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Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ART	assisted reproductive technology
APH	ante partum haemorrhage
ASGC	Australian Standard Geographical Classification
COAG	Council of Australian Governments
FGR	fetal growth restriction
g	Gram
IPPR	intermittent positive pressure respiration
LMP	first day of the last menstrual period
METeOR	Metadata Online Registry
NHDD	National Health Data Dictionary
NHISSC	National Health Information Standards and Statistics Committee
NICU	neonatal intensive care unit
NMDDP	National Maternity Data Development Project
NMDS	National Minimum Data Set
NPDC	National Perinatal Data Collection
NPDDC	National Perinatal Data Development Committee
NPESU	AIHW National Perinatal Epidemiology and Statistics Unit
NSW	New South Wales
NT	Northern Territory
PSANZ-PDC	Perinatal Society of Australia and New Zealand Perinatal Death Classification
Qld	Queensland
SA	South Australia
SACC	Standard Australian Classification of Countries
SCN	special care nursery

Tas	Tasmania
UNSW	University of New South Wales
Vic	Victoria
WA	Western Australia
WHO	World Health Organization

Symbols

–	nil or rounded to zero
..	not applicable
n.a.	not available
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data
n.r.	data not received at the time of publication

Summary

Australia's mothers and babies 2009 is the nineteenth annual report on pregnancy and childbirth in Australia.

More births

In 2009 in Australia, a total 294,540 women gave birth to 299,220 babies. There were 296,791 live births and 2,341 fetal deaths. There was a 0.8% increase in the total number of births compared with 2008, but there was a fall in the rate of females aged 15-44 years in the whole population who gave birth (from 64.4 per 1,000 in 2008 to 63.6 per 1,000 in 2009).

Mothers

The average maternal age in 2009 was 30.0 years compared with 29.0 years in 2000. Approximately 41.6% of women were having their first baby and the average age for first time mothers was 27.9 in 2009 which was 0.3 years younger than for 2008. Of all first-time mothers, 13.7% were aged 35 years or older in 2009, compared with 10.3% in 2000. In the four jurisdictions for which data on assisted reproductive technology (ART) were available, ART was used by 3.6% of women who gave birth.

Antenatal factors

Smoking while pregnant was reported by 14.5% of all mothers and by 37.0% of teenage mothers. In the 4 jurisdictions where data on the number of antenatal visits were available, 97.3% of women who gave birth at 32 weeks or more gestation attended at least one antenatal visit, with 91.9% attending 5 or more.

Indigenous mothers

About 3.8% of women who gave birth during 2009 identified as Aboriginal or Torres Strait Islander. Indigenous mothers are younger than non-Indigenous mothers; their average age was 25.3 years, compared with 30.2 years for non-Indigenous mothers. Smoking during pregnancy was reported by half (49.6%) of Indigenous mothers. Of Indigenous mothers who gave birth at 32 weeks or more gestation, 76.8% attended 5 or more antenatal visits.

Labour and delivery

In 2009, of women who laboured, 75.2% had analgesia administered. Onset of labour was spontaneous for 56.1% of women giving birth. Most women (68.5%) had a vaginal birth, and of these, 82.9% did not involve the use of instruments. Overall, 31.5% of women gave birth by caesarean section in 2009, which was a 0.4% rise from 2008.

Baby outcomes

In 2009, 8.2% of babies were born preterm (before 37 completed weeks of gestation) and 0.9% post-term (42 weeks gestation or more). Overall, 6.2% of liveborn babies were of low birthweight (less than 2,500 grams) and this nearly doubled (10.8%) among mothers who smoking during pregnancy. Less than 1.5% of liveborn babies had a low Apgar score (measure of the baby's condition at birth). The perinatal death rate was 9.8 per 1,000 births in 2009, which comprised fetal and neonatal death rates of 7.8 per 1,000 births and 3.0 per 1,000 live births respectively.

1 Introduction

Australia's mothers and babies 2009 is the 19th in the annual series prepared by the Australian Institute of Health and Welfare's (AIHW) National Perinatal Epidemiology and Statistics Unit (NPESU). The report provides national information on the pregnancy and childbirth of mothers, and the characteristics and outcomes of their babies. It is a collaborative effort of the NPESU and states and territories. The report is based on data from the National Perinatal Data Collection (NPDC).

Purpose of this report

The purpose of *Australia's mothers and babies 2009* is to update national information on births, the women who gave birth and the babies who were born in 2009. The report provides information to support the first of seven long-term objectives identified by Commonwealth and State and Territory governments for Australians to be born healthy and remain healthy (COAG 2011). It presents national health statistics about birth in Australia for researchers, academics, students and policy makers. This is achieved through:

- annual reporting against the Perinatal National Minimum Data Set (NMDS)
- supplementary reporting from the additional data provided for the National Perinatal Data Collection (NPDC)
- generating relevant national statistics about women who gave birth in 2009, including their socio-demographic characteristics, known risk factors and characteristics relating to the pregnancy, childbirth and puerperium
- providing national information on the characteristics and perinatal outcomes of babies born in 2009
- providing information for state and territory comparison
- providing information for international comparison.

National Perinatal Data Collection

Collection of perinatal data by states and territories

Perinatal data are collected after each birth by midwives or other staff from clinical and administrative records and information systems, including records of antenatal care, the care provided during labour, and the delivery and care provided after the birth. Each state and territory has its own form and/or electronic system for collecting perinatal data. Data are forwarded to the relevant state and territory health department to form the state or territory perinatal data collection. The final data are used in reports about births in their respective jurisdictions. See Appendix 1 for state and territory contact details and the most recent published reports. These contain more detailed information about the data collection and validation practices in each jurisdiction.

Collation of national perinatal data

A standardised extract of electronic data from each state and territory collection was requested by NPESU for all births from 1 January 2009 to 31 December 2009 inclusive.

Records received from states and territories are anonymous; that is, they do not include any names or addresses, but do include a unique set of identification numbers so that the source record can be identified. Data are checked for completeness, validity and logical errors before inclusion in the national collection. Changes are made in consultation with the state and territory perinatal data providers. Further details about the collection and collation of national perinatal data are provided in Appendix 2.

Structure of National Perinatal Data Collection

Data supplied for the National Perinatal Data Collection consist of the Perinatal National Minimum Data Set (NMDS) and a series of additional data items (Figure 1.1).

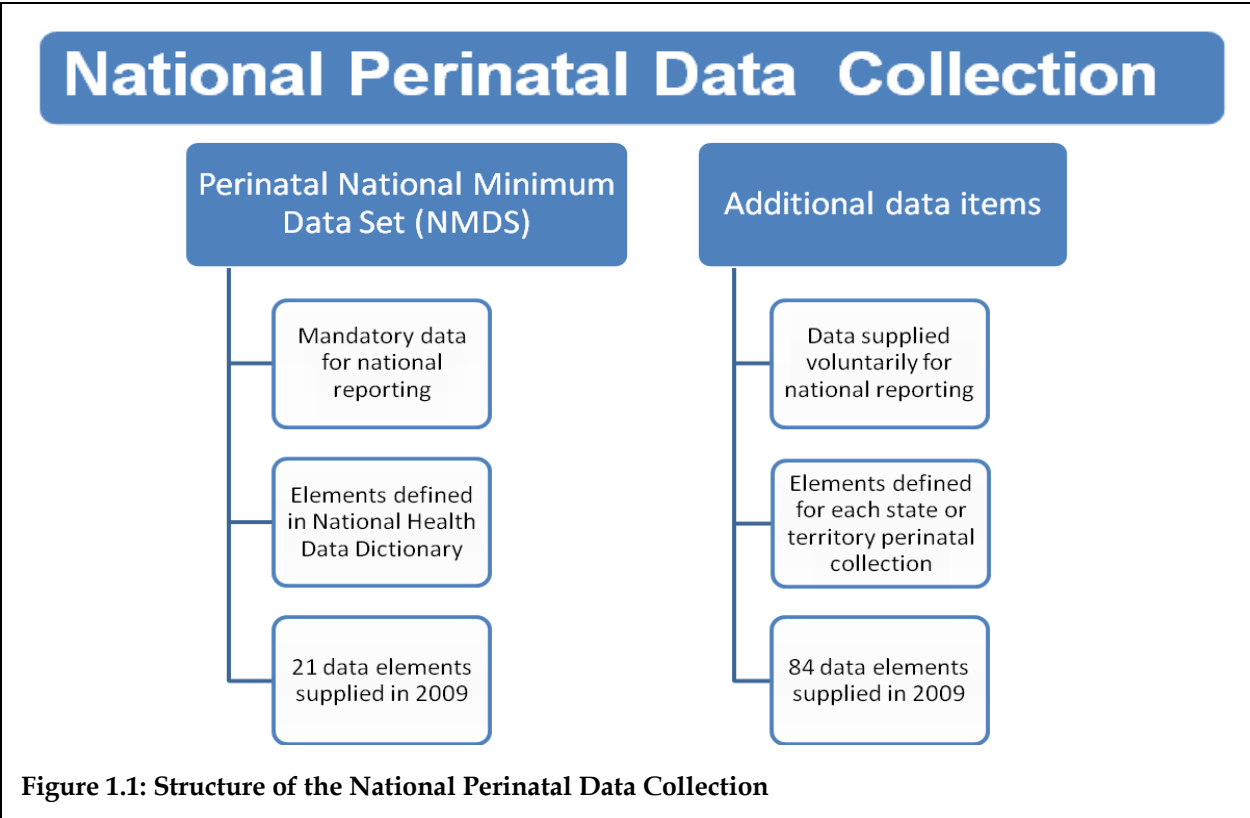


Figure 1.1: Structure of the National Perinatal Data Collection

Perinatal NMDS

The Perinatal NMDS was first specified in 1997 and remains an agreed data set for national reporting (COAG 2011). An NMDS is an agreed set of standardised data elements for mandatory supply by states and territories to support national reporting. Standardisation ensures that there is consistent meaning to data collected at different times or in different places. Endorsement by the National Health Information Standards and Statistics Committee (NHISSC) is required to register a data element as a standard and enter the data element in the National Health Data Dictionary (NHDD). Information from the NHDD is maintained by AIHW as an online metadata registry ‘METeOR’ at <www.meteor.aihw.gov.au>. The Perinatal NMDS 2008–2010 (METeOR item 426735) specifies the data elements applied in 2009 when data for this report were collected. A list of the items supplied for the NPDC from the Perinatal NMDS can be found in Appendix 2. Compliance of data provided for the

Perinatal NMDS is evaluated intermittently to assess data quality and adherence to standards (Laws 2008).

Additional data items

Each state and territory collects more information than is specified in the NMDS, and the NPESU requests some of these additional items. These data items are at different stages in the process of standardisation. Some items such as parity (METeOR item 302013) and postpartum perineal status (METeOR item 269939) have had national data standards developed, but have not been included as data elements in the Perinatal NMDS because they could not be implemented immediately in all jurisdictions.

In contrast, there are other data items for which there are no common definitions or categories for collecting the data or which are not collected in all jurisdictions, that are provided to inform the development of nationally standardised data.

Whose births are counted

This report presents information from the NPDC about all births in Australia, including births in hospitals, birth centres and in the community. The Perinatal NMDS and the NPDC apply the definition in the Australian NHDD where a birth is defined as the complete expulsion or extraction from its mother of a baby of at least 20 weeks gestation or weighing at least 400 grams at birth (the weight expected of a baby at 20 weeks gestational age) whether born alive or stillborn. Stillbirths include termination of pregnancy after 20 weeks. Babies not weighed at birth and whose gestational age and birthweight were not recorded were not included in the NPDC, but may have been included in jurisdictional perinatal collections.

Care is needed when comparing Australian birth statistics with those from other countries that have different definitions of live birth and stillbirth. In many other countries, pregnancies must continue to 22, 24 or even 28 completed weeks gestational age for a fetal death to be counted as a stillbirth. The inclusion in Australia of more births at lower gestations will affect the distributions of several key baby outcomes, in particular rates of perinatal mortality, low birthweight, low Apgar scores (a measure of a baby's wellbeing at birth) and admission to a special care nursery (SCN) or neonatal intensive care unit (NICU). In contrast, the World Health Organization uses a less restrictive definition that specifies a live birth as a baby born showing signs of life irrespective of gestation (WHO 1992).

Improving national data about births

The National Perinatal Data Development Committee

The National Perinatal Data Development Committee (NPDDC) is comprised of representatives from each state and territory health authority, the Australian Bureau of Statistics (ABS), the AIHW and the NPESU, with temporary members invited as their expertise is required. The NPDDC works in consultation with clinical reference groups. The NPDDC improves data provision, revises existing Perinatal NMDS items, develops existing perinatal METeOR items and contributes to the development of new perinatal data items.

New perinatal data items

In 2009, two programs for national data development were completed, adding three data elements on smoking during pregnancy, and one element on gestation at the first antenatal visit to the Perinatal NMDS from 2010. Indigenous status of the baby was added to the Perinatal NMDS in 2011 and will be collected for all births from 2012.

A new element was not required, rather the data set specification notes that the existing data element is applied twice, once to the mother and once to the baby. Details of these elements are provided in Appendix 3.

Standardised data elements are being developed to help with reporting for the Council of Australian Governments (COAG) National Indigenous Reform Agreement: the number of antenatal visits during pregnancy and maternal alcohol use in pregnancy. The former is being proposed for inclusion in the Perinatal NMDS.

National maternity data

The National Maternity Services Plan (AHMAC 2011) provides a framework to develop and improve maternity services in Australia. The National Maternity Data Development Project (NMDDP) is being undertaken by AIHW and NPESU to develop a nationally consistent and comprehensive maternity data collection so that good quality maternity information is available to monitor changing practice and ensure that the present levels of positive outcomes for mothers and babies are maintained. The Maternity Information Matrix provides an audit of data available from national and jurisdictional collections relevant to pregnancy and birth. Combining this with the results of scoping of maternity data needs will allow for identification of the gaps and determine the priorities for data development.

Data quality, presentation and interpretation issues

This report presents perinatal data that can largely be compared with data presented in *Australia's mothers and babies 2008* (Laws et al. 2010). Tabulated data in this report are based on births in each state and territory in 2009 meeting the criteria for inclusion in the Perinatal NMDS. Due to data editing and subsequent updates of state and territory databases, the numbers in this report may differ slightly from those in reports published by the states and territories.

Unless otherwise stated, the data in this report relate to the state or territory of occurrence of births in 2009 rather than to the state or territory of usual residence of the mother. Where data are not available from all states and territories in the required format or data have not been published for other reasons, this is indicated in the footnotes of tables or figures.

For totals in this report, percentages may not add up to 100.0, and for subtotals, they may not add up to the sum of the percentages for the categories. This is due to rounding. Some percentages in the tables appear as 0.0% where numbers are small.

The terms 'mothers' or 'women who gave birth' have been used in this report when referring to maternal characteristics, whereas 'births' refers to babies.

Data from Victoria are not final

Provisional data were supplied by Victoria for this report and limited to Perinatal NMDS data items. The numbers of mothers and babies in Victoria in Australia may change when the final data are used. Tables will be updated when NPDC data from Victoria are received. Tables in this version of the report are footnoted accordingly.

Small numbers

Cell sizes of less than five in tables have not been published in line with AIHW guidelines for protecting privacy of individuals (SIMC 2007). Exceptions to this are small numbers in 'Other' and 'Not stated' categories. Where n.p. (not published) has been used to protect confidentiality, the suppressed numbers are included in the totals.

Quality of data for reporting Indigenous status

According to the NHDD, Indigenous status is a measure of whether a person identifies as being of Aboriginal or Torres Strait Islander origin (AIHW 2010). All states and territories have a data item to record Indigenous status of the mother on their perinatal form, although there are some differences among the jurisdictions. No information is collected about the father's Indigenous status. Victoria was the only state in 2009 to collect information about the baby's Indigenous status.

Since 2005, all jurisdictions have provided information on Indigenous status of the mother in accordance with the NMDS. All jurisdictions are working towards improving the ascertainment of Indigenous status in their perinatal data collections. In 2007, the NPESU, in collaboration with the AIHW's Aboriginal and Torres Strait Islander Health and Welfare Unit, released a report on Indigenous mothers and their babies. This report included an assessment of Indigenous status data quality (Leeds et al. 2007). This noted the small number, fluctuating and high proportion of non-residents of the Australian Capital Territory among Aboriginal and Torres Strait Islander mothers who give birth in the Australian Capital Territory, making this jurisdiction less comparable with other jurisdictions. In 2009, 24.3% of Aboriginal or Torres Strait Islander women who gave birth in the Australian Capital Territory were not Australian Capital Territory residents.

ACT births include mothers resident in NSW

The Australian Capital Territory data contain a relatively high proportion of New South Wales residents who gave birth in the Australian Capital Territory. The proportion of non-residents who gave birth in the Australian Capital Territory was 15.9% in 2009. When interpreting the data it is important to note that these births to non-residents may include a disproportionate number of high-risk and multi-fetal pregnancies associated with poorer perinatal outcomes. This is because such pregnancies may be more likely to be transferred to the ACT for delivery from smaller centres in NSW which do not have the facilities to manage such deliveries safely. Therefore, percentages or rates such as those for preterm birth and perinatal deaths may be inflated for births that occur in the Australian Capital Territory. Reporting by state or territory of usual residence of the mother helps in addressing this issue.

Neonatal deaths data may be incomplete

Additional data items about neonatal deaths collected as part of the NPDC may be incomplete. In some jurisdictions, neonatal deaths for babies transferred to another hospital or readmitted to hospital and those dying at home may not be included. Neonatal deaths for the Northern Territory are considered to be incomplete for 2009 as data do not include deaths occurring outside of the Northern Territory. Due to the small number of deaths, interpretation can be limited as to whether differences in mortality rates are due to statistical fluctuations or differential ascertainment.

Maternal information about multiple births

The number of babies is marginally higher than the number of mothers because of multiple births. For multiple pregnancies, the results for some items that are presented for mothers may be different for each baby, such as place of birth. These are classified according to the characteristics of the first born baby.

Where these items are presented for babies, each baby of a multiple birth is assigned the value of the first born baby. The exceptions are gestational age, presentation at birth and method of birth, for which the value for each baby of a multiple birth is presented.

Structure of this report

The remainder of this report is divided into the following chapters:

- Chapter 2: Summary data

This chapter contains summary data on the number of women who gave birth and the number of babies born in 2009.

- Chapter 3: Mothers

This chapter contains information on women who gave birth in 2009, including their demographic profile (e.g. maternal age), maternal characteristics (e.g. parity), and characteristics of the labour, birth and puerperium (e.g. onset of labour, method of birth, perineal status).

- Chapter 4: Babies

This chapter contains information on the characteristics and outcomes of babies born in 2009, including birth status, gestational age, birthweight and sex ratios.

- Chapter 5: Perinatal mortality

This chapter includes data from the NPDC on fetal, neonatal and perinatal deaths. It also presents deaths from some jurisdictions classified using the Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ-PDC).

The underlying data for figures in this report are available in Appendix 4.

2 Summary data

Births and women who gave birth

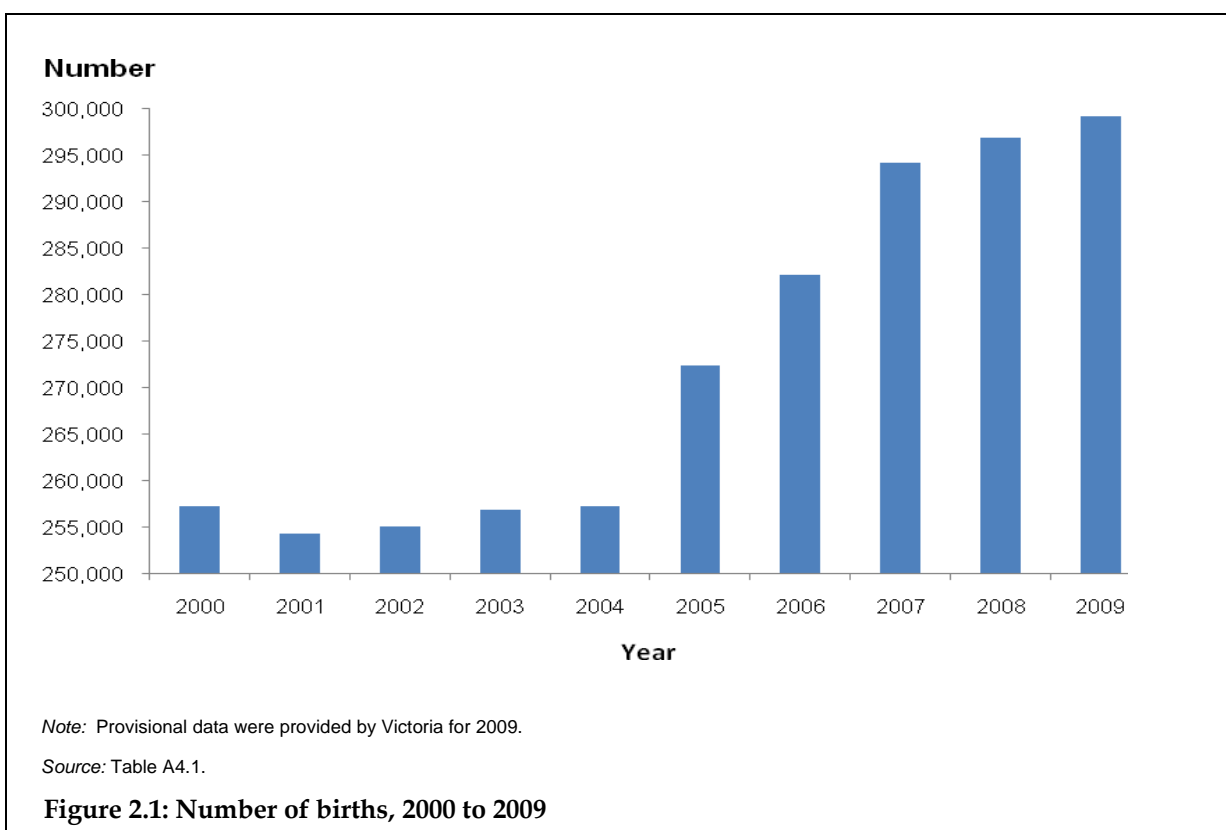
There were 294,540 women who gave birth in 2009 reported to the NPDC, resulting in a total of 299,220 births. Of these, 2,341 were fetal deaths (Table 2.1). This was an increase of only 2,295 births (0.8%) from the 296,925 reported in 2008, and a total increase of 16.3% since 2004.

Table 2.1: Births and women who gave birth, by state and territory, 2009

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Mothers	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Fetal deaths	598	787	447	234	140	52	40	43	2,341
Live births	95,836	72,613	61,601	30,985	19,758	6,317	5,811	3,870	296,791
Not stated	—	88	—	—	—	—	—	—	88
All births	96,434	73,488	62,048	31,219	19,898	6,369	5,851	3,913	299,220

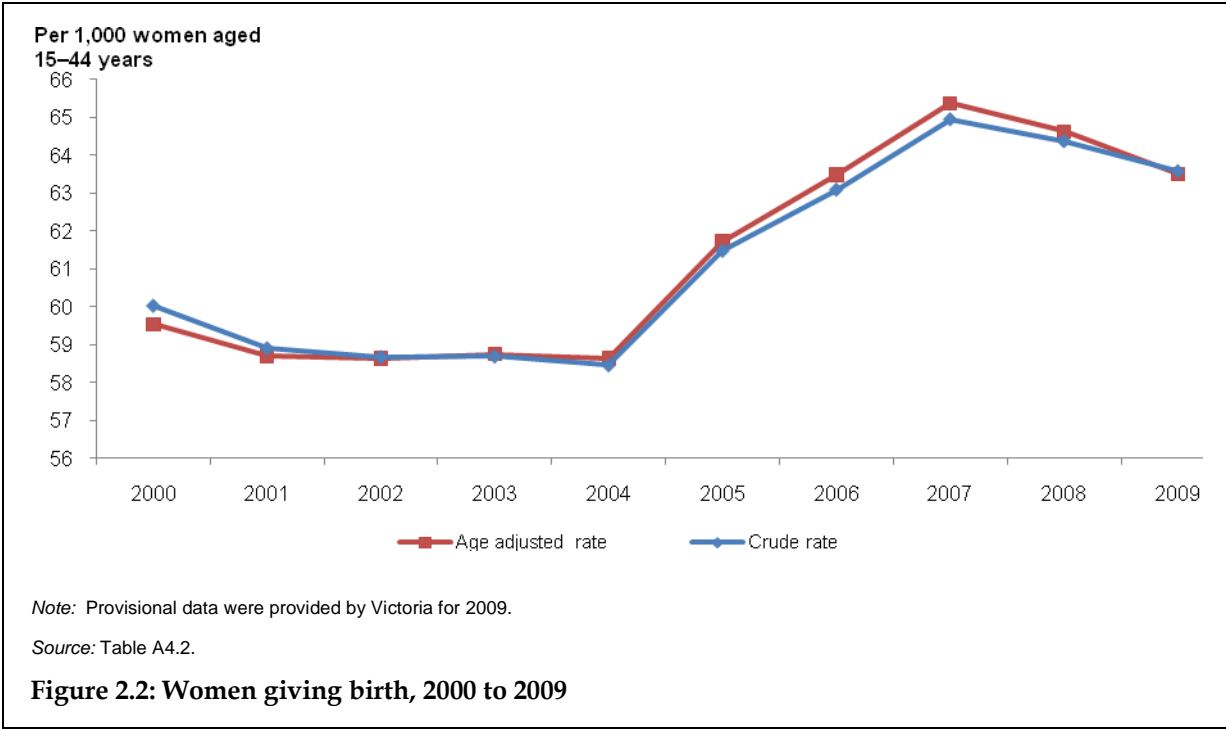
Note: Provisional data were provided by Victoria for this table.

In 2000, there were 257,238 births. The number has been increasing since 2001, when the lowest number of births during the past decade was reported (254,326) (Figure 2.1).



There were 296,791 live births in 2009 reported to the NPDC (Table 2.1). This was 1,053 more than the 295,738 live births registered in Australia in 2009 (ABS 2009). The differences in national figures on live births between the two collections reflect the different methods, timing and reporting of the data collections (Laws et al. 2007).

As a proportion of females of reproductive age (15–44) in the population, the crude rate of women who gave birth in 2009 was 63.6 per 1,000. This rate has decreased from a high of 64.9 per 1,000 females aged 15–44 in 2007, when the ‘baby boom’ peaked. A similar pattern is seen with the age-adjusted rates (Figure 2.2).



3 Mothers

Demographic profile

Maternal age

Maternal age is an important risk factor for both obstetric and perinatal outcomes. Adverse outcomes are more likely to occur in younger and older mothers. In 2009, the age of mothers ranged from less than 15 to 58 years. The average age of women who gave birth in Australia has increased by 7.5% since 1991. The mean age in 2009 was 30.0 years, compared with 29.0 years in 2000, while the median age in 2009 was 30.0 years.

In 2009, the average age of mothers was higher in women who gave birth in Victoria and the Australian Capital Territory (30.7 and 30.8 years respectively) and lower in the Northern Territory (27.8 years) when compared with the national average of 30.0 years (Table 3.1). Nationally, the proportion of teenage mothers (younger than 20) remained steady, declining from 4.2% in 2008 to 4.0% in 2009, compared with 5.0% in 2000. The proportion of teenage women who gave birth in 2009 varied by place of residence, ranging from a low of 2.4% in the Australian Capital Territory to 10.5% in the Northern Territory (Table 3.1).

The proportion of mothers aged 20–24 fell from 15.5% in 2000 to 14.2% in 2009. The proportion of older mothers, aged 35 and over, has continued to increase from 17.1% in 2000 to 22.8% in 2009. Mothers aged 40 and over made up 4.0% of women giving birth in 2009 compared with 2.6% in 2000. There were 556 women aged 45 and over who gave birth in 2009, accounting for 0.2% (Table 3.1).

Table 3.1: Women who gave birth, by maternal age and state and territory, 2009

Maternal age (years)	State/territory of birth								Australia
	NSW	Vic ^(a)	Qld	WA	SA ^(b)	Tas	ACT ^(c)	NT	
Mean	30.2	30.7	29.2	29.5	29.6	28.6	30.8	27.8	30.0
	Number								
Less than 20	3,293	1,865	3,340	1,468	811	446	138	407	11,768
20–24	12,648	8,160	10,545	4,908	3,008	1,236	591	869	41,965
25–29	25,836	18,954	17,299	8,503	5,683	1,777	1,521	994	80,567
30–34	30,588	24,316	17,676	9,479	5,955	1,684	2,039	969	92,706
35–39	18,725	15,405	10,128	5,321	3,405	940	1,184	502	55,610
40 and over	3,933	3,323	2,033	1,081	739	197	263	118	11,687
Not stated	15	222	—	—	—	—	—	—	237
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
	Per cent								
Less than 20	3.5	2.6	5.5	4.8	4.1	7.1	2.4	10.5	4.0
20–24	13.3	11.3	17.3	16.0	15.3	19.7	10.3	22.5	14.2
25–29	27.2	26.2	28.3	27.6	29.0	28.3	26.5	25.8	27.4
30–34	32.2	33.7	29.0	30.8	30.4	26.8	35.5	25.1	31.5
35–39	19.7	21.3	16.6	17.3	17.4	15.0	20.6	13.0	18.9
40 and over	4.1	4.6	3.3	3.5	3.8	3.1	4.6	3.1	4.0
Not stated	0.0	0.3	—	—	—	—	—	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For Vic, maternal ages presented here may differ from those produced by the Perinatal Data Collection Unit.

(b) For SA, the mean maternal age presented here may differ from that produced by the Pregnancy Outcome Statistics Unit that uses maternal age to four decimal places for this calculation. The National Perinatal Data Collection contains maternal age in completed years.

(c) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages.

Note: Provisional data were provided by Victoria for this table.

Aboriginal and Torres Strait Islander mothers

The data presented on Indigenous mothers are influenced by the quality and completeness of Indigenous identification, which may vary among jurisdictions. Further details about the collection and reporting of Indigenous status data are presented in the report *Indigenous mothers and their babies, Australia 2001–2004* (Leeds et al. 2007).

