



Australian Government
**Australian Institute of
Health and Welfare**

Australia's mothers and babies

2015

in brief




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The Australian Institute of Health and Welfare is a major national agency whose purpose is to create authoritative and accessible information and statistics that inform decisions and improve the health and welfare of all Australians.

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Contents

1	At a glance	1
	Mothers at a glance	1
	Babies at a glance.....	4
2	Mothers	5
	Antenatal care.....	5
	Smoking during pregnancy.....	10
	Maternal health.....	12
	Place of birth.....	14
	Onset of labour.....	15
	Method of birth.....	17
3	Babies	20
	Gestational age.....	20
	Birthweight.....	22
	Low birthweight	23
	Small for gestational age.....	25
	Baby presentation and method of birth.....	29
	Apgar scores	31
	Resuscitation.....	32
	Hospital births and length of stay	33
	Admission to special care nurseries and neonatal intensive care units.....	34
	Perinatal deaths	35
4	Aboriginal and Torres Strait Islander mothers and their babies ...	39
	Indigenous mothers.....	40
	Babies of Indigenous mothers.....	45
5	Key statistics and trends	49

Glossary	56
Abbreviations	59
References.....	60
Acknowledgments	61
Appendixes	62

AIHW information on mothers and babies

Australia's mothers and babies 2015—in brief presents an overview of the key statistics from the Australian Institute of Health and Welfare (AIHW) National Perinatal Data Collection. The AIHW's online perinatal dynamic data display complements this report and is available at <www.aihw.gov.au/reports/mothers-babies/perinatal-dynamic-data-displays>.

Detailed supplementary tables, including state and territory data, are also available online from the AIHW website at <www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies-2015-in-brief>. This report and the perinatal dynamic data display are part of a comprehensive program of AIHW work in relation to maternal and perinatal care and outcomes. Other major projects are:

- National Core Maternity Indicators (NCMIs) dynamic data display and reports, available at <www.aihw.gov.au/reports/mothers-babies/ncmi-dynamic-data-displays>. The NCMIs monitor the safety and quality of maternity care to ensure there is continual improvement following the introduction of the National Maternity Services Plan (AHMC 2011)
- National Maternity Data Development Project (NMDDP), latest report available at <www.aihw.gov.au/reports/mothers-babies/enhancing-maternity-data-collection-reporting>. The aim of the NMDDP is to build a more comprehensive and consistent national data collection for maternal and perinatal health, including development of clinical data items and maternity models of care and the establishment of ongoing national maternal and perinatal mortality data collection and reporting
- geographic reporting of maternal and perinatal indicators from the Performance Accountability Framework, to be published in 2018. This publication will present detailed geographic data for indicators on antenatal care in the first trimester, smoking during pregnancy and low birthweight.

The National Perinatal Data Collection

The National Perinatal Data Collection (NPDC) began in 1991 and is a collaborative effort by the AIHW and state and territory health departments.

Perinatal data are collected for each birth in each state and territory by midwives and other birth attendants. The data are collated by the relevant state or territory health department and a standard de-identified extract is provided to the AIHW on an annual basis to form the NPDC.

The NPDC covers both live births and stillbirths, where gestational age is at least 20 weeks or birthweight is at least 400 grams, except in Victoria and Western Australia, where births are included if gestational age is at least 20 weeks or, if gestation is unknown, birthweight is at least 400 grams.

See Appendix A for more information about the NPDC.



