-	1,876
All live births	85,447	61,587	47,649	25,411	18,577	4,650	3,393	252,820
Per cent								
Less than 1 day	3.5	1.7	2.0	3.0	1.7	4.6	4.3	2.7
1 day	8.6	5.7	10.9	7.4	6.2	9.8	10.7	8.1
2 days	13.5	11.7	17.0	13.7	14.1	12.6	13.0	13.7
3 days	17.4	20.7	19.0	16.8	17.1	18.5	16.6	18.4
4 days	19.0	19.9	16.9	17.0	17.3	15.4	16.4	18.4
5 days	16.1	17.6	13.3	15.4	20.8	12.6	14.3	16.1
6 days	9.8	9.7	8.4	9.9	8.0	10.0	8.1	9.4
7-13 days	9.8	10.3	9.9	14.4	10.0	13.4	12.6	10.5
14-20 days	1.0	1.1	1.0	0.9	1.5	1.2	1.7	1.1
21-27 days	0.5	0.6	0.6	0.5	1.1	0.5	1.2	0.6
28 or more days	0.9	1.1	0.9	1.0	2.0	1.4	1.1	1.1
All live births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Length of stay for live births in hospital or birth centre of birth only, transfers are excluded.

(b) South Australia data includes entire postnatal length of stay under care.

(c) Data exclude Tasmania.

Table A53: Length of baby's stay in hospital by plurality, Indigenous status, gestational age, and birthweight, live births, selected States and Territories, 1998

Characteristic ^(a)	Babies ^(b)	0-2 days	3-4 days	5-6 days	7-13 days	14-20 days	21-27 days	28 or more days
Plurality		Per cent						
Singleton	237,814	25.0	37.6	25.6	9.7	0.8	0.4	0.8
Twin	6,795	6.0	11.6	20.8	38.2	9.3	5.3	8.8
Other multiple birth	281	6.8	2.5	9.3	20.3	16.0	13.5	31.7
Indigenous status								
Indigenous	8,122	38.5	33.5	15.0	8.9	1.8	0.9	1.6
Non-Indigenous	236,768	24.0	36.9	25.8	10.6	1.0	0.6	1.0
Gestational age								
20-27 weeks	848	32.1	3.2	2.2	5.0	1.1	2.2	54.2
28-31 weeks	1,577	10.3	2.8	2.6	9.1	8.5	9.3	57.4
32-36 weeks	14,067	10.5	15.0	17.9	30.1	13.2	7.4	5.8
37-41 weeks	223,719	25.3	38.5	26.2	9.4	0.3	0.1	0.2
42 or more weeks	4,647	26.7	40.7	24.7	7.4	0.2	0.1	0.2
Not stated	32	40.6	9.4	28.1	18.8	3.1	-	-
Birthweight								
Less than 1,000 g	885	31.4	3.3	1.9	4.3	1.7	2.3	55.1
1,000-1,499 g	1,232	10.3	1.7	1.7	8.2	8.1	8.7	61.3
1,500-1,999 g	2,829	8.1	4.0	6.5	20.3	19.2	17.4	24.4
2,000-2,499 g	9,379	10.2	18.9	21.7	29.9	11.3	5.5	2.6
2,500 g and over	230,513	25.3	38.3	26.1	9.7	0.4	0.1	0.2
Not stated	52	44.2	25.0	17.3	5.8	3.8	-	3.8

(a) Length of baby's stay in hospital or birth centre of birth only. Transfers, home births and length of stay 'not stated' are excluded.

(b) Data exclude Tasmania.

Table A54: Mode of separation of infants born in hospitals, selected States and Territories, 1998

Mode of separation	NSW	Vic ^(a)	Qld	WA	Tas	ACT	NT	Total ^(b)
	Number							
Discharge home	80,375	59,283	45,932	24,321	5,826	4,342	3,402	223,481
Transfer to another hospital	4,874	2,040	1,547	998	-	286	-	9,745
Fetal death	595	405	341	163	50	46	27	1,627
Liveborn/Died	199	213	170	69	18	23	22	714
Other	-	51	-	23	366	-	-	440
Not stated	112	-	2	-	6	-	37	157
All births	86,155	61,992	47,992	25,574	6,266	4,697	3,488	236,164
	Per cent							
Discharge home	93.4	95.6	95.7	95.1	99.1	92.4	98.6	94.8
Transfer to another hospital	5.7	3.3	3.2	3.9	-	6.1	-	4.1
Fetal death	0.7	0.7	0.7	0.6	0.9	1.0	0.8	0.7
Liveborn/Died	0.2	0.3	0.4	0.3	0.3	0.5	0.6	0.3
Other	-	0.1	-	0.1	6.2	-	-	0.2
All births	100.0	100.0	100.0	100.0	106.5	100.0	100.0	100.2

(a) 'Other' includes 51 babies whose discharge status was recorded as infant death.