In 2009, 11,284 women who identified as being Aboriginal or Torres Strait Islander gave birth in Australia, representing 3.8% of all women who gave birth (Table 3.2). Aboriginal or Torres Strait Islander mothers accounted for a much greater proportion of all mothers in the Northern Territory (38.2%) than in other jurisdictions. There were also higher proportions of Aboriginal or Torres Strait Islander mothers who gave birth in Western Australia and Queensland (5.7% and 5.5% respectively). Because of their larger overall populations, there were more Aboriginal or Torres Strait Islander women who gave birth in Queensland (3,332), New South Wales (2,904) and Western Australia (1,738) than in the Northern Territory (1,474) (Table 3.2).

Table 3.2: Women who gave birth, by Indigenous status and state and territory, 2009

Indigenous status	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Australia
Number									
Aboriginal or Torres Strait Islander	2,904	838	3,332	1,738	607	284	107	1,474	11,284
Non-Indigenous	91,958	70,328	57,665	29,022	18,994	5,996	5,601	2,369	281,933
Not stated	176	1,079	24	—	—	—	28	16	1,323
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Per cent									
Aboriginal or Torres Strait Islander	3.1	1.2	5.5	5.7	3.1	4.5	1.9	38.2	3.8
Non-Indigenous	96.8	97.3	94.5	94.3	96.9	95.5	97.6	61.4	95.7
Not stated	0.2	1.5	0.0	—	—	—	0.5	0.4	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, 24.3% of Aboriginal or Torres Strait Islander women who gave birth in the ACT in 2009 were non-ACT residents.

Note: Provisional data were provided by Victoria for this table.

More Aboriginal or Torres Strait Islander mothers have their babies at a younger age than non-Indigenous mothers. The average age of Aboriginal or Torres Strait Islander women who gave birth in 2009 was 25.3 years, compared with 30.2 years for non-Indigenous mothers. One in five (19.6%) Aboriginal or Torres Strait Islander mothers were teenagers, compared with 3.4% of non-Indigenous mothers. In contrast 9.5% of Aboriginal and Torres Strait Islander mothers were aged 35 and older compared with 23.4% of non-Indigenous mothers (Table 3.3).

Table 3.3: Women who gave birth, by maternal age and Indigenous status, 2009

Maternal age (years)	Indigenous	Non-Indigenous	Not stated	Total
Mean	25.3	30.2	31.1	30.0
	Number			
Less than 20	2,214	9,495	59	11,768
20–24	3,620	38,182	163	41,965
25–29	2,687	77,543	337	80,567
30–34	1,686	90,596	424	92,706
35–39	880	54,465	265	55,610
40 and over	192	11,435	60	11,687
Not stated	5	217	15	237
Total	11,284	281,933	1,323	294,540
	Per cent			
Less than 20	19.6	3.4	4.5	4.0
20–24	32.1	13.5	12.3	14.2
25–29	23.8	27.5	25.5	27.4
30–34	14.9	32.1	32.0	31.5
35–39	7.8	19.3	20.0	18.9
40 and over	1.7	4.1	4.5	4.0
Not stated	0.0	0.1	1.1	0.1
Total	100.00	100.00	100.00	100.00

Note: Provisional data were provided by Victoria for this table.

Geographical location of the mother's usual residence

State and territory of the mother's usual residence

Of women who gave birth in the Australian Capital Territory, 15.9% lived elsewhere. For the remaining jurisdictions, the proportion of women who gave birth outside their state or territory of usual residence ranged from 0.1% in Western Australia to 2.1% in Victoria (Table 3.4).

Table 3.4: Women who gave birth, by state and territory of usual residence and state and territory of birth, 2009

State/ territory of usual residence	State/territory of birth								Total
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	
Number									
NSW	93,704	1,393	519	<5	28	—	904	<5	96,555
Vic	21	70,537	14	—	54	—	<5	<5	70,628
Qld	854	51	60,391	<5	<5	—	<5	<5	61,311
WA	n.p.	32	15	30,725	7	—	<5	30	30,816
SA	8	18	6	<5	19,486	—	<5	33	19,554
Tas	<5	15	<5	—	—	6,227	—	—	6,246
ACT	57	6	<5	<5	<5	—	4,823	<5	4,891
NT	<5	—	32	7	22	—	<5	3,782	3,848
Non-resident ^(a)	354	—	n.p.	<5	—	—	—	—	392
Not stated	29	193	4	15	—	53	—	5	299
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Per cent									
NSW	98.6	1.9	0.9	n.p.	0.1	—	15.8	n.p.	32.8
Vic	0.0	97.6	0.0	—	0.3	—	n.p.	n.p.	24.0
Qld	0.9	0.1	99.0	n.p.	n.p.	—	n.p.	n.p.	20.8
WA	n.p.	0.0	0.0	99.9	0.0	—	n.p.	0.8	10.5
SA	0.0	0.0	0.0	n.p.	99.4	—	n.p.	0.9	6.6
Tas	n.p.	0.0	n.p.	—	—	99.2	—	—	2.1
ACT	0.1	0.0	n.p.	n.p.	n.p.	—	84.1	n.p.	1.7
NT	n.p.	—	0.1	0.0	0.1	—	n.p.	98.0	1.3
Non-resident ^(a)	0.4	—	n.p.	n.p.	—	—	—	—	0.1
Not stated	0.0	0.3	0.0	0.0	—	0.8	—	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Not usually resident in Australia.

n.p. Data not published to maintain confidentiality of small numbers.

Note: Provisional data were provided by Victoria for this table.

Remoteness area of the mother's usual residence

Data on the geographical location of the usual residence of the mother were provided as state and Statistical Local Area and/or postcode. These data have been mapped to levels of remoteness using the ABS's Australian Standard Geographical Classification (ASGC) remoteness structure.

The distribution of Remoteness Area varied by state and territory of usual residence. In Queensland, 60.3% of women resided in Major cities compared with 70.3% or more in the other populous states. The Northern Territory and Australian Capital Territory presented different profiles of Remoteness Area, with almost all Australian Capital Territory resident mothers living in a Major city compared with Northern Territory women who lived in Outer regional, Remote and Very remote areas (Table 3.5).

Table 3.5: Women who gave birth, by Remoteness Area of usual residence and state and territory of usual residence, 2009

Remoteness Area	State/territory of usual residence								Total
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	
	Number								
Major cities	73,363	54,291	36,995	21,642	14,319	..	4,879	..	205,489
Inner regional	17,099	13,364	12,119	3,751	2,236	4,100	10	..	52,679
Outer regional	5,466	2,929	9,784	2,900	2,219	2,016	..	1,993	27,307
Remote	517	44	1,426	1,601	587	107	..	885	5,167
Very remote	96	..	982	896	191	23	..	962	3,150
Total	96,541	70,628	61,306	30,790	19,552	6,246	4,889	3,840	293,792
	Per cent								
Major cities	76.0	76.9	60.3	70.3	73.2	..	99.8	..	69.9
Inner regional	17.7	18.9	19.8	12.2	11.4	65.6	0.2	..	17.9
Outer regional	5.7	4.1	16.0	9.4	11.3	32.3	..	51.9	9.3
Remote	0.5	0.1	2.3	5.2	3.0	1.7	..	23.0	1.8
Very remote	0.1	..	1.6	2.9	1.0	0.4	..	25.1	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

1. Excludes mothers not usually resident in Australia and those whose state or territory of usual residence was 'Not stated'.
2. Provisional data were provided by Victoria for this table.
3. .. Not applicable

Remoteness Area of mother's usual residence also varied by Indigenous status. Of non-Indigenous women who gave birth in 2009, 71.6% lived in Major cities and 17.8% in Inner regional areas. Place of residence for Aboriginal and Torres Strait Islander women was more evenly spread across Remoteness Areas, with 27.7% living in Major cities and 25.4% in Outer regional areas. Few non-Indigenous women who gave birth lived in Very remote areas (0.5%) compared with Indigenous mothers (16.0%). Of 'not stated' records for Indigenous status, 76.2% were in Major cities (Table 3.6).

Table 3.6: Women who gave birth, by Remoteness Area of usual residence and Indigenous status, 2009

Remoteness Area	Indigenous	Non-Indigenous	Not stated	Total
Number				
Major cities	3,125	201,367	1,000	205,492
Inner regional	2,263	50,186	231	52,680
Outer regional	2,869	24,359	79	27,307
Remote	1,216	3,949	2	5,167
Very remote	1,801	1,348	1	3,150
Total	11,274	281,209	1,313	293,796
Per cent				
Major cities	27.7	71.6	76.2	69.9
Inner regional	20.1	17.8	17.6	17.9
Outer regional	25.4	8.7	6.0	9.3
Remote	10.8	1.4	0.2	1.8
Very remote	16.0	0.5	0.1	1.1
Total	100.0	100.0	100.0	100.0

Notes:

1. Excludes mothers not usually resident in Australia.
2. Provisional data were provided by Victoria for this table.

Maternal country of birth

The country of birth of the mother can be an important risk factor for outcomes such as low birthweight and perinatal mortality. Of women who gave birth in Australia in 2009, 26.4% were born in countries other than Australia. New Zealand-born mothers constituted 3.0% of all women who gave birth. Mothers born in the United Kingdom constituted 2.9% of all mothers and accounted for a relatively high proportion of all mothers in Western Australia (6.5%). One in 10 women who gave birth was born in an Asian country (10.6%). Larger proportions of mothers born in non-English speaking countries gave birth in the more populous states, New South Wales and Victoria (Table 3.7).

Table 3.7: Women who gave birth, by country of birth and state and territory, 2009

Country of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Number								
Australia	64,882	50,798	48,057	20,998	15,952	5,827	4,482	3,286	214,282
New Zealand	2,377	1,407	3,395	1,156	206	48	61	69	8,719
United Kingdom	2,586	1,537	1,569	2,007	551	72	109	54	8,485
Former Yugoslavia	264	—	9	70	28	—	10	—	381
Other Europe and former USSR	2,480	1,340	1,108	843	375	47	149	74	6,416
Lebanon	1,391	470	24	33	34	<5	n.p.	—	1,960
Other Middle East and North Africa	2,450	1,708	510	474	276	18	87	14	5,537
China and Hong Kong	3,018	512	491	259	243	32	100	9	4,664
India	2,342	11	683	415	371	15	111	24	3,972
Philippines	1,417	679	601	289	188	37	51	66	3,328
Vietnam	1,661	—	390	298	263	n.p.	n.p.	16	2,700
Other Asia	5,535	6,783	1,675	1,575	642	67	279	122	16,678
Northern America South and Central America and the Caribbean	730	2,781	395	231	94	31	62	24	4,348
Africa (excluding North Africa)	867	861	314	175	68	6	40	8	2,339
Other countries	1,380	1,489	837	1,110	264	42	73	52	5,247
Other countries	1,373	573	916	70	45	15	45	39	3,076
Not stated	285	1,296	47	757	1	17	3	2	2,408
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540

(continued)

Table 3.7 (continued): Women who gave birth, by country of birth and state and territory, 2009

Country of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Australia	68.3	70.3	78.8	68.3	81.4	92.8	78.1	85.2	72.8
New Zealand	2.5	1.9	5.6	3.8	1.1	0.8	1.1	1.8	3.0
United Kingdom	2.7	2.1	2.6	6.5	2.8	1.1	1.9	1.4	2.9
Former Yugoslavia	0.3	—	0.0	0.2	0.1	—	0.2	—	0.1
Other Europe and former USSR	2.6	1.9	1.8	2.7	1.9	0.7	2.6	1.9	2.2
Lebanon	1.5	0.7	0.0	0.1	0.2	n.p.	n.p.	—	0.7
Other Middle East and North Africa	2.6	2.4	0.8	1.5	1.4	0.3	1.5	0.4	1.9
China and Hong Kong	3.2	0.7	0.8	0.8	1.2	0.5	1.7	0.2	1.6
India	2.5	0.0	1.1	1.3	1.9	0.2	1.9	0.6	1.3
Philippines	1.5	0.9	1.0	0.9	1.0	0.6	0.9	1.7	1.1
Vietnam	1.7	—	0.6	1.0	1.3	n.p.	n.p.	0.4	0.9
Other Asia	5.8	9.4	2.7	5.1	3.3	1.1	4.9	3.2	5.7
Northern America	0.8	3.8	0.6	0.8	0.5	0.5	1.1	0.6	1.5
South and Central America and the Caribbean	0.9	1.2	0.5	0.6	0.3	0.1	0.7	0.2	0.8
Africa (excluding North Africa)	1.5	2.1	1.4	3.6	1.3	0.7	1.3	1.3	1.8
Other countries	1.4	0.8	1.5	0.2	0.2	0.2	0.8	1.0	1.0
Not stated	0.3	1.8	0.1	2.5	0.0	0.3	0.1	0.1	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

1. Data were mapped to the ABS Standard Australian Classification of Countries (SACC) (ABS 1998).
2. Provisional data were provided by Victoria for this table.

n.p. Data not published to maintain confidentiality of small numbers.

Maternal characteristics

Parity

Parity is the number of a woman's previous pregnancies that resulted in a birth. In 2009, 41.6% of mothers had their first baby and 33.5% had their second baby. About one in six mothers (15.0%) had given birth twice previously and 9.8% had given birth three or more times (Table 3.8).

A parity of three or more was more common among mothers in the Northern Territory than mothers in the other jurisdictions. In the Northern Territory, 8.0% of women had given birth three times previously and 7.1% four or more times, compared with 5.7% and 4.1% respectively for Australia (Table 3.8).

In 2009, 31.7% of Aboriginal or Torres Strait Islander mothers were having their first baby and 68.1% had given birth previously. More than one-quarter (27.2%) of Indigenous women had given birth three or more times previously.

Table 3.8: Women who gave birth, by parity and state and territory, 2009

Parity	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
None	40,346	n.r.	24,648	12,897	8,141	2,530	2,525	1,477	92,564
One	31,829	n.r.	19,967	10,470	6,849	2,079	2,030	1,199	74,423
Two	13,932	n.r.	9,584	4,544	2,962	972	799	602	33,395
Three	5,221	n.r.	3,778	1,695	954	427	244	308	12,627
Four or more	3,585	n.r.	3,044	1,154	695	272	138	273	9,161
Not stated	125	n.r.	—	—	—	—	—	—	125
Total	95,038	n.r.	61,021	30,760	19,601	6,280	5,736	3,859	222,295
Per cent									
None	42.5	n.r.	40.4	41.9	41.5	40.3	44.0	38.3	41.6
One	33.5	n.r.	32.7	34.0	34.9	33.1	35.4	31.1	33.5
Two	14.7	n.r.	15.7	14.8	15.1	15.5	13.9	15.6	15.0
Three	5.5	n.r.	6.2	5.5	4.9	6.8	4.3	8.0	5.7
Four or more	3.8	n.r.	5.0	3.8	3.5	4.3	2.4	7.1	4.1
Not stated	0.1	n.r.	—	—	—	—	—	—	0.1
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

n.r. Data not received at the time of publication.

The average age of first-time mothers was 27.9 years in 2009 which was 0.3 years younger than for 2008. The median age of first-time mothers was 28.0 years in 2009. Nevertheless, in 2009, 59.9% of first-time mothers were younger than 30. The average age of women giving birth for the second time was 30.3.

The average age of first-time Aboriginal and Torres Strait Islander mothers was 21.1. This was markedly lower than for first-time non-Indigenous mothers (28.2 years).

Figure 3.1 shows the increase in the proportion of first-time mothers in the older age groups between 2000 and 2009. Of women aged 35–39, 26.3% were first-time mothers compared with 25.1% in 2000. Of women aged 40 and over, one-quarter (24.9%) had their first baby in 2009, compared with 22.5% in 2000. Of all first-time mothers, 13.7% were aged 35 or older in 2009, compared with 10.3% in 2000. The proportion of mothers who had given birth at least twice previously increased with maternal age from 1.9% for teenagers to 43.4% for mothers aged 40 and over (Table 3.9).

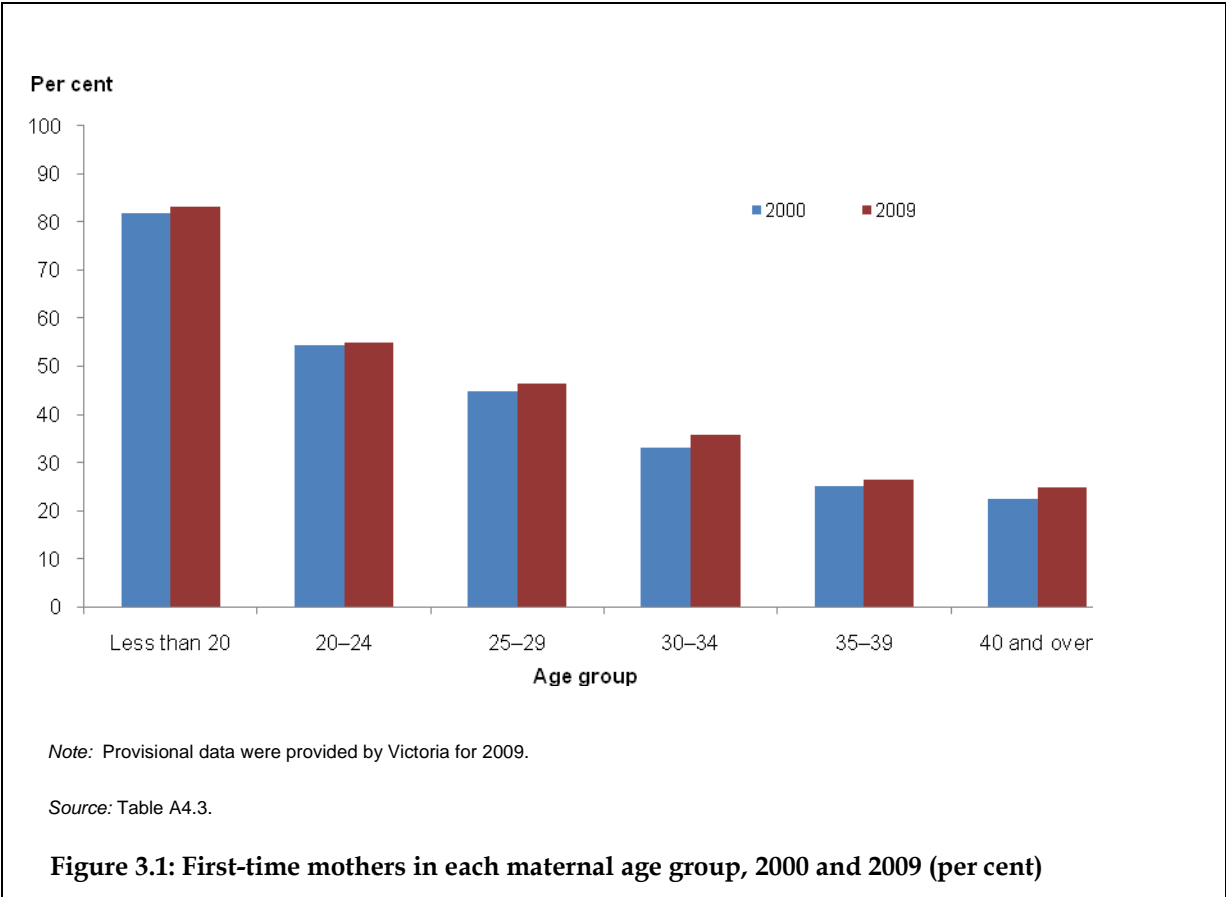


Table 3.9: Women who gave birth, by parity and maternal age, 2009

Parity	Less than 20	20–24	25–29	30–34	35–39	40 and over	Not stated	Total
Number								
None	8,222	18,568	28,640	24,466	10,579	2,080	9	92,564
One	1,493	10,479	19,728	25,242	14,845	2,633	3	74,423
Two	163	3,510	8,301	11,371	8,406	1,642	2	33,395
Three	20	929	3,123	4,264	3,415	875	1	12,627
Four or more	5	312	1,804	3,017	2,913	1,110	—	9,161
Not stated	—	7	17	30	47	24	—	125
Total	9,903	33,805	61,613	68,390	40,205	8,364	15	222,295
Per cent								
None	83.0	54.9	46.5	35.8	26.3	24.9	60.0	41.6
One	15.1	31.0	32.0	36.9	36.9	31.5	20.0	33.5
Two	1.6	10.4	13.5	16.6	20.9	19.6	13.3	15.0
Three	0.2	2.7	5.1	6.2	8.5	10.5	6.7	5.7
Four or more	0.1	0.9	2.9	4.4	7.2	13.3	—	4.1
Not stated	—	0.0	0.0	0.0	0.1	0.3	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Excludes Vic.

Previous caesarean sections

In 2009, 28.0% of multiparous women who gave birth in Australia had a history of previous caesarean section. This proportion ranged from 24.7% in Tasmania to 30.3% in South Australia (Table 3.10). Of those women who had a history of previous caesarean section (excluding Victoria, Western Australia and the Australian Capital Territory), 22.8% had had the procedure more than once.

Table 3.10: Multiparous women who gave birth, by number of previous caesarean sections and state and territory, 2009

Previous caesarean sections	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
None	38,772	n.r.	25,544	12,768	7,990	2,823	n.p.	1,730	89,627
At least one	14,467	n.r.	10,828	5,095	3,470	927	n.p.	650	35,437
<i>One</i>	11,303	n.r.	8,261	n.a.	2,686	680	n.p.	479	23,409
<i>Two</i>	2,553	n.r.	2,010	n.a.	618	189	n.p.	120	5,490
<i>Three or more</i>	611	n.r.	557	n.a.	166	58	n.p.	51	1,443
Not stated	1,328	n.r.	1	—	—	—	n.p.	2	1,331
Total	54,567	n.r.	36,373	17,863	11,460	3,750	n.p.	2,382	126,395
Per cent									
None	71.1	n.r.	70.2	71.5	69.7	75.3	n.p.	72.6	70.9
At least one	26.5	n.r.	29.8	28.5	30.3	24.7	n.p.	27.3	28.0
<i>One</i>	20.7	n.r.	22.7	n.a.	23.4	18.1	n.p.	20.1	21.6
<i>Two</i>	4.7	n.r.	5.5	n.a.	5.4	5.0	n.p.	5.0	5.1
<i>Three or more</i>	1.1	n.r.	1.5	n.a.	1.4	1.5	n.p.	2.1	1.3
Not stated	2.4	n.r.	0.0	—	—	—	n.p.	0.1	1.1
Total	100.0	n.r.	100.0	100.0	100.0	100.0	n.p.	100.0	100.0

n.a. Data not available.

n.p. Data are available in the ACT but are not of sufficient quality to publish.

n.r. Data not received at the time of publication.

Assisted reproductive technology

Data on whether the pregnancy resulted from assisted reproductive technology (ART) were available for Queensland, Western Australia, Tasmania and the Australian Capital Territory. Of women who gave birth in these four jurisdictions in 2009, 3.6% received ART treatment, ranging from 1.2% in the Australian Capital Territory to 4.3% in Tasmania (Table 3.11).

The average age of women who received ART was 33.7. This was higher than the average age of women who did not receive ART treatment (29.2 years). In 2009, 60.6% of mothers who received ART treatment were having their first baby and 39.4% had given birth previously.

Table 3.11: Women who gave birth, by whether pregnancy was the result of assisted reproductive technology (ART) and state and territory, 2009

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
ART	n.a.	n.r.	2,489	950	n.a.	268	66	n.a.	3,773
Not ART	n.a.	n.r.	58,523	19,559	n.a.	6,012	5,670	n.a.	89,764
Not stated	n.a.	n.r.	9	10,251	n.a.	—	—	n.a.	10,260
Total	n.a.	n.r.	61,021	30,760	n.a.	6,280	5,736	n.a.	103,797
Per cent									
ART	n.a.	n.r.	4.1	3.1	n.a.	4.3	1.2	n.a.	3.6
Not ART	n.a.	n.r.	95.9	63.6	n.a.	95.7	98.8	n.a.	86.5
Not stated	n.a.	n.r.	0.0	33.3	n.a.	—	—	n.a.	9.9
Total	n.a.	n.r.	100.0	100.0	n.a.	100.0	100.0	n.a.	100.0

n.a. Data not available.

n.r. Data not received at the time of publication.

Antenatal period

Antenatal visits

There is a strong relationship between regular antenatal care and positive child health outcomes. Receiving antenatal care at least four times, as recommended by the World Health Organization (WHO), increases the likelihood of receiving effective maternal health interventions during antenatal visits (WHO 2011).

Data on the number of antenatal visits during pregnancy were available for Queensland, South Australia, Australian Capital Territory and the Northern Territory. Table 3.12 shows that 97.1% of women who gave birth in these jurisdictions had at least one antenatal visit, with 91.2% having five or more visits. Only 0.3% had no antenatal visits (Table 3.12).

When only women who gave birth at 32 weeks gestation or more were included, thus excluding the very preterm births, 97.3% had at least one visit. Women who attended five or more visits accounted for 91.9%.

Aboriginal or Torres Strait Islander mothers attended fewer antenatal visits compared with non-Indigenous mothers. Of Indigenous mothers who gave birth at 32 weeks or more, 76.8% attended five or more visits, compared with 92.9% of non-Indigenous mothers.

Table 3.12: Women who gave birth, by number of antenatal visits and state and territory, 2009

Antenatal visits	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
None	n.a.	n.a.	181	n.a.	34	n.a.	7	48	270
At least one	n.a.	n.a.	60,807	n.a.	18,339	n.a.	4,685	3,780	87,611
One	n.a.	n.a.	289	n.a.	35	n.a.	n.a.	48	372
Two to four	n.a.	n.a.	3,592	n.a.	464	n.a.	^(a) 452	426	4,934
Five or more	n.a.	n.a.	56,926	n.a.	17,840	n.a.	4,233	3,306	82,305
Not stated	n.a.	n.a.	33	n.a.	1,228	n.a.	1,044	31	2,336
Total	n.a.	n.a.	61,021	n.a.	19,601	n.a.	5,736	3,859	90,217
Per cent									
None	n.a.	n.a.	0.3	n.a.	0.2	n.a.	0.1	1.2	0.3
At least one	n.a.	n.a.	99.6	n.a.	93.6	n.a.	81.7	98.0	97.1
One	n.a.	n.a.	0.5	n.a.	0.2	n.a.	0.0	1.2	0.4
Two to four	n.a.	n.a.	5.9	n.a.	2.4	n.a.	^(a) 7.9	11.0	5.5
Five or more	n.a.	n.a.	93.3	n.a.	91.0	n.a.	73.8	85.7	91.2
Not stated	n.a.	n.a.	0.1	n.a.	6.3	n.a.	18.2	0.8	2.6
Total	n.a.	n.a.	100.0	n.a.	100.0	n.a.	100.0	100.0	100.0

(a) For ACT, two to four antenatal visits includes women who had one antenatal visit and five antenatal visits.

n.a. Data not available.

Data on gestational age at the first antenatal visit were available for New South Wales, Queensland, South Australia, Australian Capital Territory and the Northern Territory. Of

women who gave birth in these jurisdictions, 71.2% attended at least one antenatal visit in the first trimester (before 14 weeks gestation).

Smoking during pregnancy

Smoking during pregnancy is a risk factor for pregnancy complications, and is associated with poorer perinatal outcomes such as low birthweight, preterm birth, and small for gestational age babies and perinatal death (Laws et al. 2006).

For 2009, data on smoking status were available for all states and territories. The proportion of women who smoked while pregnant ranged from 10.9% in the Australian Capital Territory to 24.5% in Tasmania. Nationally, 14.5% of women smoked during pregnancy (Table 3.13).

Table 3.13: Women who gave birth, by tobacco smoking status during pregnancy and state and territory, 2009^(a)

Smoking status	NSW	Vic	Qld	WA	SA ^{(b)(c)}	Tas	ACT	NT ^(c)	Total
Number									
Smoked	11,432	8,443	11,394	4,456	3,837	1,539	625	894	42,620
Did not smoke	83,602	61,978	49,372	26,304	15,439	4,705	5,042	2,180	248,622
Not stated	4	1,824	255	—	325	36	69	785	3,298
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Per cent									
Smoked	12.0	11.7	18.7	14.5	19.6	24.5	10.9	23.2	14.5
Did not smoke	88.0	85.8	80.9	85.5	78.8	74.9	87.9	56.5	84.4
Not stated	0.0	2.5	0.4	—	1.7	0.6	1.2	20.3	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Because of differences in definitions and methods used for data collection, care must be taken when comparing across jurisdictions.

(b) For SA, 'Smoked' includes women who quit before the first antenatal visit.

(c) For SA and NT, smoking status was recorded at the first antenatal visit.

Note: Mother's tobacco smoking status during pregnancy is self-reported.

Provisional data were provided by Victoria for this table.

The average age of mothers who smoked during pregnancy was 27.3 compared with 30.5 for those who did not smoke. Teenage mothers accounted for 10.2% of all mothers who reported smoking during pregnancy and 2.8% of mothers who did not smoke. Of all teenage mothers, 37.0% reported smoking.

Aboriginal or Torres Strait Islander mothers accounted for 13.1% of mothers who smoked during pregnancy. Almost half of the Aboriginal and Torres Strait Islander mothers reported smoking during pregnancy (49.6%), compared with 13.1% of non-Indigenous women who gave birth.

Labour and birth characteristics

Place of birth

Actual place of birth

Almost all births in Australia occur in hospitals, in conventional labour-ward settings. There were 285,460 women who gave birth in hospitals (96.9%) in 2009. A further 6,395 women gave birth in birth centres (2.2%); this proportion was highest in the Australian Capital Territory (6.2%) and South Australia (5.9%). Planned homebirths and other births, such as those occurring unexpectedly before arrival in hospital or in other settings, accounted for the smallest proportion of women who gave birth (2,629 women, 0.9%) (Table 3.14).

Table 3.14: Women who gave birth, by actual place of birth and state and territory, 2009

Place of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Hospital	91,560	70,530	59,952	30,063	18,224	6,152	5,351	3,628	285,460
Birth centre	2,687	1,118	581	326	1,166	43	355	119	6,395
Home	228	—	123	245	134	85	11	37	863
Other	508	597	365	126	76	—	19	^(a) 75	1,766
Not stated	55	—	—	—	1	—	—	—	56
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Per cent									
Hospital	96.3	97.6	98.2	97.7	93.0	98.0	93.3	94.0	96.9
Birth centre	2.8	1.5	1.0	1.1	5.9	0.7	6.2	3.1	2.2
Home	0.2	—	0.2	0.8	0.7	1.4	0.2	1.0	0.3
Other	0.5	0.8	0.6	0.4	0.4	—	0.3	^(a) 1.9	0.6
Not stated	0.1	—	—	—	0.0	—	—	—	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) The majority of these births occurred in remote community health centres.