1

At a glance

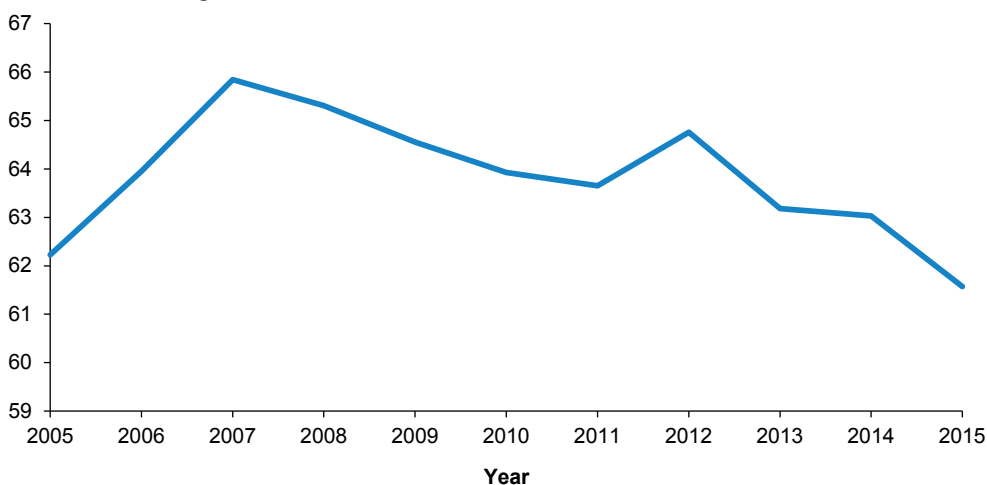
Mothers at a glance

More women are giving birth

- In 2015, 304,268 women gave birth in Australia—an increase of 13% since 2005 (267,795 women).
- The rate of women giving birth has fluctuated between 2005 and 2015, with a rate of 62 per 1,000 women of reproductive age (15–44 years) in 2015. The rate has declined from a peak of 66 per 1,000 women in 2007.

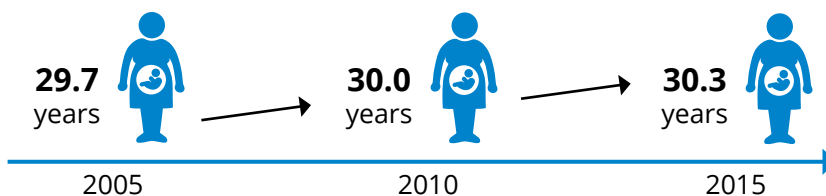
Rate of women of reproductive age giving birth, 2005 to 2015

Per 1,000 women aged 15–44



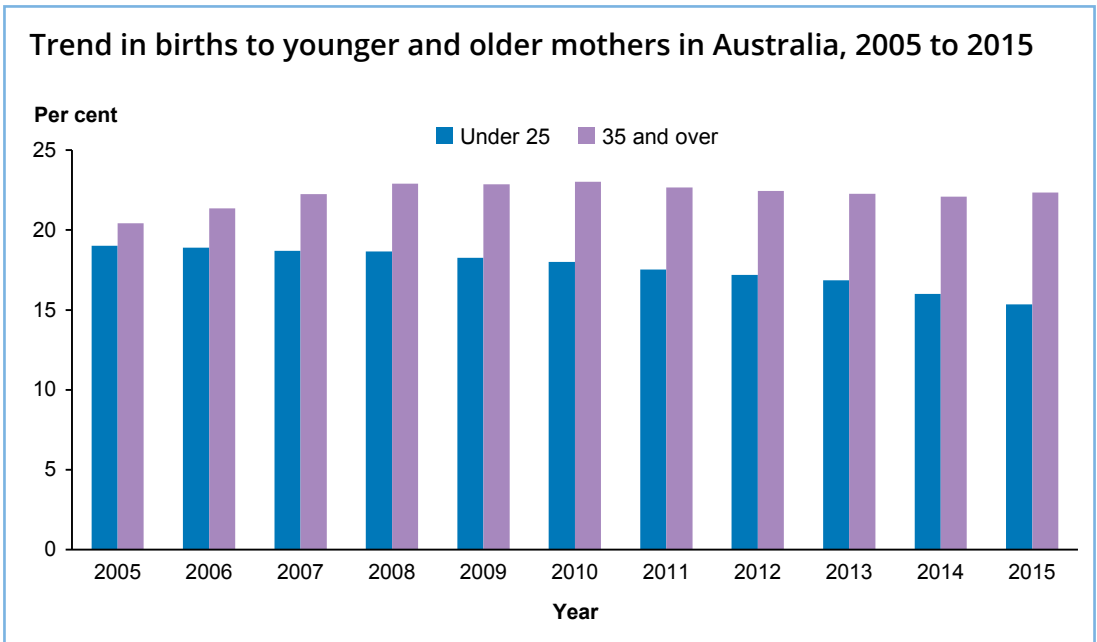
Women are giving birth later in life

- The average age of all women who gave birth continues to rise and was 30.3 in 2015, compared with 29.7 in 2005. The median age was slightly higher, at 31 years in 2015.