(b) Data exclude South Australia.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A55: Fetal, neonatal and perinatal deaths and rates, various definitions, Australia, 1996–1998

Definition/Outcome	Number				Rate per 1,000 births			
	1996	1997	1998	1996–1998	1996	1997	1998	1996–1998
400 g/20 weeks								
Fetal deaths	1,668	1,516	1,336	4,520	6.5	6.0	5.3	6.0
Neonatal deaths	879	805	754	2,438	3.5	3.2	3.0	3.2
<i>Perinatal deaths (ABS)</i>	<i>2,547</i>	<i>2,321</i>	<i>2,090</i>	<i>6,958</i>	<i>10.0</i>	<i>9.2</i>	<i>8.3</i>	<i>9.2</i>
Live births	253,834	251,745	249,555	755,134r				
500 g/22 weeks								
Fetal deaths	1,411	1,280	1,122	3,813	5.5	5.1	4.5	5.0
Early neonatal deaths	582	557	485	1,624	2.3	2.2	1.9	2.2
Neonatal deaths	759	718	679	2,156	3.0	2.9	2.7	2.9
<i>Perinatal deaths (WHO)</i>	<i>1,993</i>	<i>1,837</i>	<i>1,607</i>	<i>5,437</i>	<i>7.8</i>	<i>7.3</i>	<i>6.4</i>	<i>7.2</i>
<i>Perinatal deaths (ABS)</i>	<i>2,170</i>	<i>1,998</i>	<i>1,801</i>	<i>5,969</i>	<i>8.5</i>	<i>7.9</i>	<i>7.2</i>	<i>7.9</i>
Live births	253,567	251,658	249,495	754,720r				
1,000 g/28 weeks								
Fetal deaths	958	891	923	2,772	3.8	3.5	3.7	3.7
Early neonatal deaths	334	307	282	923	1.3	1.2	1.1	1.2
<i>Perinatal deaths (WHO)</i>	<i>1,292</i>	<i>1,198</i>	<i>1,205</i>	<i>3,695</i>	<i>5.1</i>	<i>4.8</i>	<i>4.8</i>	<i>4.9</i>
Live births ^(a)	253,098	250,509	248,537	752,144				

(a) Estimated live births.

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A56: Type of fetal death, Australia, 1993–1998

Year	Antepartum		Intrapartum ^(a)		Not known ^(b)		All fetal deaths	
	Number	Rate per 1,000 births	Number	Rate per 1,000 births	Number	Rate per 1,000 births	Number	Rate per 1,000 births
1993	951	3.6	322	1.2	166	0.6	1,439	5.5
1994	893	3.4	370	1.4	149	0.6	1,412	5.4
1995	1,013	3.9	318	1.2	181	0.7	1,512	5.9
1996	1,074	4.2	397	1.6	197	0.8	1,668	6.5
1997	941	3.7	270	1.1	305	1.2	1,516	6.0
1998	904	3.6	269	1.1	163	0.6	1,336	5.3

(a) Includes fetal deaths where it was not known whether heartbeat ceased before or after delivery.

(b) Not known whether heartbeat ceased before or during labour.

Note: Fetal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A57: Neonatal deaths by age at death, Australia, 1993–1998

Year	Less than 1 day		1–6 days		7–27 days		All neonatal deaths ^(a)	
	Number	Rate per 1,000 live births	Number	Rate per 1,000 live births	Number	Rate per 1,000 live births	Number	Rate per 1,000 live births
1993	528	2.0	245	0.9	198	0.8	972	3.7
1994	513	2.0	259	1.0	177	0.7	949	3.7
1995	505	2.0	216	0.8	186	0.7	908	3.5
1996	474	1.9	224	0.9	177	0.7	879	3.5
1997	425	1.7	213	0.8	167	0.7	805	3.2
1998	342	1.4	215	0.9	195	0.8	754	3.0

(a) Includes 'not stated' age at death.

Note: Neonatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A58: Fetal, neonatal and perinatal deaths, Australia, 1993–1998

Year	Fetal deaths		Neonatal deaths		Perinatal deaths	
	Number	Rate per 1,000 births	Number	Rate per 1,000 live births	Number	Rate per 1,000 births
1993	1,439	5.5	971	3.7	2,410	9.2
1994	1,412	5.4	949	3.7	2,361	9.1
1995	1,512	5.9	907	3.5	2,419	9.4
1996	1,668	6.5	875	3.4	2,543	10.0
1997	1,516	6.0	805	3.2	2,321	9.2
1998	1,336	5.3	754	3.0	2,090	8.3

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A59: Fetal, neonatal and perinatal deaths by maternal State or Territory of usual residence, 1993–1998

Outcome/Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Number								
Fetal deaths									
1993	512	335	236	133	117	43	23	40	1,439
1994	433	399	259	131	111	29	17	33	1,412
1995	467	381	278	162	127	40	26	31	1,512
1996	656	364	287	161	109	44	25	22	1,668
1997	568	333	271	135	109	48	19	33	1,516
1998	463	297	262	126	93	39	31	25	1,336
<i>1996–1998</i>	<i>1,687</i>	<i>994</i>	<i>820</i>	<i>422</i>	<i>311</i>	<i>131</i>	<i>75</i>	<i>80</i>	<i>4,520</i>
Neonatal deaths									
1993	340	214	208	75	61	26	11	37	972
1994	382	202	160	79	54	29	14	29	949
1995	318	201	181	73	65	24	15	31	908
1996	303	178	193	94	56	18	14	23	879
1997	293	189	159	67	43	22	9	23	805
1998	232	173	190	60	38	20	18	23	754
<i>1996–1998</i>	<i>828</i>	<i>540</i>	<i>542</i>	<i>221</i>	<i>137</i>	<i>60</i>	<i>41</i>	<i>69</i>	<i>2,438</i>
Perinatal deaths									
1993	852	549	444	208	178	69	34	77	2,411
1994	815	601	419	210	165	58	31	62	2,361
1995	785	582	459	235	192	64	41	62	2,420
1996	959	542	480	255	165	62	39	45	2,547
1997	861	522	430	202	152	70	28	56	2,321
1998	695	470	452	186	131	59	49	48	2,090
<i>1996–1998</i>	<i>2,515</i>	<i>1,534</i>	<i>1,362</i>	<i>643</i>	<i>448</i>	<i>191</i>	<i>116</i>	<i>149</i>	<i>6,958</i>

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.
Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A59: Fetal, neonatal and perinatal death rates by maternal State or Territory of usual residence, 1993–1998 (cont.)