Note: For multiple births, the place of birth of the first born baby was used.

Provisional data were provided by Victoria for this table.

Intended place of birth

The jurisdictions collect intended place of birth at different times during the pregnancy. Victoria, South Australia and Tasmania collect this item at the time of booking, while the remaining states and territories collect the intended place of birth at the onset of labour. Care must be taken when comparing data across the jurisdictions due to these differing collecting practices.

In 2009, the intended place of birth was hospital for 95.5% of mothers and birth centre for 3.7%. Only 0.8% intended to give birth at home or in other settings (Table 3.15).

Around 4.5% of mothers intended to give birth outside of a labour-ward setting (Table 3.15). Only 3.2% of mothers actually did so, giving birth in places such as birth centres or at home.

Table 3.15: Women who gave birth, by intended place of birth and state and territory, 2009

Place of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
Hospital	90,521	n.r.	60,083	29,657	17,211	6,153	5,024	3,565	212,214
Birth centre	3,740	n.r.	771	733	2,197	71	499	214	8,225
Home	266	n.r.	158	320	160	56	14	57	1,031
Other	511	n.r.	6	50	33	—	—	^(a) 7	607
Not stated	—	n.r.	3	—	—	—	199	16	218
Total	95,038	n.r.	61,021	30,760	19,601	6,280	5,736	3,859	222,295
Per cent									
Hospital	95.2	n.r.	98.5	96.4	87.8	98.0	87.6	92.4	95.5
Birth centre	3.9	n.r.	1.3	2.4	11.2	1.1	8.7	5.5	3.7
Home	0.3	n.r.	0.3	1.0	0.8	0.9	0.2	^(a) 1.5	0.5
Other	0.5	n.r.	0.0	0.2	0.2	—	—	0.2	0.3
Not stated	—	n.r.	0.0	—	—	—	3.5	0.4	0.1
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes remote community health centres.

n.r. Data not received at the time of publication.

Note: Intended place of birth at time of booking for Vic, SA and Tas. Intended place of birth at onset of labour for NSW, Qld, WA, ACT and NT.

Duration of pregnancy

Different methods may be used for estimating the duration of a pregnancy, which is reported as the number of completed weeks of gestation. Estimates may be made based on the calculated interval between the first day of the last menstrual period (LMP) and the baby's date of birth. For most pregnancies, the gestational age derived from the known menstrual dates provides a good estimate of the duration of pregnancy. When the date of LMP is not known or is uncertain, gestational age can be estimated using ultrasound measurements taken in early pregnancy (before 20 weeks gestation). Estimates of gestational age may be revised if there is a discrepancy between gestational ages calculated from dates and ultrasounds, as most pregnant women have at least one ultrasound examination in early pregnancy.

Preterm birth (less than 37 completed weeks of gestation) occurred for 7.4% of all mothers in 2009. The average duration of pregnancy in Australia was 38.8 weeks. A small proportion of mothers gave birth at 20–27 weeks (0.8%) and 28–31 weeks (0.7%), while 5.9% gave birth at 32–36 weeks. There was a higher proportion of preterm birth in the Northern Territory (9.3%) than elsewhere (Table 3.16). This is likely to be associated with the different age structure of the population and higher proportion of births to Indigenous mothers (Tables 3.1 and 3.3).

Of women who gave birth in 2009, 91.6% gave birth at 37–41 completed weeks of gestation (term) and 0.9% gave birth at 42 or more weeks gestation (post-term). Post-term births were least common in South Australia (0.4%) and most common in the Australian Capital Territory (1.7%) (Table 3.16).

The numbers reported here are based on the duration of pregnancies, and so differ from the figures on gestational age in Chapter 4, which are based on the gestational age of the babies. The numbers differ because the lower gestational age associated with multiple births is applied once for the duration of pregnancy data, while the gestational age of each individual baby in a multiple birth is used for the data presented in Chapter 4.

Table 3.16: Women who gave birth, by duration of pregnancy and state and territory, 2009

Duration of pregnancy (weeks)	NSW	Vic^(a)	Qld	WA	SA	Tas	ACT^(b)	NT	Australia
Mean	38.9	38.8	38.8	38.7	38.7	38.8	39.0	38.7	38.8
	Number								
20–27	642	807	481	264	159	46	49	39	2,487
28–31	565	529	464	224	163	31	41	44	2,061
32–36	5,095	4,118	3,864	1,906	1,259	438	347	277	17,304
37–41	87,957	65,447	55,784	28,166	17,941	5,730	5,202	3,466	269,693
42 and over	774	984	422	200	79	35	96	32	2,622
Not stated	5	360	6	—	—	—	1	1	373
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
	Per cent								
20–27	0.7	1.1	0.8	0.9	0.8	0.7	0.9	1.0	0.8
28–31	0.6	0.7	0.8	0.7	0.8	0.5	0.7	1.1	0.7
32–36	5.4	5.7	6.3	6.2	6.4	7.0	6.0	7.2	5.9
37–41	92.5	90.6	91.4	91.6	91.5	91.2	90.7	89.8	91.6
42 and over	0.8	1.4	0.7	0.7	0.4	0.6	1.7	0.8	0.9
Not stated	0.0	0.5	0.0	—	—	—	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Preterm birth rates may be higher as the majority of late terminations for psychosocial indications are undertaken in Vic.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of ACT resident women who gave birth at 20–27 weeks gestation was 0.7% and at 28–31 weeks gestation was 0.4%.

Notes:

1. For multiple births, the gestational age of the first born baby was used.
2. Provisional data were provided by Victoria for this table.

Multiple pregnancy

The number of multiple births has increased in the last two decades. This can be attributed largely to the increased use of ART, delay in childbearing and the higher proportion of older mothers.

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. In 2009, there were 4,605 multiple pregnancies (1.6% of all mothers) (Table 3.17), consisting of 4,521 twin pregnancies, 81 triplet pregnancies and 3 quadruplet pregnancies.

Table 3.17: Women who gave birth, by plurality and state and territory, 2009

Plurality	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Australia
	Number								
Singleton	93,672	71,007	60,014	30,305	19,308	6,194	5,623	3,806	289,929
Multiple	1,366	1,232	1,007	455	293	86	113	53	4,605
Not Stated	—	6	—	—	—	—	—	—	6
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
	Per cent								
Singleton	98.6	98.3	98.3	98.5	98.5	98.6	98.0	98.6	98.4
Multiple	1.4	1.7	1.7	1.5	1.5	1.4	2.0	1.4	1.6
Not Stated	—	0.0	—	—	—	—	—	—	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of multiple pregnancies for ACT residents who gave birth in the ACT was 1.5%.

Note: Provisional data were provided by Victoria for this table.

There were 15.6 multiple pregnancies per 1,000 mothers in 2009. The twinning rate was 15.3 per 1,000 mothers. In 2000, there were 4,077 multiple pregnancies (16.1 per 1,000 mothers), with a twinning rate of 15.7 per 1,000 mothers. Triplet and higher order multiple pregnancies have remained fairly stable with a rate of 0.3 to 0.4 per 1,000 mothers since 2000.

Of women who gave birth in the four jurisdictions where data were available on whether the pregnancy resulted from ART (Table 3.11), 10.3% of women who had ART had a multiple pregnancy. Of these, 9.8% had twins and 0.5% had higher order multiples. This compared with 1.3% for twins and 0.01% for higher order multiples for non-ART mothers.

Onset and type of labour

Onset of labour is categorised as spontaneous, induced or no labour, where a caesarean section was performed before labour had started. In 2009, the onset of labour was spontaneous for 56.1% of all women who gave birth, and there was no labour for 18.4% of mothers. Labour was induced for 25.3% of mothers (Table 3.18).

The proportion of mothers with spontaneous onset of labour was highest in the Northern Territory (64.1%) and lowest in Western Australia (52.1%). Queensland and Western Australia had the highest proportions of mothers with no labour (20.5% and 19.9% respectively) (Table 3.18).

The percentage of induced labour was higher in South Australia (29.4%) than in the other states and territories. Overall, combined medical and surgical induction of labour was more common than either type alone.

Once labour has started, it may be necessary to intervene to speed up or augment the labour. In 2009, labour was augmented for 19.2% of all mothers, representing 34.2% of mothers with spontaneous onset of labour. There was considerable variation in practice among the states and territories regarding augmentation, ranging from 16.0% of all women who gave birth in New South Wales to 22.0% in Queensland (Table 3.18).

Table 3.18: Women who gave birth, by onset of labour and state and territory, 2009

Onset of labour/type of augmentation or induction	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Total
	Number								
Spontaneous	53,916	40,561	34,838	16,029	10,326	3,677	3,514	2,473	165,334
<i>No augmentation</i>	38,684	<i>n.r.</i>	21,407	9,413	6,040	2,488	2,318	1,339	81,689
<i>Medical only^(b)</i>	5,285	<i>n.r.</i>	3,623	1,905	1,086	261	325	193	12,678
<i>Surgical only</i>	6,840	<i>n.r.</i>	8,038	3,085	2,545	745	586	416	22,255
<i>Combined</i>	3,097	<i>n.r.</i>	1,762	1,618	654	183	283	145	7,742
<i>Other/not stated</i>	10	<i>n.r.</i>	8	8	1	—	2	380	409
Induced	24,473	18,305	13,661	8,607	5,768	1,708	1,275	811	74,608
<i>Medical only^(b)</i>	7,650	<i>n.r.</i>	5,080	1,632	1,700	667	341	186	17,256
<i>Surgical only</i>	1,710	<i>n.r.</i>	1,422	562	702	235	83	64	4,778
<i>Combined</i>	14,932	<i>n.r.</i>	7,073	6,301	3,365	732	833	550	33,786
<i>Other/not stated</i>	181	<i>n.r.</i>	86	112	1	74	18	11	483
No labour	16,649	13,101	12,522	6,124	3,507	895	947	575	54,320
Not stated	—	278	—	—	—	—	—	—	278
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
	Per cent								
Spontaneous	56.7	56.1	57.1	52.1	52.7	58.6	61.3	64.1	56.1
<i>No augmentation</i>	40.7	<i>n.r.</i>	35.1	30.6	30.8	39.6	40.4	34.7	36.7
<i>Medical only^(b)</i>	5.6	<i>n.r.</i>	5.9	6.2	5.5	4.2	5.7	5.0	5.7
<i>Surgical only</i>	7.2	<i>n.r.</i>	13.2	10.0	13.0	11.9	10.2	10.8	10.0
<i>Combined</i>	3.3	<i>n.r.</i>	2.9	5.3	3.3	2.9	4.9	3.8	3.5
<i>Other/not stated</i>	—	<i>n.r.</i>	—	—	—	—	—	9.8	0.2
Induced	25.8	25.3	22.4	28.0	29.4	27.2	22.2	21.0	25.3
<i>Medical only^(b)</i>	8.0	<i>n.r.</i>	8.3	5.3	8.7	10.6	5.9	4.8	7.8
<i>Surgical only</i>	1.8	<i>n.r.</i>	2.3	1.8	3.6	3.7	1.4	1.7	2.1
<i>Combined</i>	15.7	<i>n.r.</i>	11.6	20.5	17.2	11.7	14.5	14.3	15.2
<i>Other/not stated</i>	0.2	<i>n.r.</i>	0.1	0.4	—	1.2	0.3	0.3	0.2
No labour	17.5	18.1	20.5	19.9	17.9	14.3	16.5	14.9	18.4
Not stated	—	0.4	—	—	—	—	—	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

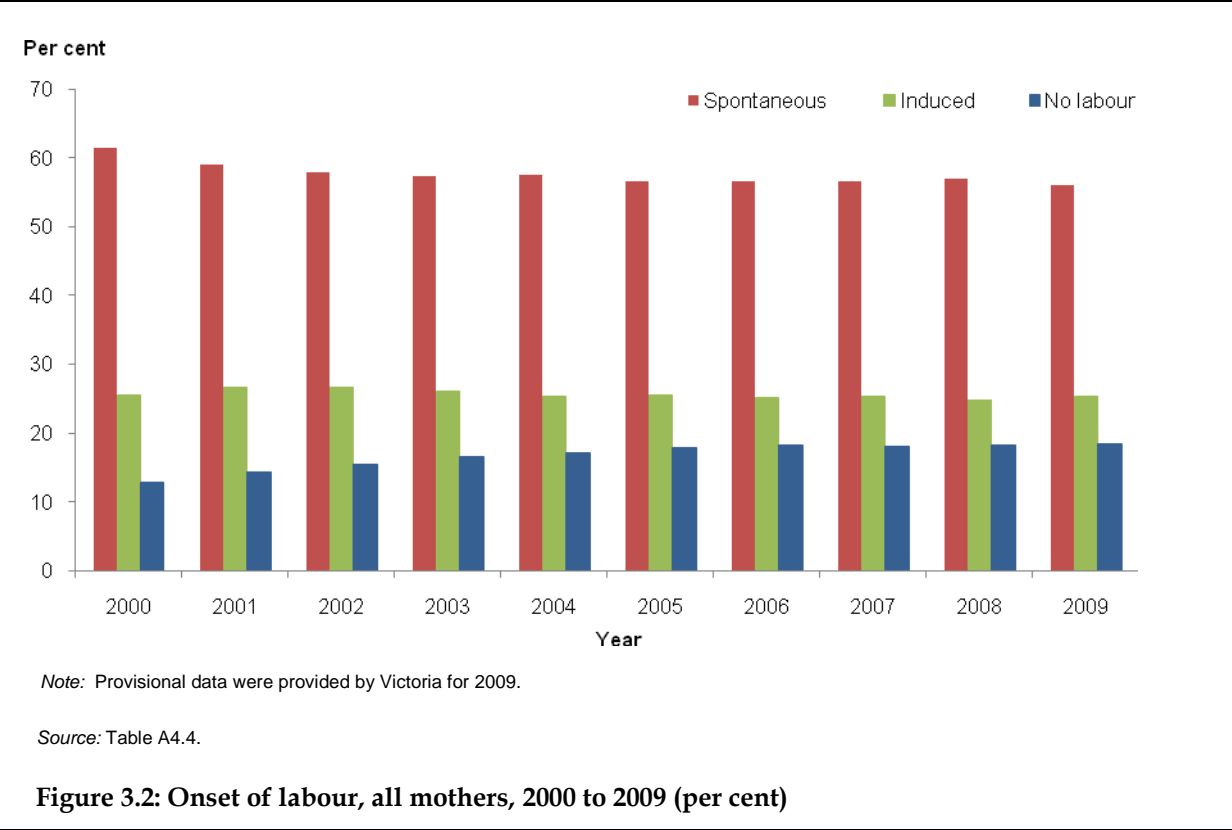
(a) Multiple sources of data were used in the ACT to identify the types of augmentation and induction and improve ascertainment.

(b) Includes use of oxytocin and/or prostaglandins.

n.r. Data not received at the time of publication.

Note: Provisional data were provided by Victoria for this table.

Figure 3.2 presents the trends in type of onset of labour over the period from 2000 to 2009. In line with the increase in caesarean sections, spontaneous onset of labour generally decreased during this time, from 64.9% of all women giving birth in 2000 to 56.1% in 2009. The proportion of women giving birth without labour gradually increased from 12.9% in 2000 to 18.4% in 2009. The proportion of women having induction of labour has remained constant over recent years.



Information about the main reason for induction of labour is presented in Table 3.19 for New South Wales, Queensland, South Australia, Tasmania and the Northern Territory. These data are not part of the Perinatal NMDS and are not standard across jurisdictions. The data presented in this table should be examined independently for each state and territory, as the data are not comparable across jurisdictions. This is because of variability in data collection methods and reporting by individual jurisdictions. Where the main reason for induction of labour was prolonged pregnancy or psychosocial, data have been reported in the 'Other' category due to variability among states.

Table 3.19 shows similar results for medical and fetal conditions or complications for the 5 jurisdictions. In these jurisdictions, hypertension or pre-eclampsia (range 10.0% to 12.4%) and premature rupture of membranes (range 2.0% to 13.2%) were important reasons for induction of labour.

Table 3.19: Women who gave birth and had an induction, by main reason for induction and state and territory, 2009^(a)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	Number							
Hypertension/pre-eclampsia	2,448	n.r.	1,375	n.a.	713	195	n.a.	90
Premature rupture of membranes	3,091	n.r.	1,808	n.a.	209	34	n.a.	22
Diabetes	1,676	n.r.	946	n.a.	399	84	n.a.	47
Intrauterine growth restriction	1,031	n.r.	553	n.a.	311	5	n.a.	41
Fetal death	254	n.r.	154	n.a.	38	5	n.a.	17
Fetal distress	380	n.r.	118	n.a.	—	72	n.a.	—
Isoimmunisation	34	n.r.	30	n.a.	12	—	n.a.	—
Chorioamnionitis	30	n.r.	12	n.a.	7	—	n.a.	—
Other ^(b)	15,526	n.r.	8,665	n.a.	4,079	87	n.a.	549
Not stated	3	n.r.	—	n.a.	—	1,226	n.a.	45
Total	24,473	n.r.	13,661	n.a.	5,768	1,708	n.a.	811
	Per cent							
Hypertension/pre-eclampsia	10.0	n.r.	10.1	n.a.	12.4	11.4	n.a.	11.1
Premature rupture of membranes	12.6	n.r.	13.2	n.a.	3.6	2.0	n.a.	2.7
Diabetes	6.8	n.r.	6.9	n.a.	6.9	4.9	n.a.	5.8
Intrauterine growth restriction	4.2	n.r.	4.0	n.a.	5.4	0.3	n.a.	5.1
Fetal death	1.0	n.r.	1.1	n.a.	0.7	0.3	n.a.	2.1
Fetal distress	1.6	n.r.	0.9	n.a.	—	4.2	n.a.	—
Isoimmunisation	0.1	n.r.	0.2	n.a.	0.2	—	n.a.	—
Chorioamnionitis	0.1	n.r.	0.1	n.a.	0.1	—	n.a.	—
Other ^(b)	63.4	n.r.	63.4	n.a.	70.7	5.1	n.a.	67.7
Not stated	0.0	n.r.	—	n.a.	—	71.8	n.a.	5.5
Total	100.0	n.r.	100.0	n.a.	100.0	100.0	n.a.	100.0

(a) Because of differences in definitions and methods used for data collection, these data are not comparable across jurisdictions.

(b) Includes prolonged pregnancy, psychosocial reasons and other reasons.

n.a. Data not available.

n.r. Data not received at the time of publication.

Pain relief during labour and operative delivery

The type of analgesia or anaesthesia used during labour or delivery can help determine the effectiveness of pain relief, the extent to which a woman is able to actively participate in the birth and her mobility immediately after the birth. Data on whether analgesia was administered to relieve pain for labour and whether anaesthesia was administered for an operative delivery (caesarean section, vacuum extraction or forceps) was available for all jurisdictions except Victoria. Information on the types of analgesic or anaesthetic is also available and more than one type could be recorded for each woman. Epidural or caudal, spinal and combined spinal-epidural analgesia or anaesthesia have been grouped into the category of 'regional analgesia or anaesthesia'. The data are presented both individually and grouped for use in comparison with other modes of analgesia or anaesthesia.

Table 3.20 shows that, of all women who laboured (defined as spontaneous or induced onset of labour), 75.2% had analgesia administered. This proportion ranged from 69.6% in the Australian Capital Territory to 79.4% in Western Australia.

Table 3.20: Women who gave birth, by whether analgesia was administered to relieve pain for labour and state and territory, 2009^(a)

Analgesia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
None	19,106	n.r.	13,274	5,064	3,612	1,417	1,457	976	44,906
Analgesia administered	59,282	n.r.	35,225	19,572	12,482	3,968	3,332	2,289	136,150
Not stated	1	n.r.	—	—	—	—	—	19	20
Total	78,389	n.r.	48,499	24,636	16,094	5,385	4,789	3,284	181,076
Per cent									
None	24.4	n.r.	27.4	20.6	22.4	26.3	30.4	29.7	24.8
Analgesia administered	75.6	n.r.	72.6	79.4	77.6	73.7	69.6	69.7	75.2
Not stated	0.0	n.r.	—	—	—	—	—	0.6	0.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Only women who had a spontaneous or induced labour are included.

n.r. Data not received at the time of publication.

Of first-time mothers who laboured, 85.3% had analgesia administered for labour. This was markedly higher than the proportion of multiparous women (66.9%) who had analgesia administered for labour.

Table 3.21 shows the method of analgesia administration for labour. As more than one type may be recorded for each woman, the individual categories add up to more than the number of women who laboured. Nitrous oxide (inhaled) was used by half of all women who laboured (50.0%) with the highest proportion of use in the Northern Territory (56.9%). Regional analgesia was used for 32.2% of women; epidural or caudal method for 29.7% and a spinal or combined spinal-epidural for a further 2.5%. Systemic opioids were administered to more than one-fifth of women who laboured (22.0%).

Table 3.21: Types of analgesia administered to relieve pain for labour, by state and territory, 2009^(a)

Type of analgesia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	Number								
Nitrous oxide	41,021	n.r.	25,320	10,098	7,569	2,665	1,965	1,869	90,507
Systemic opioids	15,270	n.r.	11,962	4,647	3,736	1,955	1,475	715	39,760
Regional	23,130	n.r.	13,999	11,623	6,322	1,348	1,260	545	58,227
<i>Epidural or caudal</i>	22,028	n.r.	12,402	10,292	6,144	1,212	1,164	510	53,752
<i>Spinal</i>	621	n.r.	1,380	421	170	115	96	7	2,810
<i>Combined spinal-epidural</i>	481	n.r.	217	910	8	21	—	28	1,665
Other	6,082	n.r.	137	687	281	145	153	156	7,641
Total women	78,389	n.r.	48,499	24,636	16,094	5,385	4,789	3,284	181,076
	Rate per 100 women who gave birth								
Nitrous oxide	52.3	n.r.	52.2	41.0	47.0	49.5	41.0	56.9	50.0
Systemic opioids	19.5	n.r.	24.7	18.9	23.2	36.3	30.8	21.8	22.0
Regional	29.5	n.r.	28.9	47.2	39.3	25.0	26.3	16.6	32.2
<i>Epidural or caudal</i>	28.1	n.r.	25.6	41.8	38.2	22.5	24.3	15.5	29.7
<i>Spinal</i>	0.8	n.r.	2.8	1.7	1.1	2.1	2.0	0.2	1.6
<i>Combined spinal-epidural</i>	0.6	n.r.	0.4	3.7	0.0	0.4	—	0.9	0.9
Other	7.8	n.r.	0.3	2.8	1.7	2.7	3.2	4.8	4.2

(a) Only women who had a spontaneous or induced labour are included.

n.r. Data not received at the time of publication.

Note: More than one type of analgesia could be recorded; therefore the sums of individual categories are greater than the total numbers of women who gave birth and percentages add to more than 100%.

Of all women who gave birth in 2009 and had a forceps, vacuum extraction or caesarean section delivery, 95.3% had anaesthesia administered. This proportion ranged from 91.6% in Queensland to around 97.3% in New South Wales (Table 3.22).

Table 3.22: Women who gave birth and had caesarean section or instrumental vaginal deliveries^(a), by whether anaesthetic was administered for the operative delivery and state and territory, 2009

Anaesthesia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
None	1,073	n.r.	2,175	562	319	183	85	66	4,463
Anaesthesia administered	38,256	n.r.	23,748	14,032	8,359	2,045	2,240	1,342	90,022
Not stated	—	n.r.	—	—	—	—	—	4	4
Total	39,329	n.r.	25,923	14,594	8,678	2,228	2,325	1,412	94,489
Per cent									
None	2.7	n.r.	8.4	3.9	3.7	8.2	3.7	4.7	4.7
Anaesthesia administered	97.3	n.r.	91.6	96.1	96.3	91.8	96.3	95.0	95.3
Not stated	—	n.r.	—	—	—	—	—	0.3	0.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Instrumental vaginal deliveries include forceps and vacuum extraction.

n.r. Data not received at the time of publication.

Table 3.23 presents method of administration of anaesthesia for women giving birth by caesarean section. Although this data element specifies method of delivery of anaesthetic for caesarean sections, some states and territories may include anaesthetics administered for labour or administered after birth under this item, and this may be reflected in the differences reported among the states and territories.

In 2009, 59.0% of women who had a caesarean section had a spinal anaesthetic, 25.9% had an epidural or caudal anaesthetic and 11.5% had a combined spinal-epidural anaesthetic (Table 3.23). The data suggest that a combination of types may be administered for each woman who has a caesarean section, noting that more than one type can be reported.

A general anaesthetic was administered for 8.4% of caesarean sections (Table 3.23). There was variability in the proportion of women having a general anaesthetic for caesarean section by state and territory, from 4.8% in Western Australia to 11.4% in New South Wales.

Table 3.23: Types of anaesthetic administered for caesarean sections, by state and territory, 2009^(a)

Type of anaesthetic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	Number								
Regional	25,844	n.r.	19,517	11,950	6,101	1,725	1,508	987	67,632
<i>Epidural or caudal</i>	6,368	n.r.	3,733	5,821	1,497	320	324	107	18,170
<i>Spinal</i>	16,016	n.r.	13,091	4,365	4,548	1,390	1,184	828	41,422
<i>Combined spinal-epidural</i>	3,460	n.r.	2,693	1,764	56	15	—	52	8,040
General	3,272	n.r.	1,365	492	397	145	127	83	5,881
Total women	28,714	n.r.	20,336	10,241	6,356	1,809	1,603	1,105	70,164
	Rate per 100 women who gave birth								
Regional	90.0	n.r.	96.0	116.7	96.0	95.4	94.1	89.3	96.4
<i>Epidural or caudal</i>	22.2	n.r.	18.4	56.8	23.6	17.7	20.2	9.7	25.9
<i>Spinal</i>	55.8	n.r.	64.4	42.6	71.6	76.8	73.9	74.9	59.0
<i>Combined spinal-epidural</i>	12.0	n.r.	13.2	17.2	0.9	0.8	—	4.7	11.5
General	11.4	n.r.	6.7	4.8	6.2	8.0	7.9	7.5	8.4

(a) Table excludes 423 cases of local anaesthetic to perineum, pudendal anaesthetic and other types of anaesthetic.

n.r. Data not received at the time of publication.

Note: More than one type of anaesthetic could be recorded, therefore the sums of individual categories are greater than the total numbers of women who gave birth.

Of the 5,881 women who had a general anaesthetic for caesarean section, 52.7% had a caesarean section in labour and 47.3% had a caesarean section without labour. Of the women who had a caesarean section in labour and a general anaesthetic, 63.5% had a spontaneous onset of labour and 36.5% had an induction of labour. Of the women who had a regional anaesthetic for caesarean section, 40.4% had a caesarean section in labour and 59.6% had a caesarean section without labour.

The method of anaesthetic administration varied between states and territories. More than half of all women who had an instrumental delivery had a regional anaesthetic (54.7%).

Administration of a general anaesthetic was rare at 5 per 1,000 women having an instrumental vaginal birth. A local anaesthetic to the perineum was administered in 28.4% and a pudendal block in 5.2% of instrumental deliveries (Table 3.24).

Table 3.24: Types of anaesthetic administered for instrumental vaginal deliveries^(a), by state and territory, 2009

Type of anaesthetic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(b)
	Number								
None	1,073	n.r.	2,175	562	319	183	85	66	4,463
Local anaesthetic to perineum	4,157	n.r.	1,059	821	481	101	190	99	6,908
Pudendal	616	n.r.	172	173	164	18	86	28	1,257
Regional	5,602	n.r.	2,465	3,094	1,510	133	401	110	13,315
<i>Epidural or caudal</i>	5,193	n.r.	2,245	2,846	1,462	124	342	91	12,303
<i>Spinal</i>	282	n.r.	174	66	43	9	59	15	648
<i>Combined spinal-epidural</i>	127	n.r.	46	182	n.p.	—	—	<5	364
General	88	n.r.	15	<5	<5	<5	<5	<5	114
Other	89	n.r.	6	74	27	—	4	26	226
Total women	10,615	n.r.	5,587	4,353	2,322	419	722	307	24,325
	Rate per 100 women who had instrumental vaginal deliveries								
None	10.1	n.r.	38.9	12.9	13.7	43.7	11.8	21.5	18.3
Local anaesthetic to perineum	39.2	n.r.	19.0	18.9	20.7	24.1	26.3	32.2	28.4
Pudendal	5.8	n.r.	3.1	4.0	7.1	4.3	11.9	9.1	5.2
Regional	52.8	n.r.	44.1	71.1	65.0	31.7	55.5	35.8	54.7
<i>Epidural or caudal</i>	48.9	n.r.	40.2	65.4	63.0	29.6	47.4	29.6	50.6
<i>Spinal</i>	2.7	n.r.	3.1	1.5	1.9	2.1	8.2	4.9	2.7
<i>Combined spinal-epidural</i>	1.2	n.r.	0.8	4.2	n.p.	—	—	n.p.	1.5
General	0.8	n.r.	0.3	n.p.	n.p.	n.p.	n.p.	n.p.	0.5
Other	0.8	n.r.	0.1	1.7	1.2	—	0.6	8.5	0.9

(a) Instrumental vaginal deliveries include forceps and vacuum extraction.

n.p. Data not published to maintain confidentiality of small numbers.

n.r. Data not received at the time of publication.

Note: More than one type of anaesthetic could be recorded; therefore the sums of individual categories are greater than the total numbers of women who gave birth and percentages add to more than 100%.

Presentation at birth

Data are presented in this section by mother. Women who gave birth to more than one baby are categorised according to the presentation at birth of the first born baby. Presentation at birth is defined as presenting part of the fetus at birth. Table 4.11 shows the presentation for each individual baby by plurality.

In 2009, the predominant presentation at birth was cephalic (94.4%) which included presentation of any part (vertex, face or brow) of the fetal head in labour. Vertex presentation, where the crown (vertex) of the fetal head is the presenting part, occurred for 94.2% of all women who gave birth while face or brow presentation occurred for 0.2% of mothers. Breech presentation, the presentation of the baby's buttocks or feet in labour, occurred for 3.9% of mothers. Summary data for breech presentation are presented; data were not available on complete, incomplete and frank breech presentations (Table 3.25). Of the 11,565 women with a breech presentation, 92.2% were singleton pregnancies and 7.8% were multiple pregnancies.