Average age of all mothers, 2005 to 2015

- The average age has also increased for Aboriginal and Torres Strait Islander mothers, from 24.9 in 2005 to 25.6 in 2015, with a median of 25 years.
- The proportion of mothers aged 35 and over has increased from 20% in 2005 to 22% in 2015, while the proportion of mothers aged under 25 has decreased from 19% to 15%.
- The average age of first-time mothers also increased, from 28.1 in 2005 to 28.9 in 2015.



Rate of multiple pregnancies has decreased

In 2015, multiple pregnancies represented 1.5% of all pregnancies. Almost all multiple pregnancies (98%) were twins, while a small proportion (2%) were other multiples (triplets, quadruplets or higher).

The proportion of multiple pregnancies was lowest among mothers aged less than 20 (0.8%) and increased to 2.8% among mothers aged 40 and over.

Between 2005 and 2015, the number of multiple pregnancies increased slightly from 4,529 in 2005 to a peak of 4,703 in 2008 and then declined to 4,540 in 2015; however, the rate decreased over this time from 17 per 1,000 mothers to 15 per 1,000.

Most mothers live in *Major cities* and were born in Australia

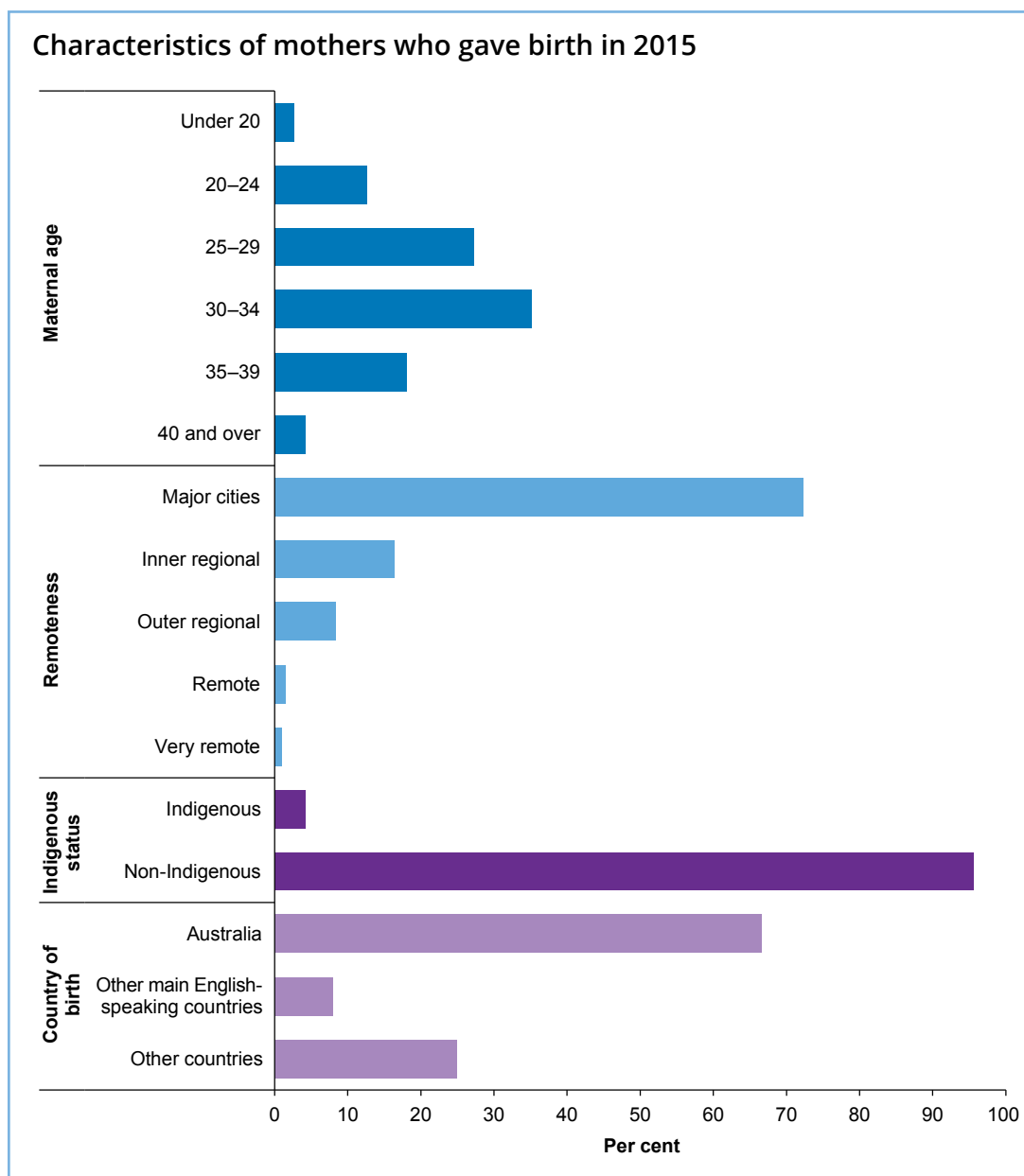
Most mothers lived in *Major cities* (72%) and most were born in Australia (67%)—similar to the proportions of all women of reproductive age in the population.