Outcome/Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Rate per 1,000 births									
Fetal deaths									
1993	5.7	5.2	5.0	5.3	5.8	6.3	5.2	11.0	5.5
1994	4.9	6.2	5.5	5.2	5.7	4.2	3.8	9.0	5.5
1995	5.3	6.1	6.0	6.4	6.5	6.1	5.9	8.2	5.9
1996	7.5	5.9	6.0	6.5	5.7	6.8	5.7	6.2	6.5
1997	6.5	5.5	5.7	5.4	5.9	7.9	4.5	9.1	6.0
1998	5.4	4.9	5.5	5.1	5.1	6.5	7.7	6.8	5.3
1996–1998	6.5	5.4	5.8	5.7	5.6	7.1	5.9	7.4	6.0
Neonatal deaths									
1993	3.8	3.3	4.5	3.0	3.0	3.8	2.5	10.3	3.7
1994	4.3	3.2	3.4	3.1	2.8	4.2	3.1	8.0	3.7
1995	3.6	3.2	3.9	2.9	3.4	3.7	3.4	8.2	3.5
1996	3.5	2.9	4.0	3.8	2.9	2.8	3.2	6.5	3.5
1997	3.4	3.1	3.4	2.7	2.3	3.7	2.1	6.4	3.2
1998	2.7	2.9	4.0	2.4	2.1	3.3	4.5	6.3	3.0
1996–1998	3.2	3.0	3.8	3.0	2.5	3.3	3.3	6.4	3.2
Perinatal deaths									
1993	9.5	8.5	9.5	8.3	8.8	10.0	7.7	21.2	9.2
1994	9.2	9.4	9.0	8.3	8.5	8.4	6.9	17.0	9.1
1995	8.9	9.3	9.8	9.3	9.9	9.7	9.2	16.4	9.4
1996	11.0	8.8	10.0	10.2	8.6	9.5	8.8	12.6	10.0
1997	9.8	8.6	9.1	8.1	8.2	11.6	6.6	15.5	9.2
1998	8.1	7.7	9.6	7.5	7.2	9.8	12.2	13.1	8.3
1996–1998	9.6	8.4	9.6	8.6	8.0	10.3	9.2	13.7	9.2

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A60: Perinatal deaths registered in the State or Territory of mothers' usual residence, Australia, 1996–1998

State of usual residence	State of registration								
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Number								
NSW	2,399	18	51	-	2	-	24	-	2,494
Vic	9	1,500	14	1	5	6	2	3	1,540
Qld	29	9	1,341	2	-	-	1	-	1,382
WA	1	1	5	627	-	-	-	5	639
SA	1	1	9	1	436	-	-	2	450
Tas	-	6	1	1	-	177	-	-	185
ACT	9	-	1	-	-	-	112	-	122
NT	1	-	2	2	6	-	-	135	146
Australia	2,449	1,535	1,424	634	449	183	139	145	6,958
	Per cent								
NSW	96.2	0.7	2.0	-	0.1	-	1.0	-	100.0
Vic	0.6	97.4	0.9	0.1	0.3	0.4	0.1	0.2	100.0
Qld	2.1	0.7	97.0	0.1	-	-	0.1	-	100.0
WA	0.2	0.2	0.8	98.1	-	-	-	0.8	100.0
SA	0.2	0.2	2.0	0.2	96.9	-	-	0.4	100.0
Tas	-	3.2	0.5	0.5	-	95.7	-	-	100.0
ACT	7.4	-	0.8	-	-	-	91.8	-	100.0
NT	0.7	-	1.4	1.4	4.1	-	-	92.5	100.0
Australia	35.2	22.1	20.5	9.1	6.5	2.6	2.0	2.1	100.0

Note: Perinatal deaths from ABS based on year of registration with 400 grams/20weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A61: Fetal, neonatal and perinatal deaths by maternal age, Australia, 1993–1998

Outcome/Year	Maternal age (years)						Not stated	All ages
	Less than 20	20–24	25–29	30–34	35–39	40 and over		
Number								
Fetal deaths								
1993	108	294	441	367	179	39	11	1,439
1994	89	268	381	423	196	40	15	1,412
1995	131	294	427	395	187	47	31	1,512
1996	131	329	449	446	221	66	26	1,668
1997	105	270	462	382	236	40	21	1,516
1998	108	225	378	344	204	51	26	1,336
<i>1996–1998</i>	<i>344</i>	<i>824</i>	<i>1,289</i>	<i>1,172</i>	<i>661</i>	<i>157</i>	<i>73</i>	<i>4,520</i>
Neonatal deaths								
1993	64	194	277	260	102	17	58	972
1994	66	193	270	228	115	28	49	949
1995	77	193	243	219	102	20	54	908
1996	58	161	250	238	98	26	48	879
1997	81	138	204	201	121	25	35	805
1998	47	132	227	180	126	23	19	754
<i>1996–1998</i>	<i>186</i>	<i>431</i>	<i>681</i>	<i>619</i>	<i>345</i>	<i>74</i>	<i>102</i>	<i>2,438</i>
Perinatal deaths								
1993	172	488	718	627	281	56	69	2,411
1994	155	461	651	651	311	68	64	2,361
1995	208	487	670	614	289	67	85	2,420
1996	189	490	699	684	319	92	74	2,547
1997	186	408	666	583	357	65	56	2,321
1998	155	357	605	524	330	74	45	2,090
<i>1996–1998</i>	<i>530</i>	<i>1,255</i>	<i>1,970</i>	<i>1,791</i>	<i>1,006</i>	<i>231</i>	<i>175</i>	<i>6,958</i>