Table 3.25: Women who gave birth, by presentation at birth and state and territory, 2009

Presentation	NSW	Vic	Qld	WA	SA	Tas ^(a)	ACT ^(b)	NT	Australia
Number									
Vertex	90,836	67,884	57,290	29,267	18,563	4,453	5,457	3,632	277,382
Breech	3,404	3,077	2,622	1,239	832	<5	215	n.p.	11,565
Face	88	94	69	56	25	<5	<5	10	347
Brow	95	98	80	30	18	<5	n.p.	<5	337
Other ^(c)	609	654	951	168	135	15	48	24	2,604
Not stated	6	438	9	—	28	1,808	1	15	2,305
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Per cent									
Vertex	95.6	94.0	93.9	95.1	94.7	70.9	95.1	94.1	94.2
Breech	3.6	4.3	4.3	4.0	4.2	n.p.	3.7	n.p.	3.9
Face	0.1	0.1	0.1	0.2	0.1	n.p.	n.p.	0.3	0.1
Brow	0.1	0.1	0.1	0.1	0.1	n.p.	n.p.	n.p.	0.1
Other ^(c)	0.6	0.9	1.6	0.5	0.7	0.2	0.8	0.6	0.9
Not stated	0.0	0.6	0.0	—	0.1	28.8	0.0	0.4	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For Tas, presentations were only recorded for vaginal births. Where a caesarean section occurred the presentation was recorded as 'Not stated'.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of breech presentation for ACT residents who gave birth in the ACT was 3.5% and 4.8% for non-ACT residents who gave birth in the ACT.

(c) Includes shoulder/transverse and compound presentations.

n.p. Data not published to maintain confidentiality of small numbers.

Note: For multiple births, the presentation of the first born baby was used.

Provisional data were provided by Victoria for this table.

Method of birth

Data are presented in this section by mother. For multiple births, women are categorised according to the method of birth for the first born baby. Table 4.12 presents method of birth data for each individual baby by plurality.

From 2007, changes to the Perinatal NMDS item for method of birth were implemented. 'Spontaneous vaginal' was changed to 'Non-instrumental vaginal' and 'Vaginal breech' was no longer a category. Therefore, care must be taken when looking at time series data. Vaginal breech births would be recorded as either 'Non-instrumental vaginal' or 'Forceps' for 2007, 2008 and 2009 with breech as the presentation. Four of the eight jurisdictions were able to provide data in this way; therefore the 'Non-instrumental vaginal' category for 2007, 2008 and 2009 may include women in New South Wales, Victoria, Western Australia and the Northern Territory, who had breech births where instruments were used.

Tables 4.13 and 4.14 present information on method of birth for babies with breech presentations.

Vaginal births

In 2009, 201,631 women (68.5%) had a vaginal birth, and most of these births (82.9%) did not involve instruments.

Of all women who gave birth in 2009, 56.8% had a non-instrumental vaginal birth. The proportion of non-instrumental vaginal births ranged from 52.6% in Western Australia to 64.5% in Tasmania (Table 3.26).

About 1 in 9 mothers (11.7%) had an instrumental vaginal delivery where either forceps or vacuum extraction was used. The proportions of these instrumental deliveries varied among the states and territories, from 6.7% in Tasmania to 14.2% in Western Australia. Forceps delivery occurred for 3.7% of mothers and was most common in Victoria (5.9%). Deliveries by vacuum extraction accounted for 7.9% of women who gave birth nationally, ranging from 5.1% in the Northern Territory to 11.5% in Western Australia (Table 3.26).

Table 3.26: Women who gave birth, by method of birth and state and territory, 2009

Method of birth	NSW ^(a)	Vic ^(a)	Qld	WA ^(a)	SA	Tas	ACT ^(b)	NT ^(a)	Australia
Number									
Non-instrumental vaginal	55,709	39,396	35,098	16,166	10,923	4,052	3,411	2,447	167,202
Forceps	3,383	4,251	1,124	830	906	75	334	112	11,015
Vacuum extraction	7,232	5,853	4,463	3,523	1,416	344	388	195	23,414
Caesarean section	28,714	22,523	20,336	10,241	6,356	1,809	1,603	1,105	92,687
<i>Labour</i>	12,065	9,236	7,814	4,117	2,849	914	656	530	38,181
<i>No labour</i>	16,649	13,066	12,522	6,124	3,507	895	947	575	54,285
<i>Not stated</i>	—	221	—	—	—	—	—	—	221
Not stated	—	222	—	—	—	—	—	—	222
Total	95,038	72,245	61,021	30,760	19,601	6,280	5,736	3,859	294,540
Per cent									
Non-instrumental vaginal	58.6	54.8	57.5	52.6	55.7	64.5	59.5	63.4	56.8
Forceps	3.6	5.9	1.8	2.7	4.6	1.2	5.8	2.9	3.7
Vacuum extraction	7.6	8.1	7.3	11.5	7.2	5.5	6.8	5.1	7.9
Caesarean section	30.2	31.3	33.3	33.3	32.4	28.8	27.9	28.6	31.5
<i>Labour</i>	12.7	12.8	12.8	13.4	14.5	14.6	11.4	13.7	13.0
<i>No labour</i>	17.5	18.2	20.5	19.9	17.9	14.3	16.5	14.9	18.4
<i>Not stated</i>	—	0.3	—	—	—	—	—	—	0.1
Not stated	—	0.3	—	—	—	—	—	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For these four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, 26.9% of ACT resident women had a caesarean section compared with 33.4% of non-ACT residents who gave birth in the ACT.

Notes:

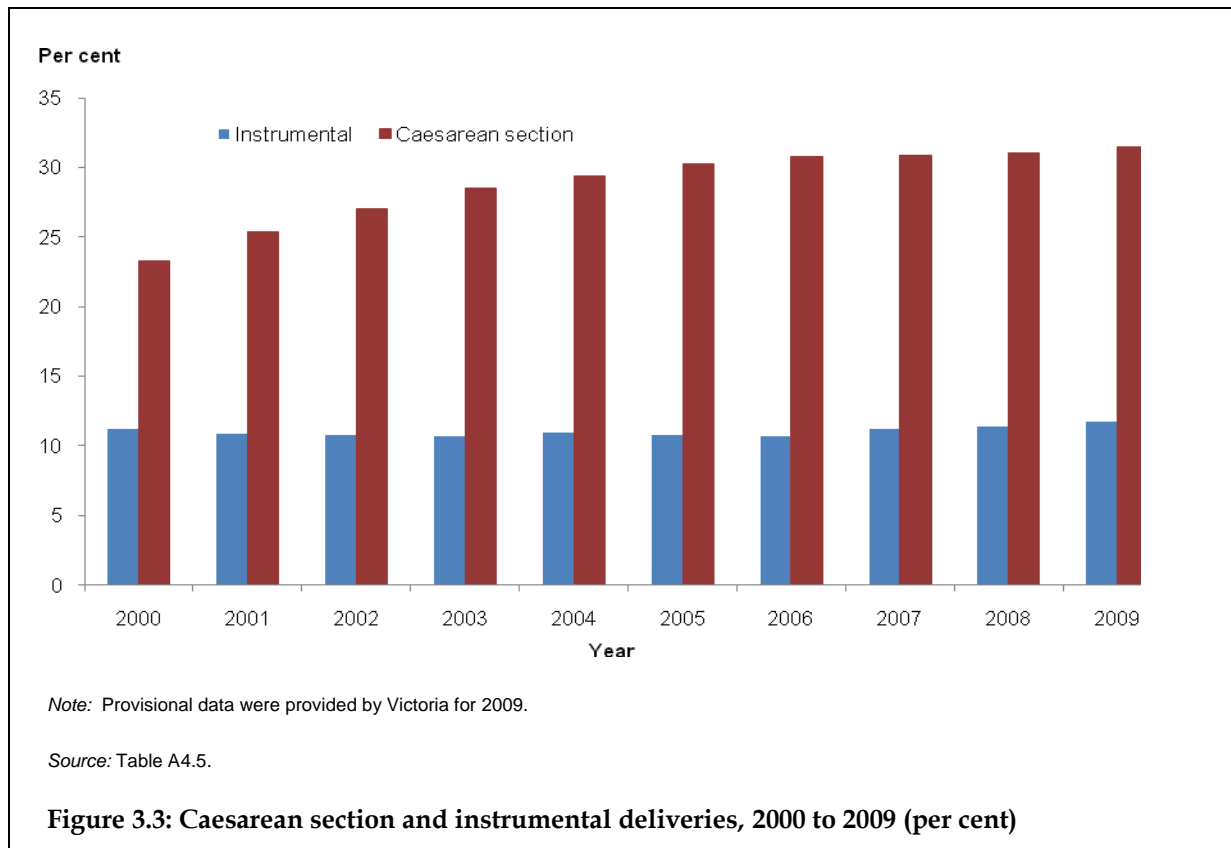
1. For multiple births, the method of birth of the first born baby was used.
2. Provisional data were provided by Victoria for this table.

Caesarean sections

There were 92,687 caesarean sections performed in 2009. Of all women who gave birth, 18.4% had a caesarean section without labour, while 13.0% had a caesarean section with labour.

The proportion of caesarean section deliveries varied by state and territory, ranging from 27.9% in the Australian Capital Territory to 33.3% in both Queensland and Western Australia (Table 3.26).

The caesarean section rate has shown an upward trend over the last 10 years, increasing from 23.3% nationally in 2000 to a peak of 31.5% in 2009. In contrast, the proportion of instrumental deliveries has remained stable at around 11.0% throughout this period (Figure 3.3).



Directly age-standardised rates of caesarean section were calculated for states and territories for 2009, using as the standard, all women who gave birth in 2009. The age-standardised rates of caesarean section varied by state and territory, ranging from 27.2% in the Australian Capital Territory to 34.3% in Queensland (Table 3.27).

Table 3.27: Women who gave birth by caesarean section, by age and state and territory, 2009

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Younger than 20	579	259	593	277	160	86	23	84	2,061
20–24	2,535	1,650	2,434	1,124	784	262	122	196	9,107
25–29	6,719	5,052	5,157	2,540	1,655	484	347	297	22,251
30–34	9,796	7,950	6,628	3,405	2,011	506	587	306	31,189
35–39	7,298	6,017	4,466	2,320	1,426	382	414	171	22,494
40 and over	1,784	1,530	1,058	575	320	89	110	51	5,517
Not stated	3	65	—	—	—	—	—	—	68
Total	28,714	22,523	20,336	10,241	6,356	1,809	1,603	1,105	92,687
Per cent									
Younger than 20	2.0	1.1	2.9	2.7	2.5	4.8	1.4	7.6	2.2
20–24	8.8	7.3	12.0	11.0	12.3	14.5	7.6	17.7	9.8
25–29	23.4	22.4	25.4	24.8	26.0	26.8	21.6	26.9	24.0
30–34	34.1	35.3	32.6	33.2	31.6	28.0	36.6	27.7	33.6
35–39	25.4	26.7	22.0	22.7	22.4	21.1	25.8	15.5	24.3
40 and over	6.2	6.8	5.2	5.6	5.0	4.9	6.9	4.6	6.0
Not stated	0.0	0.3	—	—	—	—	—	—	0.1
Total	100	100.0	100.0	100.0	100.0	100	100.0	100.0	100
Age-standardised rate^(a)									
Rate	29.9	30.2	34.3	33.8	32.7	30.2	^(b) 27.2	30.3	—

(a) Directly age-standardised using the Australian population of women who gave birth in 2009.

(b) The ACT rate includes non-ACT residents who gave birth in the ACT. Therefore the rate is a health service population rate rather than an ACT population rate.

Notes:

1. For multiple births, the method of birth of the first-born baby was used.
2. Provisional data were provided by Victoria for this table.

Information about the main reason for carrying out a caesarean section is presented in Table 3.28 for Queensland, South Australia, Tasmania and the Northern Territory. These data are not part of the Perinatal NMDS and should be examined independently for each state and territory as the data are not standard across jurisdictions. The table shows that data were not available or coded to the 'Other' category for a substantial proportion of caesarean sections. A history of repeat/previous caesarean section was the leading reason reported for caesarean section (range 32.7% to 37.0%). There was no separate category for patient choice in the data presented.

Table 3.28: Women who gave birth by caesarean section, by main reason for caesarean section and state and territory, 2009^(a)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	Number							
Previous caesarean section	n.p.	n.r.	7,520	n.a.	2,262	606	n.a.	361
Fetal distress	n.p.	n.r.	2,130	n.a.	786	331	n.a.	153
Malpresentation	n.p.	n.r.	1,836	n.a.	636	177	n.a.	156
Antepartum haemorrhage	n.p.	n.r.	531	n.a.	133	—	n.a.	30
Hypertension/ pre-eclampsia	n.p.	n.r.	495	n.a.	147	—	n.a.	—
Multiple pregnancy	n.p.	n.r.	275	n.a.	92	—	n.a.	—
Intrauterine growth restriction	n.p.	n.r.	176	n.a.	50	—	n.a.	—
Other ^(b)	n.p.	n.r.	7,373	n.a.	2,250	695	n.a.	345
Not stated	n.p.	n.r.	—	n.a.	—	—	n.a.	—
Total	n.p.	n.r.	20,336	n.a.	6,356	1,809	n.a.	1,105
	Per cent							
Previous caesarean section	n.p.	n.r.	37.0	n.a.	35.6	33.5	n.a.	32.7
Fetal distress	n.p.	n.r.	10.5	n.a.	12.4	18.3	n.a.	13.8
Malpresentation	n.p.	n.r.	9.0	n.a.	10.0	9.8	n.a.	14.1
Antepartum haemorrhage	n.p.	n.r.	2.6	n.a.	2.1	—	n.a.	2.7
Hypertension/ pre-eclampsia	n.p.	n.r.	2.4	n.a.	2.3	—	n.a.	—
Multiple pregnancy	n.p.	n.r.	1.4	n.a.	1.4	—	n.a.	—
Intrauterine growth restriction	n.p.	n.r.	0.9	n.a.	0.8	—	n.a.	—
Other ^(b)	n.p.	n.r.	36.3	n.a.	35.4	38.4	n.a.	31.2
Not stated	n.p.	n.r.	—	n.a.	—	—	n.a.	—
Total	n.p.	n.r.	100.0	n.a.	100.0	100.0	n.a.	100.0

(a) Because of differences in definitions used and methods of data collection these data are not comparable across jurisdictions.

(b) Includes failure to progress/cephalopelvic disproportion, psychosocial/elective/patient choice and other reasons.

n.a. Data not available.

n.p. Data not published as complete data were not available in a comparable format.

n.r. Data not received at the time of publication.

Method of birth and maternal age

Table 3.29 presents methods of birth by maternal age groups. Non-instrumental vaginal birth was most common for women younger than 20 (70.3%) and declined progressively with increasing maternal age. The proportion of instrumental vaginal births was highest in the 25–29 years age group (13.0%).

Caesarean section rates increased with advancing maternal age. In 2009, caesarean section rates ranged from 17.5% for mothers younger than 20 to 47.2% for mothers aged 40 and over (Table 3.29).

Table 3.29: Method of birth, by maternal age, 2009

Method of birth	Younger than 20	20–24	25–29	30–34	35–39	40 and over	Not stated	Total
Number								
Non-instrumental vaginal ^(a)	8,269	28,281	47,805	50,014	27,526	5,179	128	167,202
Forceps	381	1,409	3,359	3,754	1,788	309	15	11,015
Vacuum extraction	1,049	3,133	7,107	7,688	3,748	671	18	23,414
Caesarean section	2,061	9,107	22,251	31,189	22,494	5,517	68	92,687
Not stated	8	35	45	61	54	11	8	222
Total	11,768	41,965	80,567	92,706	55,610	11,687	237	294,540
Per cent								
Non-instrumental vaginal ^(a)	70.3	67.4	59.3	54.0	49.5	44.3	54.0	56.8
Forceps	3.2	3.4	4.2	4.1	3.2	2.6	6.3	3.7
Vacuum extraction	8.9	7.5	8.8	8.3	6.7	5.7	7.6	8.0
Caesarean section	17.5	21.7	27.6	33.6	40.5	47.2	28.7	31.5
Not stated	0.1	0.1	0.1	0.1	0.1	0.1	3.4	0.1
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) For four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

Notes:

1. For multiple births, the method of birth of the first born baby was used.
2. Provisional data were provided by Victoria for this table.

Method of birth and Indigenous status

Mothers who identified as being of Aboriginal or Torres Strait Islander origin had a higher proportion of non-instrumental vaginal births than non-Indigenous mothers (68.6% compared with 56.3%) and a lower proportion of instrumental vaginal deliveries (forceps or vacuum extraction). The caesarean section rate of 25.2% for mothers who identified as Aboriginal or Torres Strait Islander was less than that for non-Indigenous mothers (31.7%) (Table 3.30). This may be partially explained by the younger age of Indigenous mothers, which averaged 25.3 years.

Table 3.30: Women who gave birth, by Indigenous status, method of birth and state and territory, 2009

Indigenous status ^(a) / method of birth	NSW ^(b)	Vic ^(b)	Qld	WA ^(b)	SA	Tas	ACT ^(c)	NT ^(b)	Australia
Indigenous									
Number									
Non-instrumental vaginal	2,007	568	2,302	1,211	361	197	75	1,025	7,746
Instrumental vaginal ^(d)	190	74	161	123	46	15	10	79	698
Caesarean section	707	194	869	404	200	72	22	370	2,838
Not stated	—	2	—	—	—	—	—	—	2
Total	2,904	838	3,332	1,738	607	284	107	1,474	11,284
Per cent									
Non-instrumental vaginal	69.1	67.8	69.1	69.7	59.5	69.4	70.1	69.5	68.6
Instrumental vaginal ^(d)	6.5	8.8	4.8	7.1	7.6	5.3	9.3	5.4	6.2
Caesarean section	24.3	23.2	26.1	23.2	32.9	25.4	20.6	25.1	25.2
Not stated	—	0.2	—	—	—	—	—	—	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Non-Indigenous									
Number									
Non-instrumental vaginal	53,592	38,257	32,778	14,955	10,562	3,855	3,324	1,417	158,740
Instrumental vaginal ^(d)	10,398	9,881	5,424	4,230	2,276	404	709	224	33,546
Caesarean section	27,968	21,994	19,463	9,837	6,156	1,737	1,568	728	89,451
Not stated	—	196	—	—	—	—	—	—	196
Total	91,958	70,328	57,665	29,022	18,994	5,996	5,601	2,369	281,933
Per cent									
Non-instrumental vaginal	58.3	54.4	56.8	51.5	55.6	64.3	59.3	59.8	56.3
Instrumental vaginal ^(d)	11.3	14.0	9.4	14.6	12.0	6.7	12.7	9.5	11.9
Caesarean section	30.4	31.3	33.8	33.9	32.4	29.0	28.0	30.7	31.7
Not stated	—	0.3	—	—	—	—	—	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Indigenous status 'Not stated' not included.

(b) For these four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

(c) 24.3% of Aboriginal and Torres Strait Islander women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, 17.3% of ACT resident Indigenous women had a caesarean section compared with 30.8% of non-ACT resident Indigenous women who gave birth in the ACT.

(d) Instrumental vaginal birth includes forceps and vacuum extraction.

Notes:

1. For multiple births, the method of birth of the first born baby was used.
2. Provisional data were provided by Victoria for this table.

Age-specific rates of caesarean section were calculated by Indigenous status (Table 3.31). For those younger than 20, and those aged 20-24, the rate of caesarean section for Aboriginal and Torres Strait Islander mothers was higher than for non-Indigenous mothers. For mothers aged 25 and over, the rate of caesarean section was lower for Indigenous mothers than for non-Indigenous mothers (Table 3.31).

Table 3.31: Women who gave birth by caesarean section, by Indigenous status and age, 2009

	Younger than 20	20-24	25-29	30-34	35-39	40 and over	Not stated	Total
Number								
Indigenous	413	848	708	501	287	81	—	2,838
Non-Indigenous	1,640	8,214	21,447	30,558	22,117	5,411	64	89,451
Not stated	8	45	96	130	90	25	4	398
Total	2,061	9,107	22,251	31,189	22,494	5,517	68	92,687
Age-specific rate								
Indigenous	18.7	23.4	26.3	29.7	32.6	42.2	—	25.2
Non-Indigenous	17.3	21.5	27.7	33.7	40.6	47.3	29.5	31.7

Note:

1. For multiple births, the method of birth of the first born baby was used.
2. Provisional data were provided by Victoria for this table.

Primary caesarean sections

The rate of primary caesarean section varied by parity with 32.8% of primiparous women giving birth by caesarean section compared with 10.2% of multiparous women. The rate of caesarean section for primiparous women ranged from 28.8% in the Northern Territory to 34.8% in Western Australia. The overall rate for women without a history of previous caesarean section was 21.6% (Table 3.32).

Table 3.32: Primary caesarean sections, by parity and state and territory, 2009

Parity	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
Primiparas	12,858	n.r.	8,388	4,484	2,657	752	727	458	30,324
Multiparas ^(a)	3,742	n.r.	2,774	1,319	849	291	129	179	9,283
Total	16,600	n.r.	11,162	5,803	3,506	1,043	856	637	39,607
Primary caesarean section rate									
Primiparas	31.9	n.r.	34.0	34.8	32.6	29.7	28.8	31.0	32.8
Multiparas ^(a)	9.7	n.r.	10.9	10.3	10.6	10.3	8.9	10.3	10.2
Total	21.0	n.r.	22.2	22.6	21.7	19.5	21.5	19.9	21.6

(a) Only includes multiparous women who had not previously had a caesarean section.

n.r. Data not received at the time of publication.

Note: For multiple births, the method of birth of the first born baby was used.

Method of birth and previous caesarean section

In 2009, 13.3% of mothers who had previously had a caesarean section had a non-instrumental vaginal birth, and 3.1% had an instrumental vaginal birth. Repeat caesarean sections occurred for 83.6% of mothers with a history of caesarean section, and ranged from 71.8% in the Northern Territory to 87.1% in Western Australia (Table 3.33).

Table 3.33: Multiparous mothers who had previous caesarean section, by current method of birth and state and territory, 2009

Method of birth	NSW ^(a)	Vic	Qld	WA ^(a)	SA	Tas	ACT	NT ^(a)	Total
Number									
Non-instrumental vaginal	2,001	n.r.	1,405	498	476	142	116	164	4,802
Instrumental vaginal ^(b)	510	n.r.	249	159	144	19	30	19	1,130
Caesarean section	11,956	n.r.	9,174	4,438	2,850	766	528	467	30,179
Not stated	—	n.r.	—	—	—	—	—	—	—
Total	14,467	n.r.	10,828	5,095	3,470	927	674	650	36,111
Per cent									
Non-instrumental vaginal	13.8	n.r.	13.0	9.8	13.7	15.3	17.2	25.2	13.3
Instrumental vaginal ^(b)	3.5	n.r.	2.3	3.1	4.1	2.0	4.5	2.9	3.1
Caesarean section	82.6	n.r.	84.7	87.1	82.1	82.6	78.3	71.8	83.6
Not stated	—	n.r.	—	—	—	—	—	—	—
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For these three jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

(b) Instrumental vaginal birth includes forceps and vacuum extraction.

n.r. Data not received at the time of publication.

Note: For multiple births, the method of birth of the first born baby was used.

In 2009, the rate of caesarean section for women giving birth to term singletons ranged from 46.2% at 38 weeks gestation to 17.9% at 40 weeks gestation, and was 30.2% overall. Caesarean section in labour was most common at 41 weeks. The rate of no labour caesarean section peaked at 38 weeks at 35.9% (Table 3.34).

Table 3.34: Women who gave birth to term singleton babies and had a caesarean section, by gestational age and onset of labour, 2009

Gestational age	Labour	No labour	Not stated	Total
Number				
37	2,557	4,297	14	6,868
38	5,537	19,630	86	25,253
39	7,333	17,751	62	25,146
40	10,254	3,968	17	14,239
41	7,901	1,501	10	9,412
Total	33,582	47,147	189	80,918
Per cent				
37	14.6	24.5	0.1	39.1
38	10.1	35.9	0.2	46.2
39	9.7	23.4	0.1	33.2
40	12.9	5.0	0.0	17.9
41	19.7	3.7	0.0	23.5
Total	12.5	17.6	0.1	30.2

Note: Provisional data were provided by Victoria for this table.

Perineal status after vaginal birth

In 2009, about 1 in 3 mothers (29.5%) had an intact perineum following vaginal birth. A first or second degree laceration or graze was reported in 48.2% of women after vaginal birth. A third or fourth degree laceration of the perineum was reported in 1.7% of vaginal births. This proportion varied among the states and territories, from 1.1% in Tasmania to 3.0% in the Australian Capital Territory. An episiotomy only was performed for 12.7% of vaginal births, with the highest rate being recorded in New South Wales (13.8%). A combined laceration and episiotomy occurred in 2.9% of women who had a vaginal birth, giving a total of 15.6% of women who had a vaginal birth having an episiotomy (Table 3.35).

Table 3.35: Women who gave birth vaginally, by perineal status and state and territory, 2009

Perineal status	NSW	Vic	Qld	WA	SA	Tas ^(a)	ACT	NT	Total
	Number								
Episiotomy	9,134	n.r.	4,778	2,595	1,608	566	380	297	19,358
Intact	16,297	n.r.	12,325	7,799	3,723	2,216	1,350	1,191	44,901
1st degree laceration/ vaginal graze	18,857	n.r.	6,907	3,242	3,318	700	685	620	34,329
2nd degree laceration	17,528	n.r.	10,014	4,759	3,665	940	1,546	520	38,972
3rd/4th degree laceration	1,074	n.r.	666	413	269	49	125	53	2,649
Combined laceration and episiotomy	2,040	n.r.	563	1,060	631	—	47	38	4,379
Other	^(b) 1,391	n.r.	5,431	^(c) 651	31	—	—	34	7,538
Not stated	3	n.r.	1	—	—	—	—	1	5
Total	66,324	n.r.	40,685	20,519	13,245	4,471	4,133	2,754	152,131
	Per cent								
Episiotomy	13.8	n.r.	11.7	12.6	12.1	12.7	9.2	10.8	12.7
Intact	24.6	n.r.	30.3	38.0	28.1	49.6	32.7	43.2	29.5
1st degree laceration/ vaginal graze	28.4	n.r.	17.0	15.8	25.1	15.7	16.6	22.5	22.6
2nd degree laceration	26.4	n.r.	24.6	23.2	27.7	21.0	37.4	18.9	25.6
3rd/4th degree laceration	1.6	n.r.	1.6	2.0	2.0	1.1	3.0	1.9	1.7
Combined laceration and episiotomy	3.1	n.r.	1.4	5.2	4.8	—	1.1	1.4	2.9
Other	^(b) 2.1	n.r.	13.3	^(c) 3.2	0.2	—	—	1.2	5.0
Not stated	0.0	n.r.	0.0	—	—	—	—	0.0	0.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For Tas, cases where both a laceration and episiotomy occurred were coded as Episiotomy.

(b) Includes unspecified perineal tear and vulval or perineal haematoma.

(c) Includes cases where the perineum was intact but a graze was reported.

n.r. Data not received at the time of publication.

Note: For multiple births, the perineal status after the birth of the first born baby was used.

Pre-existing and pregnancy-related medical conditions

Table 3.36 presents information on pre-existing conditions and complications arising in pregnancy for women who gave birth in all jurisdictions except Victoria. These data are not part of the Perinatal NMDS and should be examined independently for each state and territory, as they are not standard across jurisdictions. The pre-existing essential hypertension rates ranged from 6.0 per 1,000 women in Queensland to 16.6 per 1,000 women in Tasmania. The rate of fetal distress varied by state and territory, and ranged from 10.7 per 1,000 women in Tasmania to 191.4 per 1,000 women in Queensland. This may reflect the relevant definitions as well as variability in the practices and protocols used to assess the conditions. The rate for gestational diabetes ranged from 36.6 per 1,000 women in Tasmania to 62.5 per 1,000 women in the Northern Territory.

Table 3.36: Women who gave birth, by selected maternal medical and obstetric conditions and state and territory, 2009^(a)

Medical condition or complication	NSW	Vic	Qld	WA	SA	Tas	ACT ^(b)	NT
	Number							
Essential hypertension	756	n.r.	364	359	216	104	65	53
Diabetes mellitus	525	n.r.	349	234	126	39	104	48
Epilepsy	n.a.	n.r.	300	158	109	33	27	15
Antepartum haemorrhage	n.a.	n.r.	1,594	1,082	671	140	230	74
Placenta praevia	n.a.	n.r.	447	191	116	21	61	n.a.
Abruptio placenta	n.a.	n.r.	305	105	106	22	16	n.a.
Other	n.a.	n.r.	842	786	449	97	153	n.a.
Pregnancy-induced hypertension	6,153	n.r.	3,154	179	1,395	348	136	n.a.
Gestational diabetes	5,157	n.r.	3,251	1,555	1,083	230	290	241
Fetal distress	n.a.	n.r.	11,679	4,124	2,334	67	575	380
Cord prolapse	n.a.	n.r.	94	53	22	5	5	<5
Postpartum haemorrhage	970	n.r.	3,310	3,935	2,071	241	517	542
Retained placenta	n.a.	n.r.	698	344	286	56	73	43
	Rate per 1,000 women who gave birth							
Essential hypertension	8.0	n.r.	6.0	11.7	11.0	16.6	11.3	13.7
Diabetes mellitus	5.5	n.r.	5.7	7.6	6.4	6.2	18.1	12.4
Epilepsy	n.a.	n.r.	4.9	5.1	5.6	5.3	4.7	3.9
Antepartum haemorrhage	n.a.	n.r.	26.1	35.2	34.2	22.3	40.1	19.2
Placenta praevia	n.a.	n.r.	7.3	6.2	5.9	3.3	10.6	n.a.
Abruptio placenta	n.a.	n.r.	5.0	3.4	5.4	3.5	2.8	n.a.
Other	n.a.	n.r.	13.8	25.6	22.9	15.4	26.7	n.a.
Pregnancy-induced hypertension	64.7	n.r.	51.7	5.8	71.2	55.4	23.7	n.a.
Gestational diabetes	54.3	n.r.	53.3	50.6	55.3	36.6	50.6	62.5
Fetal distress	n.a.	n.r.	191.4	134.1	119.1	10.7	100.2	98.5
Cord prolapse	n.a.	n.r.	1.5	1.7	1.1	0.8	0.9	n.p.
Postpartum haemorrhage	10.2	n.r.	54.2	127.9	105.7	38.4	90.1	140.5
Retained placenta	n.a.	n.r.	11.4	11.2	14.6	8.9	12.7	11.1

(a) Because of differences in definitions and methods used for data collection these data are not comparable across jurisdictions.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting rates. The ACT uses broader inclusion criteria for these conditions and data are collected from multiple sources.

n.a. Data not available.

n.p. Data not published to maintain confidentiality of small numbers.

n.r. Data not received at the time of publication.