One-quarter (25%) of mothers who gave birth in 2015 were born in a main non-English speaking country, compared with 22% of women of reproductive age in the population. The proportion of mothers born in a main non-English speaking country has increased from 17% in 2005.

1 in 23 mothers were Aboriginal and/or Torres Strait Islander

Around 4.3% of all mothers who gave birth in 2015 were Indigenous—slightly higher than the proportion of Indigenous women of reproductive age in the population (3.4%).

Indigenous mothers were on average younger than non-Indigenous mothers (25.6 years compared with 30.5).



Find out more in the *Perinatal dynamic data display: Overview and demographics*

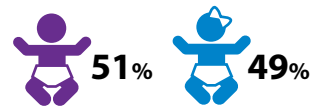
Babies at a glance

More babies are being born

- There were 308,887 babies born in 2015—an increase of 12% since 2005.
- In all, 306,725 were live births and 2,160 (less than 1%) were stillbirths (a baby born without signs of life, see Glossary). Birth status is not recorded for a small number of births.
- The stillbirth rate of 7 deaths per 1,000 births has not changed substantially since 2005, remaining between 7.0 and 7.8 per 1,000 births over this time.

Baby boys slightly outnumber baby girls

Slightly more babies were male (51%) than female (49%). The sex ratio, expressed as the number of male liveborn babies per 100 female liveborn babies, was 105.9.