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A61: Fetal, neonatal and perinatal death rates by maternal age, Australia, 1993–1998 (cont.)

Outcome / Year	Maternal age (years)						All ages
	Less than 20	20–24	25–29	30–34	35–39	40 and over	
Rate per 1,000 births							
Fetal deaths							
1993	8.1	5.8	5.0	4.7	6.7	9.1	5.5
1994	6.9	5.4	4.4	5.5	6.8	8.7	5.4
1995	10.3	6.2	5.1	5.1	6.2	9.4	5.9
1996	10.4	7.3	5.4	5.8	6.9	12.4	6.5
1997	8.5	6.4	5.6	5.0	7.0	7.4	6.0
1998	9.0	5.6	4.6	4.5	5.9	8.6	5.3
1996–1998	9.3	6.5	5.2	5.1	6.6	9.5	6.0
Neonatal deaths							
1993	4.9	3.8	3.1	3.4	3.8	4.0	3.7
1994	5.1	3.9	3.2	3.0	4.0	6.2	3.7
1995	6.1	4.1	2.9	2.8	3.4	4.0	3.5
1996	4.6	3.6	3.0	3.1	3.1	5.0	3.5
1997	6.6	3.3	2.5	2.6	3.6	4.7	3.2
1998	4.0	3.3	2.8	2.4	3.7	3.9	3.0
1996–1998	5.1	3.4	2.8	2.7	3.5	4.5	3.2
Perinatal deaths							
1993	12.9	9.6	8.1	8.1	10.4	13.1	9.2
1994	12.0	9.3	7.6	8.4	10.8	14.8	9.1
1995	16.3	10.2	8.0	7.9	9.5	13.4	9.4
1996	15.0	10.8	8.4	8.9	9.9	17.3	10.0
1997	15.0	9.6	8.0	7.6	10.7	12.1	9.2
1998	13.0	8.9	7.4	6.9	9.6	12.6	8.3
1996–1998	14.3	9.8	7.9	7.8	10.1	13.9	9.2

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.
Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998* Cat. no. 3303.0. Canberra: AGPS.

Table A62: Fetal, neonatal and perinatal deaths, singleton and multiple births, Australia, 1993–1998

Outcome/ Year	Singletons		Twins		Other multiple births		All babies	
	Number	Rate per 1,000 births	Number	Rate per 1,000 births	Number	Rate per 1,000 births	Number	Rate per 1,000 births
Fetal deaths								
1993	1,300	5.1	126	18.4	13	42.9	1,439	5.5
1994	1,292	5.1	117	17.0	3	12.0	1,412	5.4
1995	1,371	5.5	133	19.6	8	26.7	1,512	5.9
1996	1,507	6.1	153	22.6	8	25.0	1,668	6.5
1997	1,375	5.6	128	18.4	13	39.0	1,516	6.0
1998	1,226	5.0	103	14.3	7	23.3	1,336	5.3
<i>1996–1998</i>	<i>4,108</i>	<i>5.6</i>	<i>384</i>	<i>18.3</i>	<i>28</i>	<i>29.4</i>	<i>4,520</i>	<i>5.9</i>
Neonatal deaths								
1993	808	3.2	129	19.2	35	120.7	972	3.7
1994	805	3.2	135	20.0	9	36.6	949	3.7
1995	743	3.0	152	22.9	13	44.5	908	3.5
1996	738	3.0	123	18.6	18	57.7	879	3.5
1997	700	2.9	89	13.0	16	50.0	805	3.2
1998	660	2.7	87	12.2	7	23.8	754	3.0
<i>1996–1998</i>	<i>2,098</i>	<i>2.9</i>	<i>299</i>	<i>14.5</i>	<i>41</i>	<i>44.3</i>	<i>2,438</i>	<i>3.2</i>
Perinatal deaths								
1993	2,108	8.3	255	37.2	48	158.4	2,411	9.2
1994	2,097	8.3	252	36.7	12	48.2	2,361	9.1
1995	2,114	8.4	285	42.0	21	70.0	2,420	9.4
1996	2,245	9.0	276	40.8	26	81.3	2,547	10.0
1997	2,075	8.4	217	31.2	29	87.1	2,321	9.2
1998	1,886	7.7	190	26.3	14	46.5	2,090	8.3
<i>1996–1998</i>	<i>6,206</i>	<i>8.4</i>	<i>683</i>	<i>32.6</i>	<i>69</i>	<i>72.3</i>	<i>6,958</i>	<i>9.2</i>

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.
Source: Australian Bureau of Statistics (ABS) 1999 *Causes of Death Australia, 1998*. Cat. no. 3303.0. Canberra: AGPS.