Women who gave birth in hospitals

Hospitals and birth centres

Hospitals and birth centres were categorised by the number of women who gave birth in them in 2009. The categories vary from those with very few births each year to those with more than 2,000 births, and are affected by geographical location, the population of the region and policies regarding maternity services. Table 3.37 presents the number of hospitals or birth centres in each category by state and territory. In 2009, 36.8% of the hospitals or birth centres had 100 or fewer women who gave birth, and 11.7% had more than 2,000 women who gave birth. There has been a decrease in the number of hospitals or birth centres with 1–100 and 101–500 women who gave birth, from 232 and 151 respectively in 2000 to 145 and 103 in 2009.

Table 3.37: Hospitals and birth centres, by number of women who gave birth and state and territory, 2009

Number of women who gave birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Number								
1–100	23	24	54	19	21	3	—	1	145
101–500	34	23	21	9	13	1	—	2	103
501–1,000	14	12	7	4	4	3	1	2	47
1,001–2,000	16	13	12	5	2	2	2	1	53
2,001 and over	18	11	10	2	3	1	1	—	46
Total	105	83	104	39	43	10	4	6	394
	Per cent								
1–100	21.9	28.9	51.9	48.7	48.8	30.0	—	16.7	36.8
101–500	32.4	27.7	20.2	23.1	30.2	10.0	—	33.3	26.1
501–1,000	13.3	14.5	6.7	10.3	9.3	30.0	25.0	33.3	11.9
1,001–2,000	15.2	15.7	11.5	12.8	4.7	20.0	50.0	16.7	13.5
2,001 and over	17.1	13.3	9.6	5.1	7.0	10.0	25.0	—	11.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

1. In some jurisdictions, a birth centre and co-located hospital labour ward would be considered as one maternity unit.
2. Provisional data were provided by Victoria for this table.

Hospital sector

'Hospital sector' indicates whether a patient was admitted to a public or a private hospital. Of women who gave birth in hospitals in 2009, the proportion in private hospitals was 30.1%, ranging from 20.7% in the Northern Territory to 41.6% in Western Australia (Table 3.38).

Table 3.38: Women who gave birth in hospital, by hospital sector and state and territory, 2009

Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Public	67,415	n.r.	41,624	17,568	13,174	4,042	3,457	2,877	150,157
Private	24,145	n.r.	18,328	12,495	5,050	2,108	1,894	751	64,771
Not stated	—	n.r.	—	—	—	2	—	—	2
Total	91,560	n.r.	59,952	30,063	18,224	6,152	5,351	3,628	214,930
Per cent									
Public	73.6	n.r.	69.4	58.4	72.3	65.7	64.6	79.3	69.9
Private	26.4	n.r.	30.6	41.6	27.7	34.3	35.4	20.7	30.1
Not stated	—	n.r.	—	—	—	—	—	—	—
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

n.r. Data not received at the time of publication.

Admitted patient election status

'Admitted patient election status' is the accommodation chargeable status elected by a patient on admission to hospital. Of women who gave birth in hospitals in 2009, the proportion who elected private status (i.e. elected to be treated as a private patient) was 33.5%, ranging from 22.8% in the Northern Territory to 38.4% in Western Australia (Table 3.39).

Table 3.39: Women who gave birth in hospital, by admitted patient election status and state and territory, 2009

Admitted patient election status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Public	57,633	n.r.	40,332	18,422	12,096	4,386	3,354	2,796	139,019
Private	30,165	n.r.	19,620	11,554	6,128	1,764	1,995	826	72,052
Not stated	3,762	n.r.	—	87	—	2	2	6	3,859
Total	91,560	n.r.	59,952	30,063	18,224	6,152	5,351	3,628	214,930
Per cent									
Public	62.9	n.r.	67.3	61.3	66.4	71.3	62.7	77.1	64.7
Private	32.9	n.r.	32.7	38.4	33.6	28.7	37.3	22.8	33.5
Not stated	4.1	n.r.	—	0.3	—	0.0	0.0	0.2	1.8
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

n.r. Data not received at the time of publication.

Method of birth and hospital sector

Method of birth for women who gave birth in hospitals was compared by hospital sector and state and territory (Table 3.40). Women who gave birth in public hospitals reported higher levels of non-instrumental vaginal birth than those in private hospitals (61.5% compared with 43.4%). Private hospital patients had higher proportions than public hospital patients of vaginal births requiring forceps (3.6% compared with 3.0%) or vacuum extraction (10.5% compared with 7.1%) (Table 3.40).

Of women who gave birth in public hospitals, the highest rate of forceps deliveries was in the Australian Capital Territory (6.1%), and of those in private hospitals, the highest rate of forceps deliveries was in the Northern Territory (6.7%). Vacuum extraction was most common for both public and private hospitals in Western Australia.

Of women who gave birth in hospitals in Australia in 2009, 32.6% had a caesarean section delivery. The caesarean section rate of 42.5% for women in private hospitals was higher than the rate of 28.4% for those in public hospitals. The highest rate of caesarean section deliveries in private hospitals was in Queensland (47.9%), followed by Western Australia (41.8%) and Northern Territory (41.0%) (Table 3.40).

Table 3.40: Women who gave birth in hospital, by method of birth, hospital sector and state and territory, 2009

Hospital sector/ method of birth	NSW ^(a)	Vic ^(a)	Qld	WA ^(a)	SA	Tas	ACT ^(b)	NT ^(a)	Australia
Public	Number								
Non-instrumental vaginal	41,357	n.r.	26,658	10,360	7,260	2,697	2,170	1,889	92,391
Forceps	2,373	n.r.	601	538	630	23	211	62	4,438
Vacuum extraction	4,708	n.r.	2,812	1,654	970	214	191	130	10,679
Caesarean section	18,977	n.r.	11,553	5,016	4,314	1,108	885	796	42,649
Total	67,415	n.r.	41,624	17,568	13,174	4,042	3,457	2,877	150,157
	Per cent								
Non-instrumental vaginal	61.3	n.r.	64.0	59.0	55.1	66.7	62.8	65.7	61.5
Forceps	3.5	n.r.	1.4	3.1	4.8	0.6	6.1	2.2	3.0
Vacuum extraction	7.0	n.r.	6.8	9.4	7.4	5.3	5.5	4.5	7.1
Caesarean section	28.1	n.r.	27.8	28.6	32.7	27.4	25.6	27.7	28.4
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private	Number								
Non-instrumental vaginal	10,923	n.r.	7,371	5,110	2,316	1,225	856	328	28,129
Forceps	997	n.r.	523	292	270	52	123	50	2,307
Vacuum extraction	2,488	n.r.	1,651	1,868	422	130	197	65	6,821
Caesarean section	9,737	n.r.	8,783	5,225	2,042	701	718	308	27,514
Total	24,145	n.r.	18,328	12,495	5,050	2,108	1,894	751	64,771
	Per cent								
Non-instrumental vaginal	45.2	n.r.	40.2	40.9	45.9	58.1	45.2	43.7	43.4
Forceps	4.1	n.r.	2.9	2.3	5.3	2.5	6.5	6.7	3.6
Vacuum extraction	10.3	n.r.	9.0	14.9	8.4	6.2	10.4	8.7	10.5
Caesarean section	40.3	n.r.	47.9	41.8	40.4	33.3	37.9	41.0	42.5
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

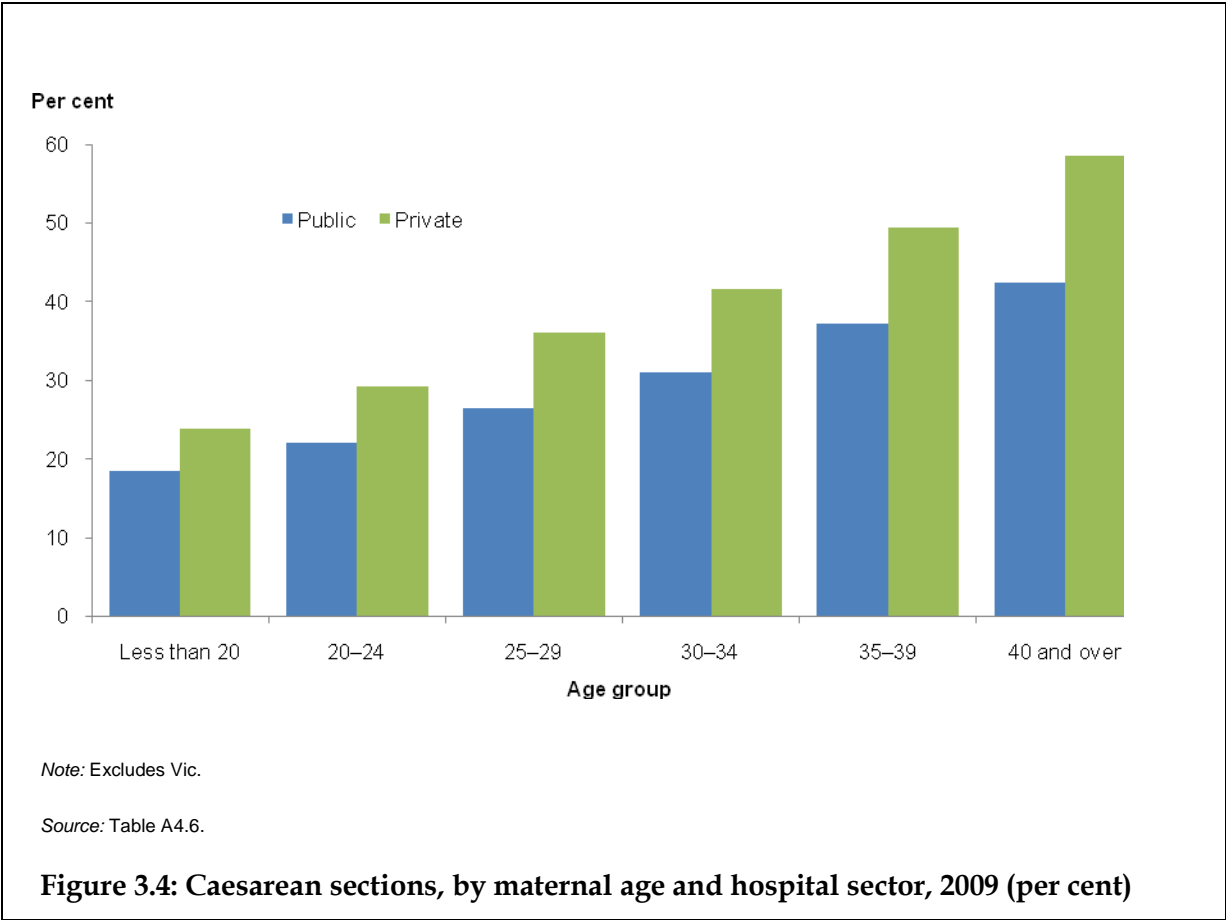
(a) For these four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages.

n.r. Data not received at the time of publication.

Note: For multiple births, the method of birth of the first born baby was used.

Caesarean section rates were higher in private hospitals than in public hospitals across all age groups. Figure 3.4 shows the differences by age group and hospital sector. The caesarean section rate for mothers aged 35–39 who gave birth in private hospitals was 49.4% compared with 37.1% for those in public hospitals. Of mothers aged 40 or more, 58.5% in private hospitals had a caesarean section compared with 42.4% of similarly aged mothers in public hospitals.



Length of stay in hospital

Antenatal length of stay

Two-thirds of women (66.3%) gave birth within a day of admission to hospital. The proportion of women who gave birth within two days of admission was 93.3%. Only 0.8% of mothers were hospitalised for seven days or more immediately before giving birth (Table 3.41).

Table 3.41: Women who gave birth in hospital, by length of antenatal stay and state and territory, 2009

Length of stay	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Less than 1 day	59,226	n.r.	41,467	20,096	11,569	4,228	3,433	2,393	142,412
1 day	24,918	n.r.	15,326	8,280	5,446	1,588	1,573	908	58,039
2–6 days	4,676	n.r.	2,766	1,359	967	303	320	297	10,688
7–13 days	468	n.r.	257	130	112	26	16	23	1,032
14 or more days	295	n.r.	136	111	130	7	9	7	695
Not stated	1,977	n.r.	—	87	—	—	—	—	2,064
Total	91,560	n.r.	59,952	30,063	18,224	6,152	5,351	3,628	214,930
Per cent									
Less than 1 day	64.7	n.r.	69.2	66.8	63.5	68.7	64.2	66.0	66.3
1 day	27.2	n.r.	25.6	27.5	29.9	25.8	29.4	25.0	27.0
2–6 days	5.1	n.r.	4.6	4.5	5.3	4.9	6.0	8.2	5.0
7–13 days	0.5	n.r.	0.4	0.4	0.6	0.4	0.3	0.6	0.5
14 or more days	0.3	n.r.	0.2	0.4	0.7	0.1	0.2	0.2	0.3
Not stated	2.2	n.r.	—	0.3	—	—	—	—	1.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

n.r. Data not received at the time of publication.

Postnatal length of stay

In 2009, the median postnatal hospital stay for mothers was 3.0 days. (Table 3.42). 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 2009, 16.7% of mothers were discharged less than two days after giving birth, and 62.7% of mothers were discharged between two and four days after giving birth (Table 3.42). This compares with 11.4% and 58.9% respectively in 2000. Relatively more mothers in Queensland (85.8%) and the Australian Capital Territory (82.0%) had stays of less than five days in 2009. Longer lengths of stay (of five or more days) were relatively more common in the Northern Territory.

Table 3.42: Women who gave birth in hospital^(a), by length of postnatal stay and state and territory, 2009

Length of stay	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Median (days)	3.0	n.r.	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Number								
Less than 1 day	2,516	n.r.	2,280	886	434	223	238	182	6,759
1 day	11,535	n.r.	10,073	3,528	1,694	668	664	378	28,540
2 days	18,676	n.r.	13,358	4,935	3,279	1,204	1,053	637	43,142
3 days	19,116	n.r.	13,333	5,888	3,628	1,421	1,166	655	45,207
4 days	18,685	n.r.	11,955	5,664	4,614	1,135	1,197	587	43,837
5 days	11,793	n.r.	6,188	4,268	2,897	722	709	458	27,035
6 days	3,418	n.r.	1,395	2,442	871	296	156	195	8,773
7–13 days	2,060	n.r.	801	1,626	417	153	n.p.	n.p.	5,382
14 or more days	71	n.r.	38	37	17	29	<5	n.p.	217
Not stated	1,934	n.r.	—	—	—	—	—	—	1,934
Total	89,804	n.r.	59,421	29,274	17,851	5,851	5,265	3,360	210,826
	Per cent								
Less than 1 day	2.8	n.r.	3.8	3.0	2.4	3.8	4.5	5.4	3.2
1 day	12.8	n.r.	17.0	12.1	9.5	11.4	12.6	11.3	13.5
2 days	20.8	n.r.	22.5	16.9	18.4	20.6	20.0	19.0	20.5
3 days	21.3	n.r.	22.4	20.1	20.3	24.3	22.1	19.5	21.4
4 days	20.8	n.r.	20.1	19.3	25.8	19.4	22.7	17.5	20.8
5 days	13.1	n.r.	10.4	14.6	16.2	12.3	13.5	13.6	12.8
6 days	3.8	n.r.	2.3	8.3	4.9	5.1	3.0	5.8	4.2
7–13 days	2.3	n.r.	1.3	5.6	2.3	2.6	n.p.	n.p.	2.6
14 or more days	0.1	n.r.	0.1	0.1	0.1	0.5	n.p.	n.p.	0.1
Not stated	2.2	n.r.	—	—	—	—	—	—	0.9
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Only includes mothers who were discharged home.

n.p. Data not published to maintain confidentiality of small numbers.

n.r. Data not received at the time of publication.

Note: For multiple births, the length of stay after the birth of the first born baby was used.

Mothers in private hospitals had a median postnatal length of stay of 4.0 days in 2009, compared with 2.0 days for those in public hospitals. The proportion of women with a postnatal stay of less than five days was 60.2% for those in private hospitals, compared with 87.8% in public hospitals.

Women who had a caesarean section or forceps delivery had a longer median length of stay (4.0 days) than women who had a non-instrumental vaginal birth (2.0 days). The median length of stay for women who had a vacuum extraction delivery was 3.0 days. Of women who had a caesarean section, 5.4% had a postnatal length of stay of seven days or longer (Table 3.43).

Table 3.43: Women who gave birth in hospital^(a), by length of postnatal stay and method of birth, 2009

Length of stay	Non-instrumental vaginal ^(b)	Forceps	Vacuum extraction	Caesarean section	Australia
Median (days)	2.0	4.0	3.0	4.0	3.0
	Number				
Less than 1 day	6,453	n.p.	n.p.	74	6,759
1 day	26,093	400	1,560	487	28,540
2 days	32,446	1,227	3,510	5,959	43,142
3 days	24,546	1,582	4,035	15,044	45,207
4 days	19,608	1,957	4,798	17,474	43,837
5 days	5,446	849	1,937	18,803	27,035
6 days	1,674	274	665	6,160	8,773
7–13 days	1,249	202	397	3,534	5,382
14 or more days	68	<5	n.p.	137	217
Not stated	883	81	149	821	1,934
Total	118,466	6,620	17,247	68,493	210,826
	Per cent				
Less than 1 day	5.4	n.p.	n.p.	0.1	3.2
1 day	22.0	6.0	9.0	0.7	13.5
2 days	27.4	18.5	20.4	8.7	20.5
3 days	20.7	23.9	23.4	22.0	21.4
4 days	16.6	29.6	27.8	25.5	20.8
5 days	4.6	12.8	11.2	27.5	12.8
6 days	1.4	4.1	3.9	9.0	4.2
7–13 days	1.1	3.1	2.3	5.2	2.6
14 or more days	0.1	n.p.	n.p.	0.2	0.1
Not stated	0.7	1.2	0.9	1.2	0.9
Total	100.0	100.0	100.0	100.0	100.0

(a) Only includes mothers who were discharged home.

(b) For four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used.

n.p. Data not published to maintain confidentiality of small numbers.

Note: Excludes Victorian data. For multiple births, the length of stay after the birth of the first born baby and the method of birth of the first born baby were used.

Mode of separation from hospital

Nearly all women who gave birth in hospital were discharged to their homes (98.1%). Around 1.7% of mothers were transferred to another hospital (Table 3.44). This usually occurs for continuing care in a hospital located nearer to the mother's place of residence or for further treatment of complications. The transfers to another hospital occurred more in Tasmania (4.9%) than in the other jurisdictions.

Table 3.44: Women who gave birth in hospital, by mode of separation and state and territory, 2009

Mode of separation	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
Discharge home	89,804	n.r.	59,421	29,274	17,851	5,851	5,265	3,360	210,826
Transfer to another hospital	1,755	n.r.	530	584	371	300	83	60	3,683
Died	n.p.	n.r.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	7
Other ^(a)	n.p.	n.r.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	319
Not stated	—	n.r.	—	87	—	—	3	5	95
Total	91,560	n.r.	59,952	30,063	18,224	6,152	5,351	3,628	214,930
Per cent									
Discharge home	98.1	n.r.	99.1	97.4	98.0	95.1	98.4	92.6	98.1
Transfer to another hospital	1.9	n.r.	0.9	1.9	2.0	4.9	1.6	1.7	1.7
Died	n.p.	n.r.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	0.0
Other ^(a)	n.p.	n.r.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	0.1
Not stated	—	n.r.	—	0.3	—	—	0.1	0.1	0.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Other includes statistical discharges and transfers to accommodation other than acute hospitals, such as hostels and prisons, and mothers discharged against medical advice.

n.p. Data not published to maintain confidentiality of small numbers. Note that in this table <5 cells and some blank cells have been presented as 'n.p.'.

n.r. Data not received at the time of publication.

Homebirths

In 2009, there were 863 planned homebirths, representing 0.3% of all women who gave birth. The highest proportions were in Tasmania (1.4%) (Table 3.14). It is probable that not all homebirths are reported to the perinatal data collections.

The mean age of mothers who gave birth at home was 31.7 years (Table 3.45). The proportion of mothers younger than 20 was 1.6%, and the proportion aged 35 and over was 30.2%. The proportion of mothers who gave birth at home who identified as being of Aboriginal or Torres Strait Islander origin was 1.7%. Most women who gave birth at home were living in Major cities (58.6%) (Table 3.45).

Of mothers who gave birth at home, one-quarter had their first baby (25.0%), and 75.0% were multiparous. The predominant method of birth for 99.5% of women who gave birth at home was non-instrumental vaginal (Table 3.45). The presentation was vertex for 98.1% of women who gave birth at home.

Of babies born at home in 2009, 99.8% were liveborn. The mean birthweight of these liveborn babies was 3,646 grams (Table 3.45). The proportion of liveborn babies of low birthweight born at home was 0.9%, and the proportion of preterm babies born at home was 1.0%.

Table 3.45: Selected characteristics of women who gave birth at home, 2009

Characteristic	Number	Per cent
Women who gave birth	863	—
Mean maternal age	31.7	—
Parity		
None	216	25.0
One	330	38.2
Two	180	20.9
Three	75	8.7
Four or more	62	7.2
Remoteness area of mother's usual residence^(a)		
Major cities	506	58.6
Inner regional	227	26.3
Outer regional	89	10.3
Remote/Very remote	33	3.8
Method of birth		
Non-instrumental vaginal ^(b)	859	99.5
Other	4	0.5
Births	864	—
Birth status		
Live births	862	99.8
Fetal deaths	2	0.2
Sex		
Male	441	51.0
Female	423	49.0
Mean birthweight of live births (g)	3,646.0	—

(a) Excludes mothers not usually resident in Australia and those whose state or territory of usual residence was 'Not stated'.

(b) For four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

Note: Provisional data were provided by Victoria for this table.

4 Babies

Demographic profile

Birth status

Babies are recorded as liveborn or stillborn (fetal deaths) on perinatal notification forms. A live birth is defined as the complete expulsion or extraction from the mother of a baby which, after such separation, breathes or shows any other evidence of life. A fetal death is defined in Australia as a death occurring before the complete expulsion or extraction from the mother of a product of conception of 20 or more completed weeks gestation or 400 grams or more birthweight (AIHW 2010). The scope of the NPDC restricts the inclusion of live births to those that are at least 400 grams birthweight.

There were 296,791 live births and 2,341 fetal deaths in Australia in 2009, with a total of 299,220 births reported to the NPDC (Table 2.1). This equates to a stillbirth rate of 7.5 per 1,000 births.

Month of birth

In 2009, the largest monthly percentage of births occurred in October (8.8%), September and July (both 8.6%). The proportion of October births was highest in Tasmania (9.6%), while the proportion of July and September births was highest in the Australian Capital Territory (Table 4.1).

Table 4.1: Births, by month of birth, 2009

Month	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
January	7,899	5,831	5,127	2,520	1,655	507	453	324	24,316
February	7,526	5,744	5,020	2,503	1,610	491	435	317	23,646
March	8,150	6,153	5,438	2,712	1,703	557	461	328	25,502
April	8,024	5,929	5,278	2,689	1,658	517	492	362	24,949
May	7,954	5,947	5,417	2,588	1,593	550	459	346	24,854
June	7,732	6,090	5,135	2,575	1,676	537	499	338	24,582
July	8,443	6,291	5,343	2,608	1,726	501	527	330	25,769
August	7,921	5,914	5,084	2,490	1,608	563	504	299	24,383
September	8,416	6,284	5,129	2,760	1,698	535	547	301	25,670
October	8,337	6,817	5,186	2,694	1,781	611	517	329	26,272
November	7,952	6,122	4,800	2,483	1,585	520	459	314	24,235
December	8,080	6,366	5,091	2,597	1,605	480	498	325	25,042
Total	96,434	73,488	62,048	31,219	19,898	6,369	5,851	3,913	299,220
Per cent									
January	8.2	7.9	8.3	8.1	8.3	8.0	7.7	8.3	8.1
February	7.8	7.8	8.1	8.0	8.1	7.7	7.4	8.1	7.9
March	8.5	8.4	8.8	8.7	8.6	8.7	7.9	8.4	8.5
April	8.3	8.1	8.5	8.6	8.3	8.1	8.4	9.3	8.3
May	8.2	8.1	8.7	8.3	8.0	8.6	7.8	8.8	8.3
June	8.0	8.3	8.3	8.2	8.4	8.4	8.5	8.6	8.2
July	8.8	8.6	8.6	8.4	8.7	7.9	9.0	8.4	8.6
August	8.2	8.0	8.2	8.0	8.1	8.8	8.6	7.6	8.1
September	8.7	8.6	8.3	8.8	8.5	8.4	9.3	7.7	8.6
October	8.6	9.3	8.4	8.6	9.0	9.6	8.8	8.4	8.8
November	8.2	8.3	7.7	8.0	8.0	8.2	7.8	8.0	8.1
December	8.4	8.7	8.2	8.3	8.1	7.5	8.5	8.3	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Provisional data were provided by Victoria for this table.

Sex

Male births exceeded female births in all states and territories, and accounted for 51.4% of all live births nationally in 2009. This proportion was similar across the states and territories. In 2009, the sex ratio for Australia, defined as the number of male liveborn babies per 100 female liveborn babies, was 106.0 (Table 4.2).

Table 4.2: Live births, by sex and state and territory, 2009

Sex	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Sex ratio (M:F)	104.8	105.0	107.7	105.9	108.2	104.6	113.5	109.3	106.0
	Number								
Males	49,045	37,073	31,935	15,938	10,269	3,230	3,089	2,021	152,600
Females	46,789	35,315	29,663	15,047	9,489	3,087	2,722	1,849	143,961
Indeterminate/ not stated	2	225	3	—	—	—	—	—	230
Total	95,836	72,613	61,601	30,985	19,758	6,317	5,811	3,870	296,791
	Per cent								
Males	51.2	51.1	51.8	51.4	52.0	51.1	53.2	52.2	51.4
Females	48.8	48.6	48.2	48.6	48.0	48.9	46.8	47.8	48.5
Indeterminate/ not stated	0.0	0.3	0.0	—	—	—	—	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Provisional data were provided by Victoria for this table.

For singleton live births, the sex ratio was 106.0 male births per 100 female births. The sex ratio for twins was 106.0 male births per 100 female births and for higher order multiples, 124.3 male births per 100 female births. The sex ratio for all live births was highest in the Australian Capital Territory, at 113.5 male births per 100 female births, and lowest in Tasmania, at 104.6 male per 100 female births.

Babies of Aboriginal and Torres Strait Islander mothers

The 11,824 mothers reported to the NPDC for 2009, who identified as being Aboriginal or Torres Strait Islander gave birth to 11,267 liveborn babies and 147 stillborn babies (fetal deaths). There were 281,933 non-Indigenous mothers who gave birth to 284,225 liveborn and 2,231 stillborn babies (Table 4.3).

Table 4.3: Births, by maternal Indigenous status and state and territory, 2009

Indigenous status ^(a)	NSW	Vic	Qld	WA	SA	Tas	ACT ^(b)	NT	Australia
Aboriginal or Torres Strait Islander									
Fetal deaths	27	21	37	20	8	<5	<5	29	147
Live births	2,904	827	3,335	1,736	610	n.p.	n.p.	1,464	11,267
All births	2,931	848	3,372	1,756	618	288	108	1,493	11,414
Non-Indigenous									
Fetal deaths	569	807	410	214	132	49	36	14	2,231
Live births	92,755	70,733	58,240	29,249	19,148	6,032	5,678	2,390	284,225
All births	93,324	71,540	58,650	29,463	19,280	6,081	5,714	2,404	286,456

(a) Indigenous status 'Not stated' not included.

(b) 24.3% of Aboriginal and Torres Strait Islander women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, 81 of the 108 babies were born in the ACT to ACT resident Aboriginal or Torres Strait Islander women in 2009.

n.p. Data not published to maintain confidentiality of small numbers.