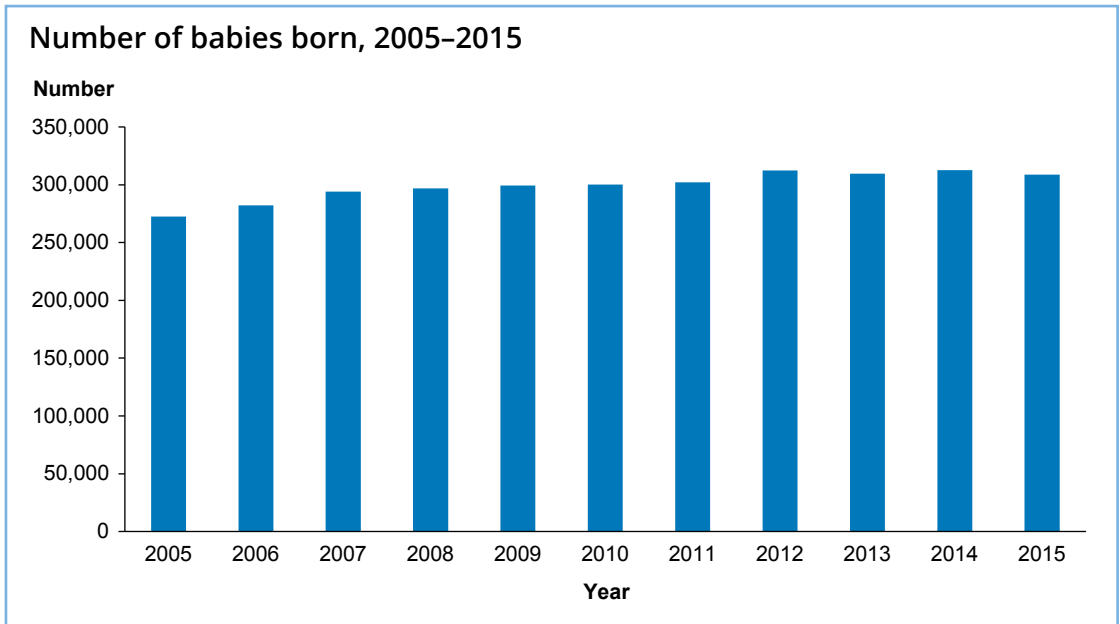


1 in 18 babies were Aboriginal and/or Torres Strait Islander

Around 1 in 18 babies (5.4% or 16,798) were Indigenous in 2015 (based on Indigenous status of the baby).

3 in 4 babies were born to mothers living in New South Wales, Victoria or Queensland

The proportion of babies born in each state and territory closely reflects the distribution of the total population in 2015.



Find out more in the *Perinatal dynamic data display: Overview and demographics*

2

Mothers

Antenatal care

Almost all mothers attend antenatal care, but only two-thirds attend in the first trimester

Antenatal care is a planned visit between a pregnant woman and a midwife or doctor to assess and improve the wellbeing of the mother and baby throughout pregnancy. It does not include visits where the sole purpose is to confirm the pregnancy.

Antenatal care is associated with positive maternal and child health outcomes—the likelihood of receiving effective health interventions is increased through attending antenatal visits. The Australian Antenatal Guidelines (AHMAC 2012) recommend that the first antenatal visit occur within the first 10 weeks of pregnancy and that first-time mothers with an uncomplicated pregnancy attend 10 visits (7 visits for subsequent uncomplicated pregnancies).

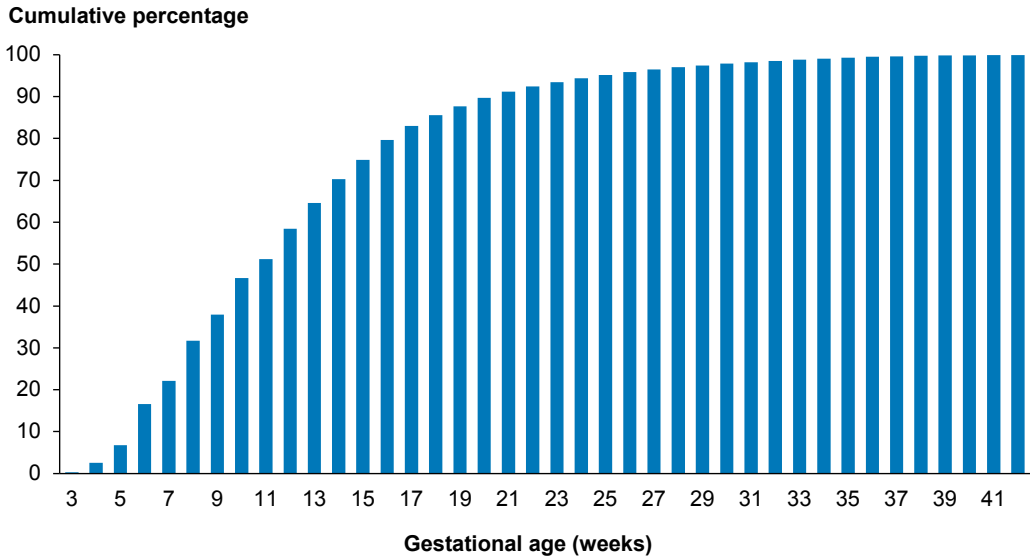
Almost all mothers (99.9%) who gave birth in 2015 had at least 1 antenatal visit:

- 95% had 5 or more visits
- 87% had 7 or more visits
- 58% had 10 or more visits (excludes data from Victoria, see Appendix Table D2).