Table A63: Fetal, neonatal and perinatal deaths by infant's sex, Australia, 1993–1998

Outcome/Year	Number			Rate per 1,000 births		
	Males	Females	All infants	Males	Females	All infants
Fetal deaths						
1993	765	674	1,439	5.7	5.3	5.5
1994	798	614	1,412	6.0	4.9	5.4
1995	805	707	1,512	6.1	5.6	5.9
1996	900	768	1,668	6.8	6.2	6.5
1997	829	687	1,516	6.4	5.6	6.0
1998	707	629	1,336	5.5	5.1	5.3
<i>1996–1998</i>	<i>2,436</i>	<i>2,084</i>	<i>4,520</i>	<i>6.2</i>	<i>5.6</i>	<i>6.0</i>
Neonatal deaths						
1993	563	409	972	4.2	3.2	3.7
1994	561	388	949	4.2	3.1	3.7
1995	514	394	908	3.9	3.2	3.5
1996	509	370	879	3.9	3.0	3.5
1997	443	362	805	3.4	3.0	3.2
1998	435	319	754	3.4	2.6	3.0
<i>1996–1998</i>	<i>1,387</i>	<i>1,051</i>	<i>2,438</i>	<i>3.6</i>	<i>2.9</i>	<i>3.2</i>
Perinatal deaths						
1993	1,328	1,083	2,411	9.9	8.5	9.2
1994	1,359	1,002	2,361	10.2	8.0	9.1
1995	1,319	1,101	2,420	10.0	8.8	9.4
1996	1,409	1,138	2,547	10.7	9.2	10.0
1997	1,272	1,049	2,321	9.8	8.5	9.2
1998	1,142	948	2,090	8.9	7.8	8.3
<i>1996–1998</i>	<i>3,823</i>	<i>3,135</i>	<i>6,958</i>	<i>9.8</i>	<i>8.5</i>	<i>9.2</i>

Note: Fetal, neonatal and perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.
Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A64: Fetal deaths by gestational age, Australia, 1993–1998

Year	Gestational age (weeks)						Total
	Less than 28	28–31	32–36	37–41	42 and over	Not stated	
Number							
1993	525	183	316	351	16	48	1,439
1994	535	151	271	361	20	74	1,412
1995	527	169	293	398	15	110	1,512
1996	645	214	313	433	11	52	1,668
1997	557	176	313	443	13	14	1,516
1998	496	163	257	386	15	19	1,336
Proportionate death rate per 1,000 births							
1993	2.0	0.7	1.2	1.3	0.1	0.2	5.5
1994	2.1	0.6	1.0	1.4	0.1	0.3	5.4
1995	2.0	0.7	1.1	1.5	0.1	0.4	5.9
1996	2.5	0.8	1.2	1.7	0.0	0.2	6.5
1997	2.2	0.7	1.2	1.7	0.1	0.1	6.0
1998	2.0	0.6	1.0	1.5	0.1	0.1	5.3

Note: Fetal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A65: Neonatal deaths by gestational age, Australia, 1993–1998

Year	Gestational age (weeks)						Total
	Less than 28	28–31	32–36	37–41	42 and over	Not stated	
Number							
1993	394	99	147	238	10	84	972
1994	399	101	117	266	14	52	949
1995	435	81	94	244	12	42	908
1996	424	64	114	241	7	29	879
1997	360	90	100	211	9	35	805
1998	323	68	98	226	1	38	754
Proportionate death rate per 1,000 births							
1993	1.5	0.4	0.6	0.9	0.0	0.3	3.7
1994	1.5	0.4	0.5	1.0	0.1	0.2	3.7
1995	1.7	0.3	0.4	1.0	0.0	0.2	3.5
1996	1.7	0.3	0.4	0.9	0.0	0.1	3.5
1997	1.4	0.4	0.4	0.8	0.0	0.1	3.2
1998	1.3	0.3	0.4	0.9	0.0	0.2	3.0

Note: Neonatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A66: Perinatal deaths by gestational age, Australia, 1993–1998

Year	Gestational age (weeks)						Total
	Less than 28	28–31	32–36	37–41	42 and over	Not stated	
Number							
1993	919	282	463	589	26	132	2,411
1994	934	252	388	627	34	126	2,361
1995	962	250	387	642	27	152	2,420
1996	1,069	278	427	674	18	81	2,547
1997	917	266	413	654	22	49	2,321
1998	819	231	355	612	16	57	2,090
Proportionate death rate per 1,000 births							
1993	3.5	1.1	1.8	2.3	0.1	0.5	9.2
1994	3.6	1.0	1.5	2.4	0.1	0.5	9.1
1995	3.7	1.0	1.5	2.5	0.1	0.6	9.4
1996	4.2	1.1	1.7	2.6	0.1	0.3	10.0
1997	3.6	1.1	1.6	2.6	0.1	0.2	9.2
1998	3.3	0.9	1.4	2.4	0.1	0.2	8.3

Note: Perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A67: Fetal deaths by birthweight, Australia, 1993–1998