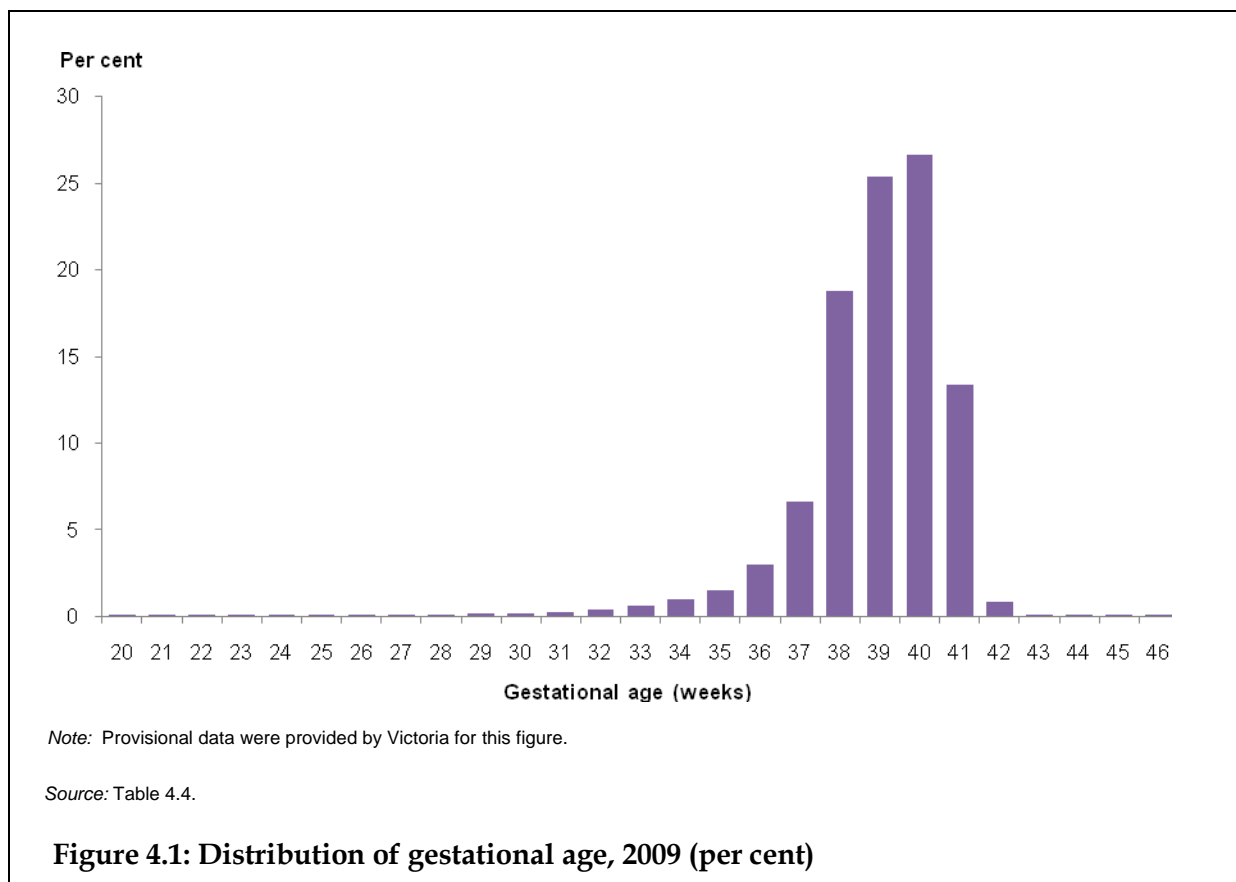
Note: Provisional data were provided by Victoria for this table.

Outcomes

Gestational age

In 2009, the mean gestational age for all babies was 38.8 weeks. The proportion of babies born at term (37–41 weeks gestation) was 90.8% (Table 4.4).

Preterm birth (before 37 completed weeks of gestation) is associated with a higher risk of adverse neonatal outcomes. Preterm births were classified according to the criteria of the WHO into groups of 20–27 completed weeks, 28–31 completed weeks and 32–36 completed weeks. Of all babies born in 2009, 8.2% were preterm, with most of the preterm births occurring at a gestational age of 32–36 completed weeks (Figure 4.1; Table 4.4).



Most stillbirths were preterm (82.2%) compared with 7.6% of liveborn babies (Table 4.4).

Table 4.4: Births, by gestational age and birth status, 2009

Gestational age (weeks)	Live births		Fetal deaths		Not stated		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20	75	0.0	304	13.0	—	0.0	379	0.1
21	100	0.0	302	12.9	—	0.0	402	0.1
22	118	0.0	231	9.9	—	0.0	349	0.1
23	116	0.0	208	8.9	—	0.0	324	0.1
24	184	0.1	132	5.6	—	0.0	316	0.1
25	203	0.1	92	3.9	—	0.0	295	0.1
26	274	0.1	59	2.5	—	0.0	333	0.1
27	245	0.1	69	2.9	—	0.0	314	0.1
28	346	0.1	62	2.6	—	0.0	408	0.1
29	457	0.2	53	2.3	—	0.0	510	0.2
30	577	0.2	38	1.6	—	0.0	615	0.2
31	804	0.3	60	2.6	—	0.0	864	0.3
32	1,205	0.4	61	2.6	—	0.0	1,266	0.4
33	1,723	0.6	46	2.0	—	0.0	1,769	0.6
34	2,905	1.0	50	2.1	2	2.3	2,957	1.0
35	4,541	1.5	69	2.9	2	2.3	4,612	1.5
36	8,772	3.0	89	3.8	2	2.3	8,863	3.0
37	19,676	6.6	88	3.8	6	6.8	19,770	6.6
38	56,023	18.9	93	4.0	25	28.4	56,141	18.8
39	75,914	25.6	75	3.2	10	11.4	75,999	25.4
40	79,523	26.8	91	3.9	23	26.1	79,637	26.6
41	40,043	13.5	42	1.8	10	11.4	40,095	13.4
42	2,506	0.8	9	0.4	1	1.1	2,516	0.8
43	90	0.0	—	0.0	—	0.0	90	0.0
44 ^(a)	18	0.0	—	0.0	—	0.0	18	0.0
Not stated	353	0.1	18	0.8	7	8.0	378	0.1
Total	296,791	100.0	2,341	100.0	88	100.0	299,220	100.0
20–36	22,645	7.6	1,925	82.2	6	6.8	24,576	8.2
Mean (weeks)	38.8		27.4		38.8		38.8	

(a) Includes 5 babies of greater than 44 weeks gestation.

Note: Provisional data were provided by Victoria for this table.

The mean gestational age for all preterm births in 2009 was 33.1 weeks. Nationally, 0.9% of births were at 20–27 weeks gestation, 0.8% were at 28–31 weeks and 6.5% were at 32–36 weeks. The Northern Territory had the highest proportion of preterm births, at 10.1% of all births, and New South Wales had the lowest, at 7.3% of all births (Table 4.5).

Table 4.5: Preterm births, by gestational age and state and territory, 2009

Gestational age (weeks)	NSW	Vic^(a)	Qld	WA	SA	Tas	ACT^(b)	NT	Australia
Mean	33.3	32.8	33.3	33.2	33.2	33.6	33.1	33.0	33.1
	Number								
20–27	701	865	533	295	171	50	55	42	2,712
28–31	660	630	531	252	187	38	50	49	2,397
32–36	5,697	4,670	4,378	2,125	1,424	481	389	303	19,467
Total	7,058	6,165	5,442	2,672	1,782	569	494	394	24,576
	Per cent of total births								
20–27	0.7	1.2	0.9	1.0	0.9	0.8	1.0	1.1	0.9
28–31	0.7	0.9	0.9	0.8	1.0	0.6	0.9	1.3	0.8
32–36	5.9	6.4	7.1	6.8	7.2	7.6	6.6	7.7	6.5
Total	7.3	8.4	8.8	8.6	9.0	8.9	8.4	10.1	8.2

(a) Preterm birth rates may be higher as the majority of late terminations for psychosocial indications are undertaken in Vic.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of preterm births among babies of ACT residents who gave birth in the ACT was 6.9% compared with 16.1% of non-ACT residents who gave birth in the ACT.

Note: Provisional data were provided by Victoria for this table.

In 2009, 13.1% of babies of Aboriginal and Torres Strait Islander mothers were born preterm. This was greater than the proportion of 8.0% in babies of non-Indigenous mothers.

For singletons, the mean gestational age was 39.0 weeks, compared with 35.2 weeks for twins and 31.7 weeks for higher order multiple births. Preterm birth occurred in 56.7% of twins and in 95.0% of higher order multiple births, compared with 6.6% of singleton births (Table 4.6). The downward shift in the distributions of gestational age for babies born as multiples compared with singletons dramatically increased for babies of less than 32 weeks gestation, when the risks of subsequent complications are much higher. In 2009, birth before 32 weeks gestation occurred for 11.1% of twin births and 34.9% of other multiple births, but only 1 in 75 (1.4%) singleton births (Table 4.6).

In contrast, only 0.9% of babies were born post-term (at 42 weeks or more gestation) (Table 4.6). The duration of pregnancy by state and territory is detailed in Table 3.16.

Table 4.6: Births, by gestational age and plurality, 2009

Gestational age (weeks)	Singletons		Twins		Other multiple births		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20–27	2,274	0.8	n.p.	n.p.	n.p.	n.p.	2,712	0.9
28–31	1,739	0.6	593	6.6	65	24.9	2,397	0.8
32–36	15,191	5.2	4,119	45.6	157	60.2	19,467	6.5
37–41	267,739	92.3	3,891	43.1	12	4.6	271,642	90.8
42 and over	2,621	0.9	<5	n.p.	<5	n.p.	2,624	0.9
Not stated	365	0.1	13	0.1	—	—	378	0.1
Total	289,929	100.0	9,030	100.0	261	100.0	299,220	100.0
20–36	19,204	6.6	5,124	56.7	248	95.0	24,576	8.2
Mean (weeks)	39.0		35.2		31.7		38.8	

n.p. Data not published to maintain confidentiality of small numbers.

Note: Provisional data were provided by Victoria for this table.

Birthweight

A baby's birthweight is a key indicator of health status. Babies are defined as low birthweight if their weight at birth is less than 2,500 grams. Those weighing less than 1,500 grams are defined as very low birthweight and those less than 1,000 grams as extremely low birthweight (WHO 1992).

In 2009, 92.0% of liveborn babies had a birthweight in the range 2,500–4,499 grams. The average birthweight of liveborn babies was 3,374 grams, ranging from 3,278 grams in the Northern Territory to 3,399 grams in Tasmania (Table 4.7).

In 2009 in Australia, there were 18,347 (6.2%) liveborn babies of low birthweight, the lowest figure in a decade. From 2000 to 2009, the rate ranged from 6.2% to 6.8%. The 3,017 very low birthweight babies constituted 1.0% of all live births in 2009, and the 1,357 extremely low birthweight babies constituted 0.5% (Table 4.7).

Table 4.7: Live births, by birthweight and state and territory, 2009

Birthweight (g)	NSW	Vic	Qld	WA	SA	Tas	ACT^(a)	NT	Australia
Mean	3,384	3,371	3,383	3,358	3,344	3,399	3,382	3,278	3,374
	Number								
Less than 1,000	376	361	306	156	86	24	29	19	1,357
1,000–1,499	456	431	358	182	134	25	41	33	1,660
1,500–1,999	1,032	997	827	400	290	89	72	72	3,779
2,000–2,499	3,508	2,764	2,552	1,173	827	256	240	231	11,551
2,500–2,999	14,275	11,005	8,788	4,796	3,151	928	860	715	44,518
3,000–3,499	34,849	25,976	21,576	11,329	7,185	2,177	1,967	1,368	106,427
3,500–3,999	29,862	22,283	19,295	9,553	5,983	1,945	1,865	1,053	91,839
4,000–4,499	9,777	7,309	6,696	2,946	1,810	723	623	319	30,203
4,500 and over	1,688	1,389	1,195	449	292	149	114	60	5,336
Not stated	13	98	8	1	—	1	—	—	121
Total	95,836	72,613	61,601	30,985	19,758	6,317	5,811	3,870	296,791
<i>Less than 1,500</i>	<i>832</i>	<i>792</i>	<i>664</i>	<i>338</i>	<i>220</i>	<i>49</i>	<i>70</i>	<i>52</i>	<i>3,017</i>
<i>Less than 2,500</i>	<i>5,372</i>	<i>4,553</i>	<i>4,043</i>	<i>1,911</i>	<i>1,337</i>	<i>394</i>	<i>382</i>	<i>355</i>	<i>18,347</i>
	Per cent								
Less than 1,000	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5
1,000–1,499	0.5	0.6	0.6	0.6	0.7	0.4	0.7	0.9	0.6
1,500–1,999	1.1	1.4	1.3	1.3	1.5	1.4	1.2	1.9	1.3
2,000–2,499	3.7	3.8	4.1	3.8	4.2	4.1	4.1	6.0	3.9
2,500–2,999	14.9	15.2	14.3	15.5	15.9	14.7	14.8	18.5	15.0
3,000–3,499	36.4	35.8	35.0	36.6	36.4	34.5	33.8	35.3	35.9
3,500–3,999	31.2	30.7	31.3	30.8	30.3	30.8	32.1	27.2	30.9
4,000–4,499	10.2	10.1	10.9	9.5	9.2	11.4	10.7	8.2	10.2
4,500 and over	1.8	1.9	1.9	1.4	1.5	2.4	2.0	1.6	1.8
Not stated	0.0	0.1	0.0	0.0	—	0.0	—	—	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Less than 1,500</i>	<i>0.9</i>	<i>1.1</i>	<i>1.1</i>	<i>1.1</i>	<i>1.1</i>	<i>0.8</i>	<i>1.2</i>	<i>1.3</i>	<i>1.0</i>
<i>Less than 2,500</i>	<i>5.6</i>	<i>6.3</i>	<i>6.6</i>	<i>6.2</i>	<i>6.8</i>	<i>6.2</i>	<i>6.6</i>	<i>9.2</i>	<i>6.2</i>

(a) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of live births of ACT residents who gave birth in the ACT where the birthweight was less than 1,500 grams was 0.7% and where the birthweight was less than 2,500 grams the percentage was 5.0%.

Note: Provisional data were provided by Victoria for this table.

The mean birthweight of stillborn babies was 1,274 grams in 2009 compared with 3,374 grams for liveborn babies. Low birthweight occurred in 76.1% of stillborn babies. More than half (58.6%) of the stillborn babies had a birthweight of less than 1,000 grams (Table 4.8).

A smaller proportion of male liveborn babies was low birthweight (5.7%) compared with female babies (6.6%). The average birthweight of liveborn male babies was 3,431 grams, 118 grams higher than that of females (3,313 grams).

Table 4.8: Births, by birthweight and birth status, 2009

Birthweight (g)	Live births		Fetal deaths		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 1,000	1,357	0.5	1,424	58.6	2,781	0.9
1,000–1,499	1,660	0.6	150	6.2	1,810	0.6
1,500–1,999	3,779	1.3	136	5.6	3,915	1.3
2,000–2,499	11,551	3.9	138	5.7	11,689	3.9
2,500–2,999	44,518	15.0	150	6.2	44,668	14.9
3,000–3,499	106,427	35.9	181	7.5	106,608	35.6
3,500–3,999	91,839	30.9	105	4.3	91,944	30.7
4,000–4,499	30,203	10.2	37	1.5	30,240	10.1
4,500 and over	5,336	1.8	13	0.5	5,349	1.8
Not stated	121	0.0	95	3.9	216	0.1
Total	296,791	100.0	2,429	100.0	299,220	100.0
<i>Less than 1,500</i>	<i>3,017</i>	<i>1.0</i>	<i>1,574</i>	<i>64.8</i>	<i>4,591</i>	<i>1.5</i>
<i>Less than 2,500</i>	<i>18,347</i>	<i>6.2</i>	<i>1,848</i>	<i>76.1</i>	<i>20,195</i>	<i>6.7</i>
Mean (g)	3,374		1,274		3,358	

Note: Provisional data were provided by Victoria for this table.

For liveborn singletons, the mean birthweight was 3,405 grams, compared with 2,400 grams for twins and 1,731 grams for other multiple births. Low birthweight occurred in half of all liveborn twins (51.3%) and in almost all higher order multiple births (94.7%), which was markedly higher than the proportion of 4.7% for singleton births (Table 4.9).

Table 4.9: Live births, by birthweight and plurality, 2009

Birthweight (g)	Singletons		Twins		Other multiple births		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 1,000	1,007	0.4	330	3.7	20	8.2	1,357	0.5
1,000–1,499	1,177	0.4	428	4.8	55	22.6	1,660	0.6
1,500–1,999	2,512	0.9	1,167	13.2	100	41.2	3,779	1.3
2,000–2,499	8,878	3.1	2,618	29.6	55	22.6	11,551	3.9
2,500–2,999	41,516	14.4	2,992	33.8	10	4.1	44,518	15.0
3,000–3,499	105,277	36.6	1,150	13.0	—	—	106,427	35.9
3,500–3,999	91,687	31.9	n.p.	n.p.	<5	n.p.	91,839	30.9
4,000–4,499	n.p.	n.p.	n.p.	n.p.	<5	n.p.	30,203	10.2
4,500 and over	n.p.	n.p.	<5	n.p.	—	—	5,336	1.8
Not stated	120	0.0	1	0.0	—	—	121	0.0
Total	287,700	100.0	8,848	100.0	243	100.0	296,791	100.0
<i>Less than 1,500</i>	<i>2,184</i>	<i>0.8</i>	<i>758</i>	<i>8.6</i>	<i>75</i>	<i>30.9</i>	<i>3,017</i>	<i>1.0</i>
<i>Less than 2,500</i>	<i>13,574</i>	<i>4.7</i>	<i>4,543</i>	<i>51.3</i>	<i>230</i>	<i>94.7</i>	<i>18,347</i>	<i>6.2</i>
Mean (g)	3,405		2,400		1,731		3,374	

n.p. Data not published to maintain confidentiality of small numbers.

Note: Provisional data were provided by Victoria for this table.

In 2009, the average birthweight of liveborn babies of Aboriginal and Torres Strait Islander mothers was 3,183 grams. This was 199 grams lighter than the average of 3,382 grams for liveborn babies of non-Indigenous mothers. The proportion of low birthweight in liveborn babies of Aboriginal and Torres Strait Islander mothers was 12.0% (Table 4.10), twice that of babies of non-Indigenous mothers (5.9%). The mean birthweight of liveborn babies of Aboriginal or Torres Strait Islander mothers, and the proportion with low birthweight, varied markedly among the states and territories.

Table 4.10: Live births of Aboriginal or Torres Strait Islander mothers, by birthweight and state and territory, 2009

Birthweight (g)	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Australia
Mean	3,244	3,176	3,206	3,119	3,159	3,238	3,008	3,102	3,183
	Number								
Less than 1,500	43	16	75	42	13	<5	n.p.	38	235
1,500–2,499	257	98	291	195	65	n.p.	n.p.	165	1,117
2,500–2,999	585	163	708	428	138	53	26	372	2,473
3,000–3,499	1,015	266	1,163	584	208	105	30	492	3,863
3,500–3,999	720	210	814	364	138	78	14	309	2,647
4,000–4,499	236	67	229	112	38	14	9	76	781
4,500 and over	47	7	55	11	10	n.p.	<5	12	150
Not stated	1	—	—	—	—	—	—	—	1
Total	2,904	827	3,335	1,736	610	285	106	1,464	11,267
<i>Less than 2,500</i>	<i>300</i>	<i>114</i>	<i>366</i>	<i>237</i>	<i>78</i>	<i>29</i>	<i>25</i>	<i>203</i>	<i>1,352</i>
	Per cent								
Less than 1,500	1.5	1.9	2.2	2.4	2.1	n.p.	n.p.	2.6	2.1
1,500–2,499	8.8	11.9	8.7	11.2	10.7	n.p.	n.p.	11.3	9.9
2,500–2,999	20.1	19.7	21.2	24.7	22.6	18.6	24.5	25.4	21.9
3,000–3,499	35.0	32.2	34.9	33.6	34.1	36.8	28.3	33.6	34.3
3,500–3,999	24.8	25.4	24.4	21.0	22.6	27.4	13.2	21.1	23.5
4,000–4,499	8.1	8.1	6.9	6.5	6.2	4.9	8.5	5.2	6.9
4,500 and over	1.6	0.8	1.6	0.6	1.6	n.p.	n.p.	0.8	1.3
Not stated	0.0	—	—	—	—	—	—	—	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Less than 2,500</i>	<i>10.3</i>	<i>13.8</i>	<i>11.0</i>	<i>13.7</i>	<i>12.8</i>	<i>10.2</i>	<i>23.6</i>	<i>13.9</i>	<i>12.0</i>

(a) 24.3% of Aboriginal and Torres Strait Islander women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of liveborn babies born in the ACT to ACT resident Aboriginal or Torres Strait Islander women in 2009 where the birthweight was less than 2,500 grams was 13.9%.

n.p. Data not published to maintain confidentiality of small numbers.

Note: Provisional data were provided by Victoria for this table.

Mothers aged 30–34 had the lowest proportion of low birthweight liveborn babies (5.6%). The proportion was higher among babies of younger and older mothers (8.6% for mothers younger than 20, 7.3% for mothers aged 40–44, and 14.1% for mothers aged 45 and older).

Of hospital births, the proportion of low birthweight liveborn babies was higher in babies of mothers who gave birth in public hospitals (7.3%) than in babies of mothers who gave birth in private hospitals (4.0%). Liveborn babies of mothers who reported smoking during pregnancy had a higher proportion of low birthweight babies (10.8%) compared with mothers who did not smoke (5.3%).

Presentation at birth

In 2009, vertex presentations occurred for 93.6% of all babies. Breech presentation occurred for 4.4% and other presentations for 1.2%. Around 30.4% of twins and one-third of higher order multiple births (33.0%) had non-vertex presentations at birth (Table 4.11).

Table 4.11: Births, by presentation at birth and plurality, 2009

Presentation	Singletons		Twins		Other multiple births		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Vertex	273,843	94.5	6,140	68.0	157	60.2	280,140	93.6
Breech	10,658	3.7	2,445	27.1	78	29.9	13,181	4.4
Other ^(a)	3,195	1.1	296	3.3	8	3.1	3,499	1.2
Not stated	2,233	0.8	149	1.7	18	6.9	2,400	0.8
Total	289,929	100.0	9,030	100.0	261	100.0	299,220	100.0

(a) Includes face, brow, shoulder/transverse and compound presentations.

Note: Provisional data were provided by Victoria for this table.

Table 3.25 shows the presentation at birth for mothers, where the presentation at birth of the first born baby in multiple births is used.

Method of birth

Of all births in 2009, 32.1% of babies were delivered by caesarean section and 56.3% had a non-instrumental vaginal birth. About 1 in 9 babies was born by an instrumental vaginal delivery (11.6%). Two-thirds of all twins (67.1%) and the majority of higher order multiples were delivered by caesarean section (93.1%) (Table 4.12).

Table 3.26 presents data for mothers, where the method of birth of the first born baby in multiple births is used.

Table 4.12: Births, by method of birth and plurality, 2009

Method of birth	Singletons		Twins		Other multiple births		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Non-instrumental vaginal ^(a)	166,021	57.3	n.p.	n.p.	n.p.	n.p.	168,320	56.3
Instrumental vaginal ^(b)	34,081	11.8	n.p.	n.p.	<5	n.p.	34,740	11.6
Caesarean section	89,610	30.9	6,057	67.1	243	93.1	95,910	32.1
Not stated	217	0.1	32	0.4	1	0.4	250	0.1
Total	289,929	100.0	9,030	100.0	261	100.0	299,220	100.0

(a) For four jurisdictions, 'Non-instrumental vaginal' includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used.

(b) 'Instrumental vaginal' includes forceps and vacuum extraction.

n.p. Data not published to maintain confidentiality of small numbers.

Note: Provisional data were provided by Victoria for this table.

Method of birth for babies with breech presentations

Of babies with breech presentations at birth in 2009, 87.1% were born by caesarean section. This ranged from 80.8% in the Australian Capital Territory to 89.8% in South Australia (Table 4.13). The remaining babies were born vaginally.

Table 4.13: Babies with breech presentations, by method of birth and state and territory, 2009

Method of birth	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Total
Number									
Vaginal ^(b)	485	434	349	172	96	n.p.	50	33	1,619
Caesarean section	3,332	3,031	2,675	1,235	843	n.p.	210	152	11,478
Not stated	—	81	—	—	—	n.p.	—	—	81
Total	3,817	3,546	3,024	1,407	939	n.p.	260	185	13,178
Per cent									
Vaginal ^(b)	12.7	12.2	11.5	12.2	10.2	n.p.	19.2	17.8	12.3
Caesarean section	87.3	85.5	88.5	87.8	89.8	n.p.	80.8	82.2	87.1
Not stated	—	2.3	—	—	—	n.p.	—	—	0.6
Total	100.0	100.0	100.0	100.0	100.0	n.p.	100.0	100.0	100.0

(a) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of babies born in the ACT to ACT residents with a breech presentation by a vaginal birth was 15.3%.

(b) Includes instrumental vaginal births.

n.p. Data for Tas not published as presentations were only recorded for vaginal births.

Note: Provisional data were provided by Victoria for this table.

Of singleton babies born at term with breech presentations, 95.8% were born by caesarean section. Three-quarters of all term singleton breech births were delivered by caesarean section without labour (77.1%) (Table 4.14).

Table 4.14: Singleton and term babies with breech presentations, by method of birth and state and territory, 2009

Method of birth	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Total
Number									
Vaginal ^(b)	115	84	73	28	17	n.p.	6	9	332
Caesarean section	2,463	1,978	1,759	833	570	n.p.	136	110	7,849
<i>Labour</i>	476	361	395	153	134	n.p.	24	29	1,572
<i>No labour</i>	1,987	1,604	1,364	680	436	n.p.	112	81	6,264
<i>Not stated</i>	—	13	—	—	—	n.p.	—	—	13
Not stated	—	8	—	—	—	n.p.	—	—	8
Total	2,578	2,070	1,832	861	587	n.p.	142	119	8,189
Per cent									
Vaginal ^(b)	4.5	4.1	4.0	3.3	2.9	n.p.	4.2	7.6	4.1
Caesarean section	95.5	95.6	96.0	96.7	97.1	n.p.	95.8	92.4	95.8
<i>Labour</i>	18.5	17.4	21.6	17.8	22.8	n.p.	16.9	24.4	18.5
<i>No labour</i>	77.1	77.5	74.5	79.0	74.3	n.p.	78.9	68.1	77.1
<i>Not stated</i>	—	0.7	—	—	—	n.p.	—	—	0.2
Not stated	—	0.4	—	—	—	n.p.	—	—	0.1
Total	100.0	100.0	100.0	100.0	100.0	n.p.	100.0	100.0	100.0

(a) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages.

(b) Includes instrumental vaginal births.

n.p. Data for Tas not published as presentations were only recorded for vaginal births.

Note: Provisional data were provided by Victoria for this table.

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 is between 0 and 10. An Apgar score of less than 7 at 5 minutes after birth is considered to be an indicator of complications and of compromise for the baby.

In 2009, 1.5% of liveborn babies had a low Apgar score (between 0 and 6) at 5 minutes. Scores of 0–3 were recorded at 5 minutes in 0.3% of all live births nationally, and scores of 4–6 were recorded in 1.2% of live births. Among the states and territories, the distribution of low Apgar scores at 5 minutes ranged from 1.0% of all live births in Tasmania to 2.0% in the Northern Territory (Table 4.15).

Table 4.15: Live births, by Apgar score at 5 minutes and state and territory, 2009

Apgar score	NSW	Vic	Qld	WA	SA	Tas	ACT ^(a)	NT	Australia
Number									
0–3	318	256	222	71	46	31	20	16	980
4–6	1,068	988	673	364	221	62	105	77	3,558
7–10	94,175	71,240	60,638	30,529	19,457	6,222	5,684	3,776	291,721
Not stated	275	129	68	21	34	2	2	1	532
Total	95,836	72,613	61,601	30,985	19,758	6,317	5,811	3,870	296,791
<i>Less than 7</i>	<i>1,386</i>	<i>1,244</i>	<i>895</i>	<i>435</i>	<i>267</i>	<i>93</i>	<i>125</i>	<i>93</i>	<i>4,538</i>
Per cent									
0–3	0.3	0.4	0.4	0.2	0.2	0.5	0.3	0.4	0.3
4–6	1.1	1.4	1.1	1.2	1.1	1.0	1.8	2.0	1.2
7–10	98.3	98.1	98.4	98.5	98.5	98.5	97.8	97.6	98.3
Not stated	0.3	0.2	0.1	0.1	0.2	0.0	0.0	0.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Less than 7</i>	<i>1.4</i>	<i>1.7</i>	<i>1.5</i>	<i>1.4</i>	<i>1.4</i>	<i>1.5</i>	<i>2.2</i>	<i>2.4</i>	<i>1.5</i>

(a) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages.

Note: Provisional data were provided by Victoria for this table.

Resuscitation at birth

The types of active resuscitation measures given to babies immediately after birth are presented in Table 4.16. For these data, the type of resuscitation used is coded hierarchically from lowest 'none' to highest 'external cardiac massage and ventilation' with the category 'other' not included in the hierarchy. If more than one type of resuscitation was used, the highest order type in the hierarchy is coded.

Suction and oxygen therapy were the most common types of resuscitation used. Just over one-quarter (28.1%) of babies required some form of resuscitation at birth, although most of these babies (71.3%) required only suction or oxygen therapy. Ventilatory assistance by intermittent positive pressure respiration (IPPR) through a bag and mask or after endotracheal intubation was performed for at least 7.2% of all live births in 2009. External cardiac massage and ventilation was provided for a minority of babies (0.3%) (Table 4.16).

Table 4.16: Live births, by active resuscitation measures at birth and state and territory, 2009

Resuscitation type^(a)	NSW	Vic	Qld	WA	SA	Tas	ACT^(b)	NT	Australia
	Number								
None	70,667	n.r.	40,095	23,389	14,772	4,940	4,364	2,784	161,011
Suction	8,746	n.r.	7,004	1,915	924	239	464	352	19,644
Oxygen therapy	9,697	n.r.	9,021	2,785	2,480	657	341	357	25,338
IPPR through bag and mask	5,812	n.r.	4,346	1,765	1,378	435	439	289	14,464
Endotracheal intubation and IPPR	594	n.r.	576	241	150	25	115	24	1,725
External cardiac massage and ventilation	313	n.r.	156	65	49	21	21	18	643
Other ^(c)	—	n.r.	396	825	5	—	—	9	1,235
Not stated	7	n.r.	7	—	—	—	67	37	118
Total	95,836	n.r.	61,601	30,985	19,758	6,317	5,811	3,870	224,178
	Per cent								
None	73.7	n.r.	65.1	75.5	74.8	78.2	75.1	71.9	71.8
Suction	9.1	n.r.	11.4	6.2	4.7	3.8	8.0	9.1	8.8
Oxygen therapy	10.1	n.r.	14.6	9.0	12.6	10.4	5.9	9.2	11.3
IPPR through bag and mask	6.1	n.r.	7.1	5.7	7.0	6.9	7.6	7.5	6.5
Endotracheal intubation and IPPR	0.6	n.r.	0.9	0.8	0.8	0.4	2.0	0.6	0.8
External cardiac massage and ventilation	0.3	n.r.	0.3	0.2	0.2	0.3	0.4	0.5	0.3
Other ^(c)	—	n.r.	0.6	2.7	0.0	—	—	0.2	0.6
Not stated	0.0	n.r.	0.0	—	—	—	1.2	1.0	0.1
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) A hierarchical coding system is used for this item, starting with suction, up to external cardiac massage and ventilation. If more than one type of resuscitation was used, the highest order type in the hierarchy is coded.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages.