Regular antenatal care in the first trimester (before 14 weeks' gestational age) is associated with better maternal health in pregnancy, fewer interventions in late pregnancy and positive child health outcomes. Nationally, in 2015:

- 47% of mothers attended at least 1 antenatal visit in the first 10 weeks of pregnancy
- 35% of mothers did not attend an antenatal visit in the first trimester (less than 14 weeks)
- 1 in 10 (10%) did not begin antenatal care until after 20 weeks' gestation.

Time to first antenatal visit, by gestational age, 2015



Trend information on antenatal care is limited due to the relatively recent standardised collection of data; however, the data that are available show little change over time:

- The proportion of mothers who attended 5 or more antenatal visits was 95.0% in 2011 and 95.6% in 2015 (based on mothers who gave birth at 32 weeks' or more gestation from New South Wales, Queensland, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory).
- The proportion who received antenatal care in the first trimester of pregnancy was 62.8% in 2010 compared with 64.7% in 2015 (excludes data from New South Wales due to a change in data collection practice introduced in 2011).

See Chapter 5 for more data on trends.



Find out more in the *Perinatal dynamic data display: Antenatal period*

Antenatal care visits vary by socioeconomic status and Indigenous status

Mothers living in the lowest socioeconomic status (SES) areas began antenatal care later in pregnancy—59% of mothers living in the lowest SES areas attended antenatal care in the first trimester compared with 70% in the highest SES areas in 2015.

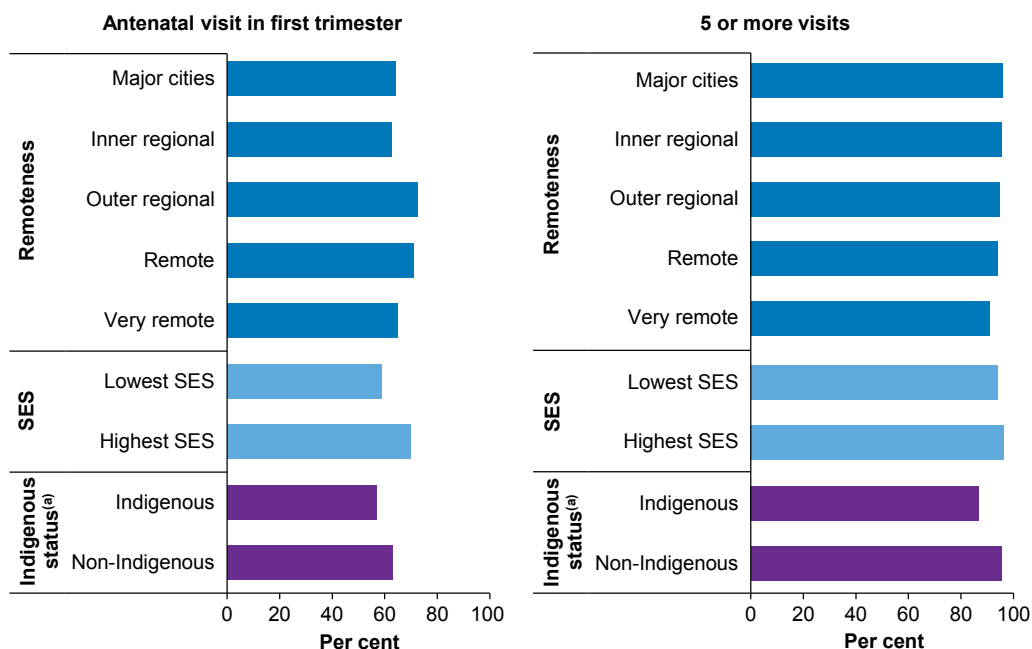
The proportion of mothers attending 5 or more antenatal visits varied slightly by remoteness and socioeconomic disadvantage (data exclude very pre-term births and data from Victoria, see Appendix Table D2):

- 96% of mothers living in *Major cities* compared with 91% in *Very remote* areas
- 96% of mothers living in the highest SES areas compared with 94% in the lowest SES areas.

Mothers who were born in main non-English-speaking countries were less likely to attend antenatal care in the first trimester (58% compared with 67% of those born in Australia and other main English-speaking countries). However, there was no difference in the proportion attending 5 or more antenatal visits (both 95.5%).