Year	Birthweight (g)				Total
	Less than 1,000	1,000–2,499	2,500 and over	Not stated	
Number					
1993	574	411	371	83	1,439
1994	597	338	365	112	1,412
1995	541	428	418	125	1,512
1996	685	451	457	75	1,668
1997	604	420	451	41	1,516
1998	546	353	396	41	1,336
Proportionate death rate per 1,000 births					
1993	2.2	1.6	1.4	0.3	5.5
1994	2.3	1.3	1.4	0.4	5.4
1995	2.1	1.7	1.6	0.5	5.9
1996	2.7	1.8	1.8	0.3	6.5
1997	2.4	1.7	1.8	0.2	6.0
1998	2.2	1.4	1.6	0.2	5.3

Note: Fetal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A68: Neonatal deaths by birthweight, Australia, 1993–1998

Year	Birthweight (g)				Total
	Less than 1,000	1,000–2,499	2,500 and over	Not stated	
Number					
1993	389	249	268	66	972
1994	391	227	277	54	949
1995	419	206	242	41	908
1996	415	175	261	28	879
1997	376	184	215	30	805
1998	318	184	226	26	754
Proportionate death rate per 1,000 live births					
1993	1.5	1.0	1.0	0.3	3.7
1994	1.5	0.9	1.1	0.2	3.7
1995	1.6	0.8	0.9	0.2	3.5
1996	1.6	0.7	1.0	0.1	3.5
1997	1.5	0.7	0.9	0.1	3.2
1998	1.3	0.7	0.9	0.1	3.0

Note: Neonatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A69: Perinatal deaths by birthweight, Australia, 1993–1998

Year	Birthweight (g)				Total
	Less than 1,000	1,000–2,499	2,500 and over	Not stated	
Number					
1993	963	660	639	149	2,411
1994	988	565	642	166	2,361
1995	960	634	660	166	2,420
1996	1,100	626	718	103	2,547
1997	980	604	666	71	2,321
1998	864	537	622	67	2,090
Proportionate death rate per 1,000 births					
1993	3.7	2.5	2.4	0.6	9.2
1994	3.8	2.2	2.5	0.6	9.1
1995	3.7	2.5	2.6	0.6	9.4
1996	4.3	2.5	2.8	0.4	10.0
1997	3.9	2.4	2.6	0.3	9.2
1998	3.4	2.1	2.5	0.3	8.3

Note: Perinatal deaths from ABS based on year of registration with 400 grams/20 weeks gestation definition.

Source: Australian Bureau of Statistics (ABS) 1999 Causes of Death Australia, 1998 Cat. No. 3303.0. Canberra: AGPS.

Table A70: Fetal deaths by maternal age, Australia, 1998

Maternal age (years)	Fetal deaths		Live births		Total births		Fetal death rate	
	Number				(per 1,000 births)			
Less than 20	141		12,874		13,015		10.8	
20-24	297		41,755		42,052		7.1	
25-29	536		82,783		83,319		6.4	
30-34	452		76,079		76,531		5.9	
35-39	255		34,400		34,655		7.4	
40 and over	70		5,793		5,863		11.9	
Not stated	-		87		87		-	
All ages	1,751		253,771		255,522		6.9	

Notes: Data include fetuses and infants of at least 20 weeks gestation or 400 g birthweight.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A71: Fetal deaths by maternal age and Indigenous status, Australia, 1998

Maternal age (years)	Fetal deaths		Live births		Total births		Fetal death rate				
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous			
				Number				(per 1,000 births)			
Less than 20	26	115	1,823	11,051	1,849	11,166	14.1	10.3			
20-24	32	265	2,677	39,078	2,709	39,343	11.8	6.7			
25-29	29	507	2,334	80,449	2,363	80,956	12.3	6.3			
30-34	7	445	1,276	74,803	1,283	75,248	5.5	5.9			
35-39	6	249	442	33,958	448	34,207	13.4	7.3			
40 and over	2	68	69	5,724	71	5,792	28.2	11.7			
Not stated	-	-	6	81	6	81	-	-			
All ages	102	1,649	8,627	245,144	8,729	246,793	11.7	6.7			

Notes: Data include fetuses and infants of at least 20 weeks' gestation or 400 g birthweight.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A72: Fetal deaths by parity, Australia, 1998

Parity	Fetal deaths		Live births		Total births		Fetal death rate	
	Number				(per 1,000 births)			
None	805		101,556		102,361		7.9	
One	448		86,319		86,767		5.2	
Two	282		40,919		41,201		6.8	
Three	119		15,153		15,272		7.8	
Four or more	95		9,135		9,230		10.3	
Not stated	2		689		691		2.9	
All parities	1,751		253,771		255,522		6.9	

Notes: Data include fetuses and infants of at least 20 weeks gestation or 400 g birthweight.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A73: Fetal deaths by plurality, Australia, 1998

Plurality	Fetal deaths	Live births	Total births	Fetal death rate
		Number		(per 1,000 births)
Singletons	1,589	246,320	247,909	6.4
Twins	149	7,141	7,290	20.4
Other multiple births	13	310	323	40.2
All births	1,751	253,771	255,522	6.9

Notes: Data include fetuses and infants of at least 20 weeks gestation or 400g birthweight.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A74: Fetal deaths by marital status, Australia, 1998

Marital status ^(a)	Fetal deaths	Live births	Total births	Fetal death rate
		Number		(per 1,000 births)
Married/de facto	911	146,411	147,322	6.2
Single	226	18,924	19,150	11.8
Widowed, divorced separated or other	17	2,297	2,314	7.3
Not stated	2	429	431	4.6
All marital status	1,156	168,061	169,217	6.8

(a) Data exclude New South Wales

Notes: Data include fetuses and infants of at least 20 weeks gestation or 400 g birthweight.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A75: Fetal deaths by mother's status in hospital, selected States and Territories, 1998

Hospital status ^(a)	Fetal deaths	Live births	Total births	Fetal death rate
		Number		(per 1,000 births)
Public	1,220	169,890	171,110	7.1
Private	406	76,308	76,714	5.3
Not stated	98	4,073	4,171	23.5
All births	1,724	250,271	251,995	6.8

(a) Data exclude Victoria and Northern Territory.