(c) Includes tactile stimulation for Qld.

n.r. Data not received at the time of publication.

Admission to special care nurseries or neonatal intensive care units

Babies are admitted to a special care nursery (SCN) or neonatal intensive care unit (NICU) if they require more specialised medical care and treatment than is available on the postnatal ward. Of liveborn babies in 2009, 14.2% were admitted to an SCN or NICU. This proportion appears low in Western Australia because only babies who stayed in an SCN or NICU for one day or more were included. In the other states and territories, this ranged from 10.4% in Tasmania to 17.9% in the Northern Territory (Table 4.17).

Table 4.17: Live births, by admission to special care nursery or neonatal intensive care unit and state and territory, 2009

Admission to SCN or NICU	NSW	Vic	Qld	WA ^(a)	SA	Tas	ACT ^(b)	NT	Australia
	Number								
Admitted	13,649	n.r.	9,995	2,922	3,071	656	855	692	31,840
Not admitted	82,183	n.r.	51,606	28,063	16,687	5,661	4,953	3,178	192,331
Not stated	4	n.r.	—	—	—	—	3	—	7
Total	95,836	n.r.	61,601	30,985	19,758	6,317	5,811	3,870	224,178
	Per cent								
Admitted	14.2	n.r.	16.2	9.4	15.5	10.4	14.7	17.9	14.2
Not admitted	85.8	n.r.	83.8	90.6	84.5	89.6	85.2	82.1	85.8
Not stated	0.0	n.r.	—	—	—	—	0.1	—	0.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For WA, babies were recorded as being admitted to an SCN or NICU only if the length of stay was one day or more.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages.

n.r. Data not received at the time of publication.

Hospital births

Length of stay in hospital of birth

Most babies are discharged from hospital at the same time as their mothers but some babies require longer hospitalisation. A baby's gestation and birthweight are two factors that influence the duration of hospitalisation. Twins and higher order multiple births usually have longer stays in hospital than singleton babies.

In 2009, the median length of stay in hospital for babies born in hospital who were discharged home was 3.0 days. The majority of babies remained in their hospital of birth for less than six days (89.5%), and over half stayed in hospital for less than four days (56.7%). Relatively more babies born in Queensland had a length of stay of less than four days (62.8%). Nationally in 2009, babies hospitalised for seven or more days accounted for 6.2% of babies born in hospital (Table 4.18).

Table 4.18: Babies born in hospital^(a), by length of stay and state and territory, 2009

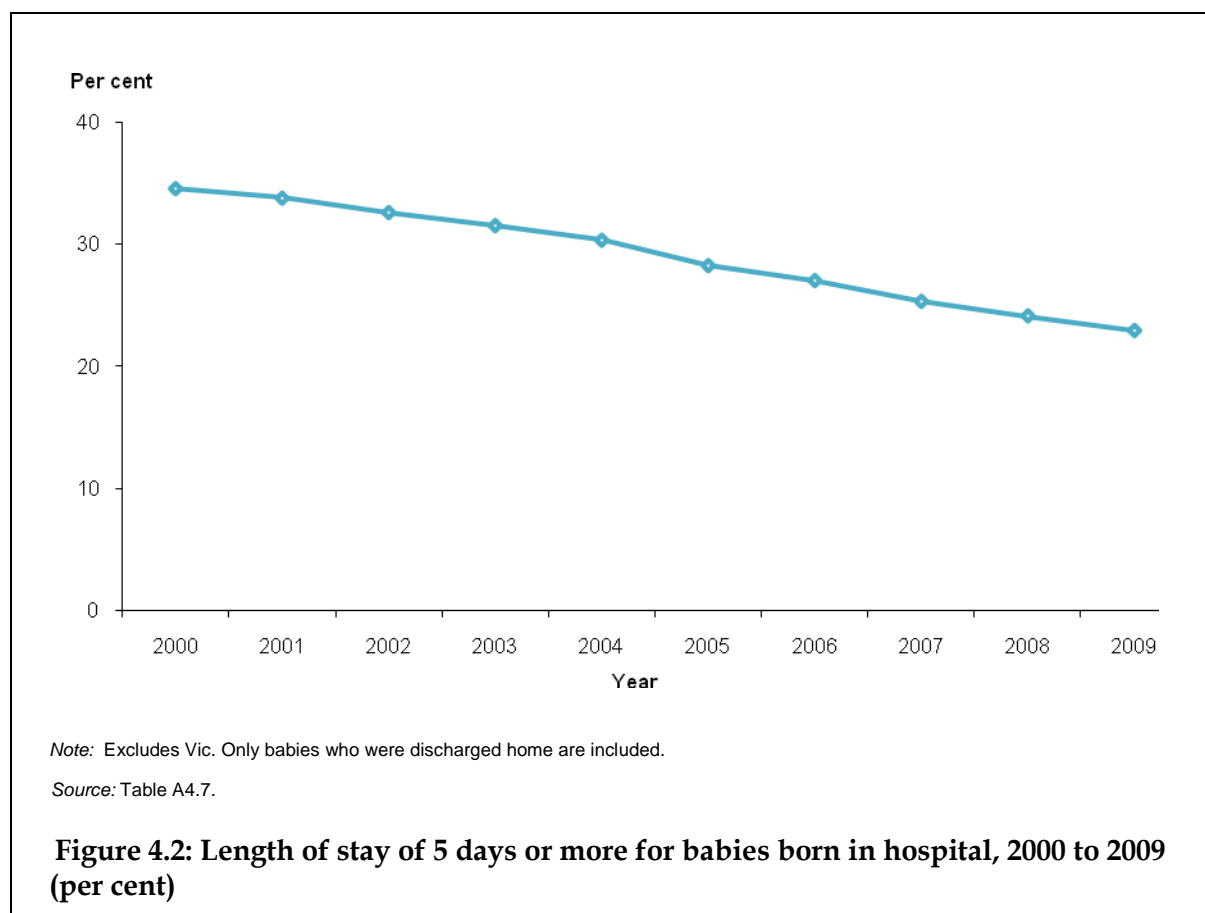
Length of stay (days)	NSW	Vic	Qld	WA	SA	Tas	ACT^(b)	NT	Australia
Median	3.0	n.r.	3.0	3.0	4.0	3.0	3.0	3.0	3.0
	Number								
Less than 1 day	2,213	n.r.	2,049	846	366	202	304	157	6,137
1 day	11,040	n.r.	9,562	3,297	1,555	627	639	365	27,085
2 days	18,302	n.r.	12,751	4,709	3,073	1,163	965	583	41,546
3 days	18,747	n.r.	12,664	5,644	3,422	1,349	1,069	579	43,474
4 days	18,524	n.r.	11,278	5,530	4,344	1,076	1,102	519	42,373
5 days	11,730	n.r.	5,843	4,165	2,724	688	642	391	26,183
6 days	3,557	n.r.	1,425	2,432	835	280	144	166	8,839
7–13 days	3,245	n.r.	1,731	1,758	685	233	160	247	8,059
14–20 days	827	n.r.	711	129	270	86	53	80	2,156
21–27 days	370	n.r.	381	60	167	58	22	34	1,092
28 or more days	574	n.r.	537	175	280	78	10	68	1,722
Not stated	—	n.r.	—	—	—	—	—	—	—
Total	89,129	n.r.	58,932	28,745	17,721	5,840	5,110	3,189	208,666
	Per cent								
Less than 1 day	2.5	n.r.	3.5	2.9	2.1	3.5	5.9	4.9	2.9
1 day	12.4	n.r.	16.2	11.5	8.8	10.7	12.5	11.4	13.0
2 days	20.5	n.r.	21.6	16.4	17.3	19.9	18.9	18.3	19.9
3 days	21.0	n.r.	21.5	19.6	19.3	23.1	20.9	18.2	20.8
4 days	20.8	n.r.	19.1	19.2	24.5	18.4	21.6	16.3	20.3
5 days	13.2	n.r.	9.9	14.5	15.4	11.8	12.6	12.3	12.5
6 days	4.0	n.r.	2.4	8.5	4.7	4.8	2.8	5.2	4.2
7–13 days	3.6	n.r.	2.9	6.1	3.9	4.0	3.1	7.7	3.9
14–20 days	0.9	n.r.	1.2	0.4	1.5	1.5	1.0	2.5	1.0
21–27 days	0.4	n.r.	0.6	0.2	0.9	1.0	0.4	1.1	0.5
28 or more days	0.6	n.r.	0.9	0.6	1.6	1.3	0.2	2.1	0.8
Not stated	—	n.r.	—	—	—	—	—	—	—
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Only babies who were discharged home are included. For multiple births, the place of birth of the first born baby was used for all subsequent babies.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages as babies of non-ACT residents were more likely to stay in hospital for four days or more, compared with babies of ACT residents (48.9% and 40.5%).

n.r. Data not received at the time of publication.

From 2000 to 2009, the proportion of hospital-born babies with a length of stay of less than five days increased from 65.4% to 77.0%, while the proportion of babies with a length of stay in hospital of five days or more decreased from 34.6% to 23.0% (Figure 4.2).



Mode of separation from hospital

In 2009, 95.6% of babies born in hospital were discharged home, varying from 86.6% in the Northern Territory to 96.6% in Queensland. A total of 3.3% of babies were transferred to another hospital from their hospital of birth (Table 4.19).

Babies dying at their hospital of birth accounted for 1.0% of separations. These data do not include babies born outside hospital, and may not include all babies who are transferred to another hospital and die, or babies discharged home who subsequently die.

Table 4.19: Babies born in hospital^(a), by mode of separation and state and territory, 2009

Mode of separation	NSW	Vic	Qld	WA	SA	Tas	ACT ^(b)	NT	Australia
Number									
Discharge home	89,129	n.r.	58,932	28,745	17,721	5,840	5,110	3,189	208,666
Transfer to another hospital ^(c)	3,012	n.r.	1,417	1,469	626	331	217	93	7,165
Fetal or neonatal death	807	n.r.	619	277	173	66	81	53	2,076
Other ^(d)	—	n.r.	9	29	—	4	—	^(e) 343	385
Not stated	—	n.r.	—	—	—	—	58	3	61
Total	92,948	n.r.	60,977	30,520	18,520	6,241	5,466	3,681	218,353
Per cent									
Discharge home	95.9	n.r.	96.6	94.2	95.7	93.6	93.5	86.6	95.6
Transfer to another hospital ^(c)	3.2	n.r.	2.3	4.8	3.4	5.3	4.0	2.5	3.3
Fetal or neonatal death	0.9	n.r.	1.0	0.9	0.9	1.1	1.5	1.4	1.0
Other ^(d)	—	n.r.	0.0	0.1	—	0.1	—	^(e) 9.3	0.2
Not stated	—	n.r.	—	—	—	—	1.1	0.1	0.0
Total	100.0	n.r.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) For multiple births, the place of birth of the first born baby was used for all subsequent babies.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting percentages. For example, the percentage of live babies born in the ACT to ACT residents who were transferred to another hospital was 2.1%.

(c) Includes babies who were transferred to another hospital and died.

(d) May include statistical discharges, transfers to health care accommodation other than acute hospitals and postneonatal deaths.

(e) Includes mothers discharged with their babies against medical advice, babies transferred to accommodation hostels and statistical discharges.

n.r. Data not received at the time of publication.

5 Perinatal mortality

Definitions

There are different definitions in Australia for reporting and registering perinatal deaths (Figure 5.1). The NPDC uses a definition of perinatal deaths to include all fetal and neonatal deaths of at least 400 grams birthweight or at least 20 weeks gestation.

In Australia, all fetal and neonatal deaths of at least 400 grams birthweight or, if birthweight is unavailable, a gestational age of at least 20 weeks should be registered (ABS 2010). Further information on these definitions and the issues surrounding the collection of data on perinatal deaths can be found in a previous edition of this report (Laws & Sullivan 2004).

Figure 5.1: Definitions of perinatal mortality

Institution	Perinatal deaths		
	Fetal deaths		Neonatal deaths
	Birthweight	Gestational age	
WHO – International comparisons – National reporting	1,000 grams	28 weeks (only if birthweight is unavailable)	<7 days
	500 grams	22 weeks (only if birthweight is unavailable)	<7 days
ABS	400 grams	20 weeks (only if birthweight is unavailable)	<28 days
NHDD & NPESU	400 grams	20 weeks	<28 days

Figure 5.2 shows the definitions of periods of perinatal and infant deaths used by the NPESU. Neonatal deaths are those occurring in live births up to 28 completed days after birth. Infant deaths are those occurring in live births at less than one year of age.

Figure 5.2: Perinatal and infant death periods

Labour		Birth	7 days	28 days	1 year
<i>At least 20 weeks or 400 grams</i>					
Antepartum fetal deaths	Intrapartum fetal deaths	0–6 days	7–27 days	28 days–<1 year	
		Early neonatal deaths	Late neonatal deaths	Postneonatal deaths	
Fetal deaths		Neonatal deaths			
Perinatal deaths					
Infant deaths					

The ABS definition of a perinatal death includes birthweight of at least 400 grams or, where birthweight is unknown, a gestational age of at least 20 weeks. Deaths where both the birthweight and gestational age are unknown, are included. The data on perinatal deaths published by the ABS are based on the year of registration of the death rather than on the year of birth or death. Data are presented in the *Perinatal deaths, Australia* report (e.g. ABS 2010).

This report presents data on perinatal deaths from the NPDC. For vital statistics, refer to ABS data at: <www.abs.gov.au>.

Fetal deaths

As noted previously, fetal deaths are included in the NPDC if the birthweight is at least 400 grams or the gestational age is 20 weeks or more.

In 2009, there were 2,341 fetal deaths reported to the NPDC, resulting in a fetal death rate of 7.8 per 1,000 births. The state and territory fetal death rates ranged from 6.2 per 1,000 births in New South Wales to 11.0 per 1,000 births in the Northern Territory (Table 5.1).

Table 5.1: Fetal, neonatal and perinatal deaths, by state and territory, 2009

	State/territory of birth								Total
	NSW	Vic ^(a)	Qld	WA	SA	Tas	ACT ^(b)	NT ^(c)	
	Number								
Live births ^(d)	95,836	72,613	61,601	30,985	19,758	6,317	5,811	3,870	296,791
Fetal deaths	598	787	447	234	140	52	40	43	2,341
Neonatal deaths ^(e)	235	n.r.	235	77	46	16	42	16	^(f) 667
Perinatal deaths	833	n.r.	682	311	186	68	82	59	^(f) 2,221
Total births	96,434	73,488	62,048	31,219	19,898	6,369	5,851	3,913	299,220
	Rate per 1,000 births^(g)								
Fetal deaths	6.2	10.7	7.2	7.5	7.0	8.2	6.8	11.0	7.8
Neonatal deaths ^(e)	2.5	n.r.	3.8	2.5	2.3	2.5	7.2	4.1	^(f) 3.0
Perinatal deaths	8.6	n.r.	11.0	10.0	9.3	10.7	14.0	15.1	^(f) 9.8

(a) Death rates may be higher as the majority of late terminations for psychosocial indications are undertaken in Vic.

(b) 15.9% of women who gave birth in the ACT were non-ACT residents. Care must be taken when interpreting rates. For example, for ACT residents who gave birth in the ACT, there were 6.3 fetal deaths per 1,000 births, 5.3 neonatal deaths per 1,000 live births and 11.6 perinatal deaths per 1,000 births.

(c) Neonatal deaths for NT may be an underestimate as deaths which occurred interstate are not included.

(d) Includes neonatal deaths.

(e) Except in WA, these may exclude neonatal deaths within 28 days of birth for babies transferred to another hospital or readmitted to hospital and those dying at home.

(f) Excludes Vic.

(g) Fetal and perinatal death rates were calculated using all births (live births and stillbirths). Neonatal death rates were calculated using all live births.

n.r. Data not received at the time of publication.

Note: Provisional data were provided by Victoria for this table.

Table 5.2 presents fetal, neonatal and perinatal deaths by state or territory of the mother's usual residence, excluding women who were usually resident overseas. It shows that for 2009, the state and territory fetal death rates ranged from 6.5 per 1,000 births for babies of mothers who resided in New South Wales, to 11.0 per 1,000 births to mothers who resided in the Northern Territory (Table 5.2). For Victoria, the rate of fetal death declined by 1.7 deaths per 1,000 births, from 10.7 per 1,000 births occurring in Victoria (Table 5.1) to 9.0 per 1,000 births for women who resided in Victoria (Table 5.2). For the Australian Capital Territory, where 15.9% of women who gave birth were non-residents, the fetal death rate changed from 6.8 per 1,000 births by territory of birth (Table 5.1) to 7.3 per 1,000 births by territory of mother's usual residence (Table 5.2).

Table 5.2: Fetal, neonatal and perinatal deaths, by state and territory of mother's usual residence, 2009

	State/territory of usual residence								Total
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(a)	
	Number								
Live births ^(b)	97,377	71,117	61,839	31,023	19,707	6,280	4,927	3,861	296,131
Fetal deaths	637	645	487	253	143	55	36	43	2,299
Neonatal deaths ^(c)	248	n.r.	232	77	48	17	26	15	^(d) 663
Perinatal deaths	885	n.r.	719	330	191	72	62	58	^(d) 2,317
Total births	98,014	71,850	62,326	31,276	19,850	6,335	4,963	3,904	298,518
	Rate per 1,000 births^(e)								
Fetal deaths	6.5	9.0	7.8	8.1	7.2	8.7	7.3	11.0	7.7
Neonatal deaths ^(c)	2.5	n.r.	3.8	2.5	2.4	2.7	5.3	3.9	^(e) 2.9
Perinatal deaths	9.0	n.r.	11.5	10.6	9.6	11.4	12.5	14.9	^(e) 10.2

(a) Neonatal deaths for NT may be an underestimate as deaths which occurred interstate are not included.

(b) Includes neonatal deaths.

(c) These may exclude neonatal deaths within 28 days of birth for babies transferred to another hospital or readmitted to hospital and those dying at home.

(d) Excludes Vic.

(e) Fetal and perinatal death rates were calculated using all births (live births and stillbirths). Neonatal death rates were calculated using all live births.

n.r. Data not received at the time of publication.

Note: Excludes babies of mothers not usually resident in Australia and those whose state or territory of usual residence was 'Not stated'.

Provisional data were provided by Victoria for this table.

Fetal and neonatal death data were stratified by a number of demographic, pregnancy and risk factors in Table 5.3. Data did not include timing of fetal death (antepartum or intrapartum) or cause of death. Therefore data does not adjust for or discriminate between deaths due to lethal congenital anomalies or the underlying population risk profile for perinatal death.

There was variation in fetal and perinatal death rates according to maternal age with higher rates reported for teenage mothers. The age-group specific fetal death rates ranged from 6.6 per 1,000 births for babies of mothers aged 30–34 to 14.2 per 1,000 births for babies of mothers younger than 20 (Table 5.3).

The fetal death rate of babies born to Aboriginal or Torres Strait Islander mothers was 12.9 per 1,000 births, compared with 7.5 per 1,000 births for non-Indigenous mothers. For Australian-born mothers the fetal death rate was 7.5 per 1,000 births, compared with 8.5 per 1,000 births for mothers born overseas (Table 5.3). For the four jurisdictions where data were available on whether the mother received ART treatment, the fetal death rate was 10.8 per 1,000 births for women giving birth after ART.

Fetal death rates were higher among babies of first-time mothers (7.3 per 1,000 births) than among babies whose mothers had at least one previous birth (6.6 per 1,000 births) (Table 5.3). However, for grand multiparous women (women who have had four or more previous pregnancies resulting in a live birth or stillbirth), the rate was higher at 10.5 per 1,000 births.

Fetal deaths occurred more frequently in the lowest gestational age and birthweight groups (Table 5.3).

The fetal death rate of twins (19.7 per 1,000 births) and higher order multiples (58.8 per 1,000 births) was higher than that of singleton babies (7.4 per 1,000 births) (Table 5.3). For singleton term babies, the fetal death rate was 1.4 per 1,000 births.

Table 5.3: Rates of fetal, neonatal and perinatal deaths, by selected characteristics, 2009

Characteristic	Fetal deaths	Neonatal deaths ^{(a)(b)}	Perinatal deaths ^(a)
	Rate per 1,000 births ^(c)		
Maternal age			
Younger than 20	14.2	4.5	12.8
20–24	9.8	3.7	11.7
25–29	6.7	2.5	8.6
30–34	6.6	2.8	9.0
35–39	7.7	3.0	9.9
40 and over	11.6	3.1	14.2
Maternal Indigenous status			
Aboriginal or Torres Strait Islander	12.9	6.7	18.6
Non-Indigenous	7.5	2.8	9.4
Maternal country of birth			
Australia	7.5	3.1	9.8
Other	8.5	2.7	9.9
Parity^(b)			
Primipara	7.3	3.3	10.6
Multipara	6.6	2.7	9.3

(continued)

Table 5.3 (continued): Rates of fetal, neonatal and perinatal deaths, by selected characteristics, 2009

Characteristic	Fetal deaths	Neonatal deaths ^{(a)(b)}	Perinatal deaths ^(a)
	Rate per 1,000 births ^(c)		
Plurality			
Singletons	7.4	2.4	8.9
Twins	19.7	18.9	36.7
Higher order multiples	58.8	75.1	139.8
Gestational age			
20–27	515.1	409.6	685.4
28–31	88.9	29.6	109.8
32–36	16.2	4.7	20.8
37–41	1.4	0.7	2.2
42 and over	3.4	—	4.9
Birthweight (g)			
Less than 1,500	340.8	191.9	436.9
1,500–2,499	17.1	6.4	23.7
2,500–2,999	3.1	1.5	4.3
3,000–3,999	1.1	0.6	1.8
4,000 and over	1.2	0.4	1.7

(a) Except in WA, these may exclude neonatal deaths within 28 days of birth for babies transferred to another hospital or readmitted to hospital, and those dying at home.

(b) Excludes Victorian data.

(c) Fetal and perinatal death rates were calculated using all births (live births and fetal deaths). Neonatal death rates were calculated using all live births.

Note: Provisional data were provided by Victoria for this table.

Neonatal deaths

There were 667 neonatal deaths reported to the NPDC for 2009, giving a rate of 3.0 per 1,000 live births (Table 5.1). Ascertainment of neonatal deaths within 28 days of birth is likely to be incomplete. In particular, deaths occurring among babies transferred to another hospital, readmitted to hospital or dying at home may not be known to midwives who collect these data or staff who compile state and territory data. Neonatal deaths occurring in a different state or territory to which the birth occurred may also not be included.

The Perinatal NMDS did not include neonatal death or perinatal death data items. However, this information is collected as part of the NPDC. Neonatal death rates based on NPDC data varied among the states and territories. The variation in rates may reflect differences in ascertainment practices of deaths by states and territories as well as absolute differences in mortality in the state or territory. The neonatal death rates ranged from 2.3 per 1,000 live births in South Australia to 7.2 per 1,000 live births in the Australian Capital Territory (Table 5.1).

A significant proportion of women who gave birth in the Australian Capital Territory were New South Wales residents (15.7% in 2009). Many women from southern New South Wales

with high-risk pregnancies gave birth in the Australian Capital Territory (Table 3.4), so death rates are likely to appear higher than for those based on births to residents of the Australian Capital Territory. Presenting the deaths by state or territory of usual residence of the mother addresses this issue. The neonatal death rate for mothers usually resident in the Australian Capital Territory was 5.3 per 1,000 live births (Table 5.2) compared with 7.2 per 1,000 live births to women who gave birth in this territory (Table 5.1).

Higher neonatal death rates were reported for younger and older mothers. The age-group specific neonatal death rate was 4.5 per 1,000 live births for babies of teenage mothers (aged less than 20 years) and 3.1 per 1,000 live births for babies of mothers aged 40 and over (Table 5.3).

The neonatal death rate of babies born to Aboriginal or Torres Strait Islander mothers was 6.7 per 1,000 live births. The neonatal death rate for babies of non-Indigenous mothers was 2.8 per 1,000 live births (Table 5.3). The neonatal death rate was 7.3 per 1,000 births for women giving birth after ART treatment, where data were available.

The neonatal death rate of twins (18.9 per 1,000 births) and higher order multiples (75.1 per 1,000 births) was higher than that of singleton babies (2.4 per 1,000 births) (Table 5.3). For singleton term babies, the neonatal death rate was 0.7 per 1,000 live births.

Neonatal death rates decreased with increasing gestational age, from 409.6 per 1,000 live births for those born at 20–27 weeks gestation to 0.7 per 1,000 live births for those born at term. For babies of less than 1,500 grams birthweight, the neonatal death rate was 191.9 per 1,000 live births compared with 0.6 per 1,000 live births for babies 3,000–3,999 grams and 0.4 per 1,000 live births for babies 4,000 grams or more (Table 5.3).

Perinatal deaths

There were 2,221 perinatal deaths reported to the NPDC for 2009, giving a rate of 9.8 perinatal deaths per 1,000 births (Table 5.1). Of these deaths, 70.0% were fetal deaths.

For the Australian Capital Territory, where 15.1% of women who gave birth were non-residents, the crude rate of perinatal mortality changed from 15.1 per 1,000 births by territory of birth (Table 5.1) to 12.5 per 1,000 births by territory of mother's usual residence (Table 5.2).

Perinatal death data were stratified by a number of demographic, pregnancy and risk factors in Table 5.3. Perinatal death rates were highest in babies of mothers aged 40 and over (14.2 per 1,000 births), followed by babies of teenage mothers (12.8 per 1,000 births). The perinatal death rate of babies born to Aboriginal or Torres Strait Islander mothers was 18.6 per 1,000 births. The rate was 9.4 per 1,000 births in babies born to non-Indigenous mothers (Table 5.3). The perinatal death rate was 17.9 per 1,000 births for women giving birth after ART treatment, compared with 11.3 per 1,000 births for non-ART women, where data were available.

Perinatal death rates were higher among babies of first-time mothers (10.6 per 1,000 births) than among babies whose mothers had at least one previous birth (9.3 per 1,000 births) (Table 5.3).

Table 5.3 shows that perinatal death rates were higher for babies in the 20–27 week gestational age group (685.4 per 1,000 births) and lowest at 37–41 weeks (2.2 per 1,000 births). Babies weighing less than 1,500 grams at birth had the highest perinatal death rate (436.9 per 1,000 births).

Causes of perinatal deaths

The majority of states and territories have implemented the Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ-PDC) to classify causes of perinatal deaths. Further details on these classifications can be found at <http://www.psanz.com.au/special-interest-groups/pnm.aspx/>.

For the 2009 data, three jurisdictions provided causes of death according to the PSANZ-PDC: Western Australia, South Australia and Tasmania. The main causes of perinatal deaths in these jurisdictions were congenital abnormalities (anomalies) (31.2%), spontaneous preterm birth (18.9%) and unexplained antepartum death (10.6%). These three groups of causes accounted for more than half of all perinatal deaths in these states (60.7%) and the rates were 3.1, 1.9 and 1.0 respectively per 1,000 births in the three jurisdictions. Antepartum haemorrhage (APH) and specific perinatal conditions (8.0%) were also commonly reported causes of perinatal death, with a rate of 0.8 per 1,000 births (Table 5.4).

Applying these classifications reveals variability by jurisdiction in the leading causes of perinatal death. The largest apparent difference relates to the category of 'maternal conditions'. This category includes late terminations undertaken for psychosocial indications. Differences in the rates of termination of pregnancy may reflect different provision of services, with the majority undertaken in Victoria (CCOPMM 2010). There may also be some differential assignment of the ranking related to jurisdictional differences in applying the classifications as well as small numbers in some categories.

Table 5.4: Perinatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and state and territory, 2009

Cause of death	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Rate ^(a)
Number										
Congenital abnormality	n.a.	n.r.	n.a.	99	63	14	n.a.	n.a.	176	3.1
Perinatal infection	n.a.	n.r.	n.a.	n.p.	12	<5	n.a.	n.a.	24	0.4
Hypertension	n.a.	n.r.	n.a.	7	<5	<5	n.a.	n.a.	13	0.2
Antepartum haemorrhage (APH)	n.a.	n.r.	n.a.	16	17	12	n.a.	n.a.	45	0.8
Maternal conditions	n.a.	n.r.	n.a.	17	n.p.	<5	n.a.	n.a.	23	0.4
Specific perinatal conditions	n.a.	n.r.	n.a.	19	21	5	n.a.	n.a.	45	0.8
Hypoxic peripartum death	n.a.	n.r.	n.a.	11	n.p.	<5	n.a.	n.a.	17	0.3
Fetal growth restriction (FGR)	n.a.	n.r.	n.a.	20	14	7	n.a.	n.a.	41	0.7
Spontaneous preterm	n.a.	n.r.	n.a.	80	20	7	n.a.	n.a.	107	1.9
Unexplained antepartum death	n.a.	n.r.	n.a.	30	21	9	n.a.	n.a.	60	1.0
No obstetric antecedent	n.a.	n.r.	n.a.	<5	n.p.	—	n.a.	n.a.	7	0.1
Not stated	n.a.	n.r.	n.a.	1	—	6	n.a.	n.a.	7	0.1
Total	n.a.	n.r.	n.a.	311	186	68	n.a.	n.a.	565	9.8
Per cent										
Congenital abnormality	n.a.	n.r.	n.a.	31.8	33.9	20.6	n.a.	n.a.	31.2	—
Perinatal infection	n.a.	n.r.	n.a.	n.p.	6.5	n.p.	n.a.	n.a.	4.2	—
Hypertension	n.a.	n.r.	n.a.	2.3	n.p.	n.p.	n.a.	n.a.	2.3	—
Antepartum haemorrhage (APH)	n.a.	n.r.	n.a.	5.1	9.1	17.6	n.a.	n.a.	8.0	—
Maternal conditions	n.a.	n.r.	n.a.	5.5	n.p.	n.p.	n.a.	n.a.	4.1	—
Specific perinatal conditions	n.a.	n.r.	n.a.	6.1	11.3	7.4	n.a.	n.a.	8.0	—
Hypoxic peripartum death	n.a.	n.r.	n.a.	3.5	n.p.	n.p.	n.a.	n.a.	3.0	—
Fetal growth restriction (FGR)	n.a.	n.r.	n.a.	6.4	7.5	10.3	n.a.	n.a.	7.3	—
Spontaneous preterm	n.a.	n.r.	n.a.	25.7	10.8	10.3	n.a.	n.a.	18.9	—
Unexplained antepartum death	n.a.	n.r.	n.a.	9.6	11.3	13.2	n.a.	n.a.	10.6	—
No obstetric antecedent	n.a.	n.r.	n.a.	n.p.	n.p.	—	n.a.	n.a.	1.2	—
Not stated	n.a.	n.r.	n.a.	0.3	—	8.8	n.a.	n.a.	1.2	—
Total	n.a.	n.r.	n.a.	100.0	100.0	100.0	n.a.	n.a.	100.0	—

(a) Rate per 1,000 births in WA, SA and Tas. The total number of births in the three jurisdictions was 57,486 in 2009.

n.a. Data not available.

n.p. Data not published to maintain confidentiality of small numbers.

n.r. Data not received at the time of publication.