Notes: Data include fetuses and infants of at least 20 weeks gestation or 400 g birthweight.
Data for Tasmania unavailable, 1997 data used as estimate.

Table A76: Fetal, neonatal and perinatal deaths, States and Territories, 1998

Outcome	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Live births	85,710	61,685	47,822	25,513	18,612	6,238	4,691	3,500	253,771
Fetal deaths	595	406	341	164	121	51	46	27	1,751
Neonatal deaths ^(a)	192	213	208	69	46	18	24	22	792
Total perinatal deaths	787	619	549	233	167	69	70	49	2,543
Total births	86,305	62,091	48,163	25,677	18,733	6,289	4,737	3,527	255,522
Rate per 1,000 births									
Fetal deaths	6.9	6.5	7.1	6.4	6.5	8.1	9.7	7.7	6.9
Neonatal deaths ^(a)	2.2	3.5	4.3	2.7	2.5	2.9	5.1	6.3	3.1
Total perinatal deaths	9.1	10.0	11.4	9.1	8.9	11.0	14.8	13.9	10.0

(a) May exclude neonatal deaths within 28 days of birth for babies transferred or readmitted to hospital and those dying at home.

Note: Data for Tasmania unavailable, 1997 data used as estimate.

Table A77: Causes of perinatal deaths, selected States, 1998

Causes ^(a)	Western Australia		South Australia	
	Number	Per cent	Number	Per cent
Spontaneous preterm	38	16.2	18	10.8
Intrauterine growth restriction	8	3.4	6	3.6
Unexplained intrauterine death	45	19.2	35	21.0
Birth trauma	-	0.0	-	0.0
Intrapartum asphyxia	12	5.1	5	3.0
Hypertension	10	4.3	7	4.2
Maternal disease	5	2.1	5	3.0
Antepartum haemorrhage	17	7.3	18	10.8
Fetal abnormality	59	25.2	49	29.3
Haemolytic disease	-	-	1.0	0.6
Infection	22	9.4	12	7.2
Other	18	7.7	11	6.6
All causes	234	100.0	167	100.0

(a) Causes of perinatal death based upon a modified Whitfield classification system.

Note: Data for Western Australia exclude births less than 500 g birthweight.

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Explanatory notes

- The term 'Indigenous' is used to refer to mothers of Aboriginal or Torres Strait Islander descent and their babies.
- Tabulated data in this report are based on births that occurred in each State and Territory in 1998. Because of differences in data items, and varying practices for coding the mother's place of residence if she lived in a State or Territory other than that in which the birth occurred, it is presently not possible to analyse the perinatal data according to region of residence.
- Confinements and births in 'not stated' categories are excluded from calculation of percentages. Due to rounding, percentages may not always add up to exactly 100.0%.
- Trend lines have been fitted using a second order polynomial regression model to approximate a line of best fit (Kleinbaum et al. 1988).
- Maternal age in this report is calculated as an integer function of the difference in days between the baby's and mother's dates of birth divided by 365.25. Slight differences in maternal age may exist compared to those in State and Territory reports.
- All mean values are arithmetically derived excluding unknowns and may differ from those derived by the States and Territories in their reports.
- Length of stay in this report is calculated as a function of the difference in days between the baby's date of birth and the mother's or baby's date of separation, and only accounts for stays at the hospital or birth centre of initial confinement. Those babies born before arrival are also included. Mothers or babies who are transferred and home births are excluded from length of stay statistics. Three States (Victoria, South Australia, Tasmania) collect information for the entire period under care, that is for the period up until final separation, including transfers to facilities after the hospital of birth.
- Perinatal data from the Tasmanian perinatal data collection for 1998 was not available at the time of submission for the Australia's mothers and babies 1998 report. Thus, 1997 data was used as a proxy for 1998 data in this report.
- Data on marital status for New South Wales in 1998 were excluded at request by NSW Health due to large fluctuations in numbers for the items, thought to be due to changes in the method and timing of its data collection.
- If data items such as presentation or type of delivery differed for twins or other multiple births, the confinement was arbitrarily included in the category of the first multiple birth.
- Fetal deaths (stillbirths) from the State and Territory perinatal collections have a gestational age of at least 20 weeks or a birthweight of at least 400 g and relate to year of 'birth'. Fetal, neonatal and perinatal deaths in the tables and figures based on data from the Australian Bureau of Statistics also use a birthweight of at least 400 g or, when birthweight was not available, a gestational age of at least 20 weeks and relate to year of 'registration'.

- Information on the Australian Bureau of Statistics births denominators for gestational age and birthweight breakdowns of fetal, neonatal and perinatal death rates are not available. These categories of gestational age and birthweight are expressed as proportionate death rates. The denominator used for calculating proportionate death rates is the total number of births rather than the number of births in a particular gestational age or birthweight group.
- The *National Health Data Dictionary* version 9.0 definition defines the scope of perinatal data collection as mortality and morbidity occurring at the hospital of birth from the period of 20 completed weeks gestation and up to 28 days post live born delivery.
- Due to data editing and subsequent updates of State and Territory databases, the figures in this report may differ slightly from those in reports published by the States and Territories.