Note: Data are based on state/territory of birth rather than the state/territory of the mother's usual residence.

Table 5.5 presents causes of perinatal deaths by gestational age group for three states. The main cause of perinatal death was congenital abnormalities at 20–21 weeks gestation (53.5%) as well as 32 – 36 weeks (27.9%). The leading cause of death at 22–27 weeks gestation was spontaneous preterm (36.6%). Perinatal deaths of babies at 37–41 weeks were most commonly due to unexplained antepartum death.

Table 5.5: Perinatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and gestational age, 2009

Cause of death	Gestational age (weeks)						Total
	20–21	22–27	28–31	32–36	37–41	42 and over	
	Number						
Congenital abnormality	76	47	9	24	20	—	176
Perinatal infection	n.p.	9	—	<5	7	—	24
Hypertension	<5	<5	<5	5	<5	—	13
Antepartum haemorrhage (APH)	5	17	5	8	10	—	45
Maternal conditions	—	<5	6	10	<5	—	23
Specific perinatal conditions	9	19	<5	n.p.	8	—	45
Hypoxic peripartum death	—	—	n.p.	<5	10	—	17
Fetal growth restriction (FGR)	<5	13	<5	10	12	—	41
Spontaneous preterm	34	67	6	—	—	—	107
Unexplained antepartum death	<5	<5	10	17	25	<5	60
No obstetric antecedent	—	—	—	<5	<5	—	7
Not stated	2	3	—	—	2	—	7
Total	142	183	51	86	102	n.p.	565
	Per cent						
Congenital abnormality	53.5	25.7	17.6	27.9	19.6	—	31.2
Perinatal infection	n.p.	4.9	—	n.p.	6.9	—	4.2
Hypertension	n.p.	n.p.	n.p.	5.8	n.p.	—	2.3
Antepartum haemorrhage (APH)	3.5	9.3	9.8	9.3	9.8	—	8.0
Maternal conditions	—	n.p.	11.8	11.6	n.p.	—	4.1
Specific perinatal conditions	6.3	10.4	n.p.	n.p.	7.8	—	8.0
Hypoxic peripartum death	—	—	n.p.	n.p.	9.8	—	3.0
Fetal growth restriction (FGR)	n.p.	7.1	n.p.	11.6	11.8	—	7.3
Spontaneous preterm	23.9	36.6	11.8	—	—	—	18.9
Unexplained antepartum death	n.p.	n.p.	19.6	19.8	24.5	n.p.	10.6
No obstetric antecedent	—	—	—	n.p.	n.p.	—	1.2
Not stated	1.4	1.6	—	—	2.0	—	1.2
Total	100.0	100.0	100.0	100.0	100.0	n.p.	100.0

Notes:

1. Includes WA, SA and Tas.
2. The total number of births in the three jurisdictions included in the table was 57,486 in 2009.

n.p. Data not published to maintain confidentiality of small numbers.

The causes of death differed for fetal and neonatal deaths. Spontaneous preterm was the leading cause of neonatal deaths (33.1%), while congenital abnormality was the leading cause for fetal deaths (31.0%). Among neonatal deaths, congenital abnormalities accounted for 62.5% of babies at 32–36 weeks and 57.1% of babies at 37 weeks or more. The second most common cause of fetal deaths was spontaneous preterm (14.3%) (Table 5.6).

Table 5.6: Fetal and neonatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and gestational age, 2009

Cause of death	Fetal deaths				Total
	20–27	28–31	32–36	37 and over	
	Number				
Congenital abnormality	112	n.p.	9	<5	132
Perinatal infection	9	—	<5	<5	14
Hypertension	<5	<5	5	<5	12
Antepartum haemorrhage (APH)	16	<5	n.p.	8	34
Maternal conditions	<5	5	9	<5	21
Specific perinatal conditions	24	<5	<5	8	40
Hypoxic peripartum death	—	<5	—	6	n.p.
Fetal growth restriction (FGR)	13	<5	n.p.	12	38
Spontaneous preterm	n.p.	<5	—	—	61
Unexplained antepartum death	7	10	17	26	60
No obstetric antecedent	—	—	<5	—	<5
Not stated	4	—	—	2	6
Total	252	37	62	75	426
	Per cent				
Congenital abnormality	44.4	18.9	14.5	n.p.	31.0
Perinatal infection	3.6	—	n.p.	n.p.	3.3
Hypertension	n.p.	n.p.	8.1	n.p.	2.8
Antepartum haemorrhage (APH)	6.3	n.p.	n.p.	10.7	8.0
Maternal conditions	n.p.	13.5	14.5	n.p.	4.9
Specific perinatal conditions	9.5	n.p.	n.p.	10.7	9.4
Hypoxic peripartum death	—	n.p.	—	8.0	n.p.
Fetal growth restriction (FGR)	5.2	n.p.	n.p.	16.0	8.9
Spontaneous preterm	n.p.	n.p.	—	—	14.3
Unexplained antepartum death	2.8	27.0	27.4	34.7	14.1
No obstetric antecedent	—	—	n.p.	—	n.p.
Not stated	1.6	—	—	2.7	1.4
Total	100.0	100.0	100.0	100.0	100.0

(continued)

Table 5.6 (continued): Fetal and neonatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and gestational age, 2009

Cause of death	Neonatal deaths				Total
	20–27	28–31	32–36	37 and over	
	Number				
Congenital abnormality	n.p.	<5	15	16	44
Perinatal infection	n.p.	—	—	<5	10
Hypertension	—	<5	—	—	<5
Antepartum haemorrhage (APH)	6	<5	<5	<5	11
Maternal conditions	—	<5	<5	—	<5
Specific perinatal conditions	<5	—	<5	—	5
Hypoxic peripartum death	—	<5	<5	<5	10
Fetal growth restriction (FGR)	<5	—	—	—	<5
Spontaneous preterm	41	5	—	—	46
Unexplained antepartum death	—	—	—	—	0
No obstetric antecedent	—	—	<5	<5	6
Not stated	1	—	—	—	1
Total	73	14	24	28	139
	Per cent				
Congenital abnormality	n.p.	n.p.	62.5	57.1	31.7
Perinatal infection	n.p.	—	—	n.p.	7.2
Hypertension	—	n.p.	—	—	n.p.
Antepartum haemorrhage (APH)	8.2	n.p.	n.p.	n.p.	7.9
Maternal conditions	—	n.p.	n.p.	—	n.p.
Specific perinatal conditions	n.p.	—	n.p.	—	3.6
Hypoxic peripartum death	—	n.p.	n.p.	n.p.	7.2
Fetal growth restriction (FGR)	n.p.	—	—	—	n.p.
Spontaneous preterm	56.2	35.7	—	—	33.1
Unexplained antepartum death	—	—	—	—	0.0
No obstetric antecedent	—	—	n.p.	n.p.	4.3
Not stated	1.4	—	—	—	0.7
Total	100.0	100.0	100.0	100.0	100.0

Notes:

1. Includes WA, SA and Tas.
 2. The total number of births in the three jurisdictions included in the table was 57,486 in 2009.
- n.p. Data not published to maintain confidentiality of small numbers.

The most common cause of perinatal death in singletons was congenital abnormalities (33.2%). Deaths of twins and higher order multiples were mostly due to specific perinatal conditions and spontaneous preterm birth (Table 5.7).

Table 5.7: Perinatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and plurality, 2009

Cause of death	Singletons	Twins and higher order multiples		Total
		Number		
Congenital abnormality	168	8		176
Perinatal infection	24	—		24
Hypertension	13	—		13
Antepartum haemorrhage (APH)	n.p.	<5		45
Maternal conditions	23	—		23
Specific perinatal conditions	23	22		45
Hypoxic peripartum death	n.p.	<5		17
Fetal growth restriction (FGR)	n.p.	<5		41
Spontaneous preterm	88	19		107
Unexplained antepartum death	n.p.	<5		60
No obstetric antecedent	n.p.	<5		7
Not stated	5	2		7
Total	506	59		565
		Per cent		
Congenital abnormality	33.2	13.6		31.2
Perinatal infection	4.7	—		4.2
Hypertension	2.6	—		2.3
Antepartum haemorrhage (APH)	n.p.	n.p.		8.0
Maternal conditions	4.5	—		4.1
Specific perinatal conditions	4.5	37.3		8.0
Hypoxic peripartum death	n.p.	n.p.		3.0
Fetal growth restriction (FGR)	n.p.	n.p.		7.3
Spontaneous preterm	17.4	32.2		18.9
Unexplained antepartum death	n.p.	n.p.		10.6
No obstetric antecedent	n.p.	n.p.		1.2
Not stated	1.0	3.4		1.2
Total	100.0	100.0		100.0

Notes:

1. Includes WA, SA and Tas.
2. The total number of births in the three jurisdictions included in the table was 57,486 in 2009.

n.p. Data not published to maintain confidentiality of small numbers.

Causes of death for singletons were examined by gestational age. This showed that 42.2% of 20–27 week babies had congenital abnormalities. The most common cause of death for 28–31 week babies was unexplained antepartum death (22.2%), while the most common cause for babies of 32–36 weeks was congenital abnormality (27.5%). For babies of 37 weeks and over, the leading categories were unexplained antepartum death (26.3%), congenital abnormality (19.2%) and fetal growth restriction (12.1%) (Table 5.8).

Table 5.8: Singleton perinatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and gestational age, 2009

Cause of death	Gestational age (weeks)				Total
	20–27	28–31	32–36	37 and over	
	Number				
Congenital abnormality	119	8	22	19	168
Perinatal infection	16	—	<5	n.p.	24
Hypertension	<5	<5	5	<5	13
Antepartum haemorrhage (APH)	21	5	8	9	43
Maternal conditions	<5	6	10	<5	23
Specific perinatal conditions	13	<5	<5	6	23
Hypoxic peripartum death	—	<5	<5	10	15
Fetal growth restriction (FGR)	15	<5	n.p.	12	40
Spontaneous preterm	82	6	—	—	88
Unexplained antepartum death	6	10	16	26	58
No obstetric antecedent	—	—	<5	<5	6
Not stated	3	—	—	2	5
Total	282	45	80	99	506
	Per cent				
Congenital abnormality	42.2	17.8	27.5	19.2	33.2
Perinatal infection	5.7	—	n.p.	n.p.	4.7
Hypertension	n.p.	n.p.	6.3	n.p.	2.6
Antepartum haemorrhage (APH)	7.4	11.1	10.0	9.1	8.5
Maternal conditions	n.p.	13.3	12.5	n.p.	4.5
Specific perinatal conditions	4.6	n.p.	n.p.	6.1	4.5
Hypoxic peripartum death	—	n.p.	n.p.	10.1	3.0
Fetal growth restriction (FGR)	5.3	n.p.	n.p.	12.1	7.9
Spontaneous preterm	29.1	13.3	—	—	17.4
Unexplained antepartum death	2.1	22.2	20.0	26.3	11.5
No obstetric antecedent	—	—	n.p.	n.p.	1.2
Not stated	1.1	—	—	2.0	1.0
Total	100.0	100.0	100.0	100.0	100.0

Notes:

1. Includes WA, SA and Tas.
2. The total number of births in the three jurisdictions included in the table was 57,486 in 2009.

n.p. Data not published to maintain confidentiality of small numbers.

Of perinatal deaths to mothers younger than 20, over one-quarter were related to spontaneous preterm (28.6%). In mothers aged 40 and over, 26.9% of perinatal deaths were caused by congenital abnormalities as well as unexplained antepartum deaths (26.9%). For congenital abnormalities, the figure was 28.0% for perinatal deaths to mothers in the 35–39 years age group (Table 5.9).

Table 5.9: Perinatal deaths, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and maternal age, 2009

Cause of death	Maternal age (years)						Total
	Less than 20	20–24	25–29	30–34	35–39	40 and over	
	Number						
Congenital abnormality	6	42	41	54	26	7	176
Perinatal infection	n.p.	7	5	6	—	<5	24
Hypertension	<5	<5	5	<5	<5	<5	13
Antepartum haemorrhage (APH)	—	12	n.p.	10	11	<5	45
Maternal conditions	<5	6	<5	<5	<5	<5	23
Specific perinatal conditions	—	9	n.p.	17	10	<5	45
Hypoxic peripartum death	—	<5	<5	7	5	—	17
Fetal growth restriction (FGR)	<5	10	6	11	11	<5	41
Spontaneous preterm	8	17	32	41	9	—	107
Unexplained antepartum death	<5	n.p.	17	15	12	7	60
No obstetric antecedent	<5	—	<5	—	<5	—	7
Not stated	—	1	1	3	—	2	7
Total	28	113	135	170	93	26	565
	Per cent						
Congenital abnormality	21.4	37.2	30.4	31.8	28.0	26.9	31.2
Perinatal infection	n.p.	6.2	3.7	3.5	—	n.p.	4.2
Hypertension	n.p.	n.p.	3.7	n.p.	n.p.	n.p.	2.3
Antepartum haemorrhage (APH)	—	10.6	n.p.	5.9	11.8	n.p.	8.0
Maternal conditions	n.p.	5.3	n.p.	n.p.	n.p.	n.p.	4.1
Specific perinatal conditions	—	8.0	n.p.	10.0	10.8	n.p.	8.0
Hypoxic peripartum death	—	n.p.	n.p.	4.1	5.4	—	3.0
Fetal growth restriction (FGR)	n.p.	8.8	4.4	6.5	11.8	n.p.	7.3
Spontaneous preterm	28.6	15.0	23.7	24.1	9.7	—	18.9
Unexplained antepartum death	n.p.	n.p.	12.6	8.8	12.9	26.9	10.6
No obstetric antecedent	n.p.	—	n.p.	—	n.p.	—	1.2
Not stated	—	0.9	0.7	1.8	—	7.7	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

1. Includes WA, SA and Tas.
 2. The total number of births in the three jurisdictions included in the table was 57,486 in 2009.
- n.p. Data not published to maintain confidentiality of small numbers.

Of perinatal deaths to women who gave birth in hospital, 31.9% were due to congenital abnormalities. This proportion was higher in public (35.2%) than in private hospitals (12.5%). Maternal conditions occurred in 6.3% of perinatal deaths to women in private hospitals, compared with 3.4% in public hospitals (Table 5.10). Of all perinatal deaths in hospitals at 32 weeks gestation or more, 23.0% were unexplained antepartum deaths (33.3% in private hospitals and 19.9% in public hospitals), and 24.0% were due to congenital abnormalities (7.1% in private hospitals and 29.1% in public hospitals).

Table 5.10: Perinatal deaths to women who gave birth in hospital, by Perinatal Society of Australia and New Zealand Perinatal Death Classification and hospital sector, 2009

Cause of death	Public	Private	Total
	Number		
Congenital abnormality	165	10	175
Perinatal infection	n.p.	<5	23
Hypertension	n.p.	<5	13
Antepartum haemorrhage (APH)	29	13	42
Maternal conditions	16	5	21
Specific perinatal conditions	37	7	44
Hypoxic peripartum death	n.p.	<5	15
Fetal growth restriction (FGR)	32	9	41
Spontaneous preterm	92	11	103
Unexplained antepartum death	44	15	59
No obstetric antecedent	6	—	6
Not stated	3	4	7
Total	469	80	549
	Per cent		
Congenital abnormality	35.2	12.5	31.9
Perinatal infection	n.p.	n.p.	4.2
Hypertension	n.p.	n.p.	2.4
Antepartum haemorrhage (APH)	6.2	16.3	7.7
Maternal conditions	3.4	6.3	3.8
Specific perinatal conditions	7.9	8.8	8.0
Hypoxic peripartum death	n.p.	n.p.	2.7
Fetal growth restriction (FGR)	6.8	11.3	7.5
Spontaneous preterm	19.6	13.8	18.8
Unexplained antepartum death	9.4	18.8	10.7
No obstetric antecedent	1.3	—	1.1
Not stated	0.6	5.0	1.3
Total	100.0	100.0	100.0

Notes:

1. Includes WA, SA and Tas.
2. The total number of births in the three jurisdictions included in the table was 57,486 in 2009.

n.p. Data not published to maintain confidentiality of small numbers.

Appendix 1: State and territory perinatal data collections, contacts and recent reports

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Latest report:

Centre for Epidemiology and Research, New South Wales Department of Health. New South Wales Mothers and Babies 2008. N S W Public Health Bulletin 2010;21(S-2).

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Latest report:

CCOPMM (Consultative Council on Obstetric and Paediatric Mortality and Morbidity) 2010. Births in Victoria 2007 and 2008. Melbourne: Quality, Safety and Patient Experience Branch, Department of Health.

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Latest report:

Health Statistics Centre 2011. Perinatal statistics Queensland 2009. Brisbane: Queensland Health.

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Latest report:

Joyce A & Tran BN 2009. Western Australia's mothers and babies 2009: 27th Annual Report of the Western Australian Midwives' Notification System. Perth: Department of Health.

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Latest reports:

Chan A, Scheil W, Scott J, Nguyen A-M & Sage L 2009. Pregnancy outcome in South Australia 2009. Adelaide: SA Health.

Maternal, Perinatal and Infant Mortality Committee 2011. Maternal, perinatal and infant mortality in South Australia 2009, including the South Australian protocol for investigation of stillbirths. Adelaide: SA Health.

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Council of Obstetric and Paediatric Mortality and Morbidity 2011. Annual report 2009. Hobart: Department of Health and Human Services.

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Latest report:

Epidemiology Branch, ACT Health 2011. Maternal and perinatal health in the ACT, 1999–2008. Canberra: ACT Health

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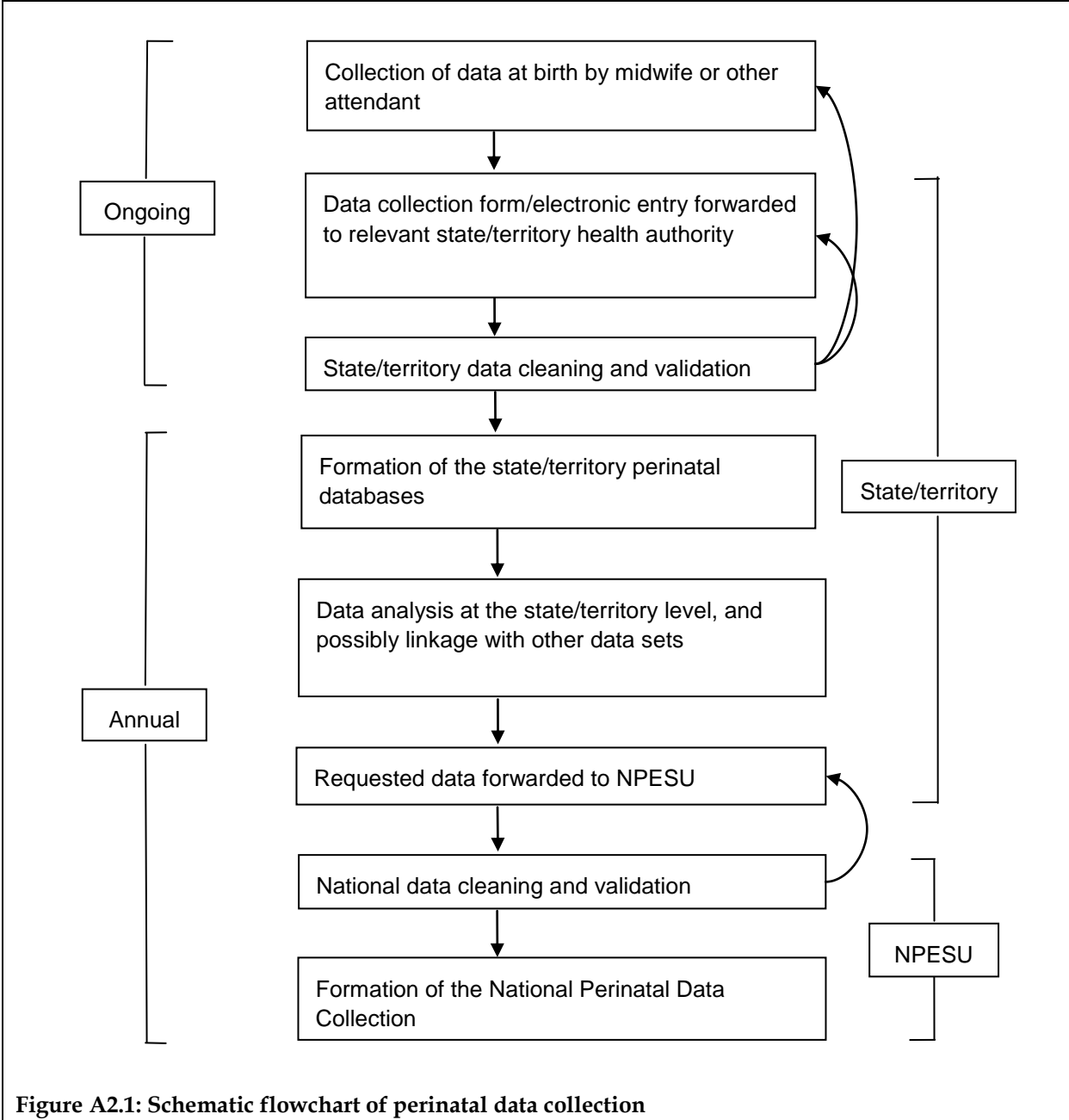
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Latest report:

Tew K & Zhang X 2010. Northern Territory Midwives' Collection, mothers and babies 2006. Darwin: Department of Health and Families.

Appendix 2: Collection and collation of data for the National Perinatal Data Collection

Figure A2.1 shows the pathway of perinatal data to the NPESU for national collation.



Appendix 3: Perinatal National Minimum Data Set items

Table A3.1: Perinatal NMDS 2008–2010 data items

Data element name	METeOR identifier
Birth—Apgar score (at 5 minutes), code NN	289360
Birth—birth order, code N	269992
Birth—birth status, code N	269949
Birth—birth weight, total grams NNNN	269938
Birth event—birth method, code N	295349
Birth event—birth plurality, code N	269994
Birth event—birth presentation, code N	299992
Birth event—labour onset type, code N	269942
Birth event—setting of birth (actual), code N	269937
Birth event—state/territory of birth, code N	270151
Episode of admitted patient care—separation date, DDMMYYYY	270025
Establishment—organisation identifier (Australian), NNX[X]NNNNN	269973
Female (pregnant)—estimated gestational age, total weeks NN	269965
Person—country of birth, code (SACC 1998) NNNN	270277
Person—date of birth, DDMMYYYY	287007
Person—Indigenous status, code N	291036
Person—person identifier, XXXXXX[X(14)]	290046
Person—sex, code N	287316

Source: <<http://meteor.aihw.gov.au/content/index.phtml/itemId/362313>>.

Table A3.2: New Perinatal NMDS items

Data element name	METeOR identifier
Female (pregnant)—number of cigarettes smoked (per day after 20 weeks of pregnancy), number N[NN]	365445
Female (pregnant)—tobacco smoking indicator (after twenty weeks of pregnancy), yes/no code N	365417
Female (pregnant)—tobacco smoking indicator (first twenty weeks of pregnancy), yes/no code N	365404
Pregnancy— estimated duration (at the first visit for antenatal care), completed weeks N[N]	379597

Note: Indigenous status of the baby did not require a new data element. The data element Person – Indigenous status, code N (291036) is applied twice, once for the mother and once for the baby.

Source: <<http://meteor.aihw.gov.au/content/index.phtml/itemId/426735>>.

Appendix 4: Data used in figures

Table A4.1: Number of births, 2000 to 2009

Year	Births
2000	257,238
2001	254,326
2002	255,095
2003	256,925
2004	257,205
2005	272,419
2006	282,169
2007	294,205
2008	296,925
2009	299,220

Note: Provisional data were provided by Victoria for 2009.

Table A4.2: Women giving birth in the population, 2000 to 2009

Rate	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Crude	60.0	58.9	58.7	58.7	58.5	61.5	63.1	64.9	64.4	63.6
Age-adjusted	59.6	58.8	58.7	58.9	58.7	61.8	63.6	65.5	64.6	63.5

Note: Provisional data were provided by Victoria for 2009.

Table A4.3: Primiparous women who gave birth, by maternal age, 2000 and 2009 (per cent)

Maternal age (years)	2000	2009
Younger than 20	81.9	83.0
20–24	54.4	54.9
25–29	44.9	46.5
30–34	33.2	35.8
35–39	25.1	26.3
40 and over	22.5	24.9

Note: Provisional data were provided by Victoria for 2009.

Table A4.4: Women who gave birth, by onset of labour, 2000 to 2009 (per cent)

Onset of labour	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Spontaneous	61.5	59.0	57.9	57.3	57.6	56.5	56.6	56.6	57.0	56.1
Induced	25.6	26.7	26.6	26.1	25.3	25.6	25.1	25.3	24.8	25.3
No labour	12.9	14.3	15.5	16.5	17.1	17.9	18.3	18.1	18.2	18.4

Note: Provisional data were provided by Victoria for 2009.

Table A4.5: Women who gave birth, by caesarean section and instrumental birth, 2000 to 2009 (per cent)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Caesarean section	23.3	25.4	27.0	28.5	29.4	30.3	30.8	30.9	31.1	31.5
Instrumental	11.2	10.9	10.8	10.7	11.0	10.8	10.7	11.2	11.4	11.7

Note: Provisional data were provided by Victoria for 2009.

Table A4.6: Women who gave birth, by caesarean section by maternal age and hospital sector, 2009 (per cent)

Maternal age (years)	Public	Private
Less than 20	18.5	23.8
20–24	22.1	29.2
25–29	26.5	36.1
30–34	31.0	41.6
35–39	37.1	49.4
40 and over	42.4	58.5

Note: Excludes Vic.

Table A4.7: Length of stay of 5 days or more for babies born in hospital, 2000 to 2009 (per cent)

Length of stay	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
5 days and over	34.6	33.8	32.6	31.5	30.3	28.2	27.0	25.3	24.1	23.0

Note: Excludes Vic. Only babies who were discharged home are included.

Glossary

Age standardisation: a method of removing the influence of age when comparing populations with different age structures.

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

Apgar score: numerical score used to indicate the baby's condition at 1 minute and 5 minutes after birth. Between 0 and 2 points are given for each of 5 characteristics: heart rate, breathing, colour, muscle tone and reflex irritability, and the total score is between 0 and 10.

Assisted reproductive technology: treatments or procedures that involve the in vitro handling of human oocytes (eggs) and sperm or embryos for the purposes of establishing a pregnancy.

Augmentation of labour: intervention after the onset of labour to assist the progress of labour.

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

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 5 grams and obtained within one hour of birth).

Caesarean section: operative birth by surgical incision through the abdominal wall and uterus.

Chorioamnionitis: an inflammation, usually from an infection, of the membranes surrounding the fetus.

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

Epidural: injection of anaesthetic agent into the epidural space of the spinal cord.

Episiotomy: an incision of the perineum and vagina to enlarge the vulval orifice.

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

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 grams 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 via ultrasound, or derived from clinical assessment during pregnancy or from examination of the baby after birth.

Grand multipara: pregnant woman who has had four or more previous pregnancies resulting in a live birth or stillbirth.

Induction of labour: intervention to stimulate the onset of labour.

Instrumental delivery: vaginal delivery using forceps or vacuum extraction.

Intrapartum fetal death: fetal death occurring during labour.

Intrauterine growth restriction: a fetus whose estimated weight is below the 10th percentile for its gestational age.

Isoimmunisation: development of antibodies directed at the red blood cells of the baby in utero. This occurs when there is an incompatibility between the baby's blood type and that of its mother.

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

Live birth: 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 grams.

Maternal age: mother's age in completed years at the birth of her baby.

Mode of separation: 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 a birth) and separation date (from the hospital where birth occurred). The interval is calculated by subtracting the date of admission from the date of separation.

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

Neonatal care levels: Level I care is for normal healthy term babies, some of whom may need short-term observation during the first few hours of life.

Level II refers to a nursery that generally has babies born at 32–36 weeks gestation weighing around 1,500 to 2,500 grams at birth. It includes care for babies who require intravenous therapy or antibiotics, and/or those who are convalescing after intensive care, and/or those who need their heart rate or breathing monitored, and/or those who need short-term oxygen therapy.

Level III or intensive care refers to the care of newborn infants who require more specialised care and treatment. It includes most babies born at less than 32 weeks gestation or less than 1,500 grams birthweight, and others who may require such interventions as intravenous feeding, and/or surgery, and/or cardiorespiratory monitoring for management of apnoea or seizures, and/or require assisted ventilation, and/or supplemental oxygen over 40% or long-term oxygen (ANZNN 2009).

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.

Parity: number of previous pregnancies resulting in live births or stillbirths, excluding the current pregnancy.

Perinatal death: a fetal or neonatal death of at least 20 weeks gestation or at least 400 grams birthweight.

Perineal status: status of the perineum after the birth. It may involve surgical suturing of perineal laceration or episiotomy incision.

Plurality: the number of births resulting from a pregnancy.

Postneonatal death: death of a liveborn baby after 28 days and within one year of birth.

Post-term birth: birth at 42 or more completed weeks of gestation.

Presentation at birth: presenting part of the fetus at birth.

Preterm birth: birth before 37 completed weeks of gestation.

Primary caesarean section: caesarean section to mother with no previous history of caesarean section.

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

Pudendal: local anaesthetic to block the pudendal nerves.

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

Sex ratio: number of male liveborn babies per 100 female liveborn babies.

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

Stillbirth: see Fetal death (stillbirth).

Teenage mother: mother aged less than 20 years at the birth of her baby.

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

Vaginal breech: vaginal birth in which the baby's buttocks is the presenting part.

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

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