Glossary

Aboriginality (Indigenous status): 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 with which he or she is associated (Department of Aboriginal Affairs, Constitutional Section 1981). Aboriginality is determined by the person's self-identification.

Admission date: date on which a pregnant woman commences an episode of care as an admitted patient, resulting in confinement (delivery).

Antepartum fetal death: fetal death occurring before the onset of labour.

Apgar score: numerical score to evaluate the baby's condition at 1 minute and 5 minutes after birth.

Birth status: status of the baby immediately after birth.

Birthweight: the first weight of the baby (stillborn or liveborn) obtained after birth (usually measured to the nearest five grams and obtained within one hour of birth).

Caesarean section: operative birth through an abdominal incision.

Complications of labour and delivery: medical and obstetric problems arising after the onset of labour and before the completed delivery of the baby and placenta.

Complications of puerperium: medical and obstetric problems of the mother occurring during the postnatal period (up to 6 weeks after giving birth).

Confinement: pregnancy resulting in at least one birth.

Congenital malformations: structural or anatomical abnormalities that are present at birth, usually resulting from abnormal development in the first trimester of pregnancy.

Discharge date: date on which a woman completes an episode of care as an admitted patient after giving birth.

Early neonatal death: death of a liveborn baby within 7 days of birth.

Elective caesarean section: operative birth through an abdominal incision performed before the onset of labour.

Emergency caesarean section: operative birth through an abdominal incision performed after the onset of labour.

Extremely low birthweight: birthweight of less than 1,000 g.

Fetal death (stillbirth): death prior to the complete expulsion or extraction from its mother of a product of conception of 20 or more completed weeks of gestation or of 400 g or more birthweight. The death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Forceps: assisted birth using a metallic obstetric instrument.

Gestational age: the duration of pregnancy in completed weeks calculated from the date of the first day of a woman's last menstrual period and her baby's date of birth, or derived from clinical assessment during pregnancy or from examination of the baby after birth.

Hospital size: number of confinements occurring annually in a hospital.

Indigenous: a person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander and is accepted as such by the community with which he or she is associated.

Baby's discharge date: date on which a newborn baby completes an episode of care after birth.

Baby's length of stay: number of days between date of birth and date of discharge from the hospital of birth (calculated by subtracting the date of birth from the date of discharge).

International Classification of Diseases: WHO's internationally accepted classification of death and disease. The 9th Revision (ICD-9) and the tenth revision, Australian Modification (ICD-10-AM) is referred to in this report.

Intrapartum fetal death: fetal death occurring during labour.

Late neonatal death: death of a liveborn baby after 7 completed days and before 28 completed days.

Live birth: live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered liveborn (WHO definition).

Low birthweight: birthweight of less than 2,500 g.

Marital status: current marital status of a woman at the time of confinement. Married and de facto are coded as one variable.

Maternal age: mother's age at her child's birth.

Maternal medical conditions: pre-existing maternal diseases and conditions, and other diseases, illnesses or conditions arising during pregnancy, that are not directly attributable to pregnancy but may significantly affect care during pregnancy and/or pregnancy outcome. Examples include essential hypertension, diabetes mellitus, epilepsy, cardiac disease, and chronic renal disease.

Mode of separation of mother: status at separation of patient (discharge/transfer/death) and place to which patient is released (where applicable).

Mother's length of stay: number of days between admission date (during the admission resulting in delivery) and discharge date (from the hospital where delivery occurred). The interval is calculated by subtracting the date of admission from the date of discharge.

Multipara: pregnant woman who has had at least one previous pregnancy resulting in a live birth or stillbirth.

Neonatal death: death of a liveborn baby within 28 days of birth.

Neonatal morbidity: any condition or disease of the baby diagnosed after birth and before separation from care.

Obstetric complications: Obstetric complications are conditions arising during pregnancy that are directly attributable to pregnancy and may significantly affect care during pregnancy and/or pregnancy outcome. Examples include threatened abortion, antepartum haemorrhage, pregnancy-induced hypertension and gestational diabetes.

Parity: number of previous pregnancies resulting in live births or stillbirths.

Perinatal death: A perinatal death is a fetal or neonatal death of at least 20 weeks gestation or at least 400 g birthweight.

Plurality: the number of births resulting from a pregnancy.

Presentation at delivery: presenting part of the fetus (that is, at lower segment of uterus) at delivery.

Preterm birth: birth before 37 completed weeks of gestation.

Primipara: pregnant woman who has had no previous pregnancy resulting in a live birth or stillbirth.

Repair following delivery: surgical suturing of perineal laceration or episiotomy incision.

Resuscitation of baby: active measures taken shortly after birth to assist baby's ventilation and heartbeat; or to treat depressed respiratory effort and to correct metabolic disturbances.

Spontaneous vertex: birth without intervention in which the baby's head is the presenting part.

Stillbirth: See 'fetal death'.

Vacuum extraction: assisted birth using a suction cap applied to the baby's head.

Vaginal breech: birth in which the baby's buttocks or lower limbs are the presenting parts.

Very low birthweight: birthweight of less than 1,500 g.

Whitfield: a classification system for perinatal deaths.

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