Indigenous mothers were less likely to attend either an antenatal visit in the first trimester (57% compared with 63% of non-Indigenous mothers) or to attend 5 or more visits (87% compared with 95% of non-Indigenous mothers) (age-standardised). See Chapter 4 for more information on Indigenous mothers.

Antenatal visits in the first trimester and 5 or more antenatal visits, by selected maternal characteristics, 2015



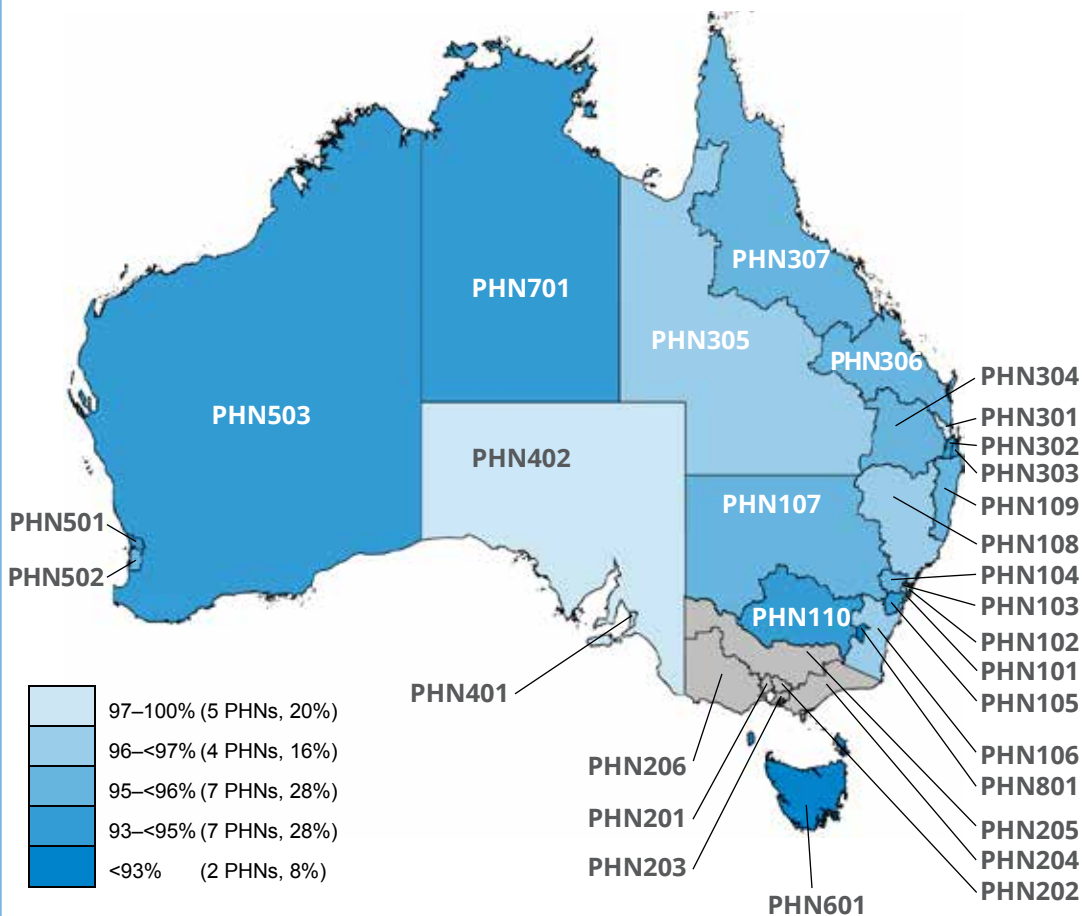
(a) Age-standardised percentages.

Note: Data on 5 or more antenatal visits exclude Victoria (see Appendix Table D2) and very pre-term births (less than 32 weeks' gestation).

Number of antenatal visits varies depending on where mothers live

In 2015, the proportion of mothers attending 5 or more antenatal visits nationally was 95% (208,996) (data exclude very pre-term births and data from Victoria, see Appendix Table D2). However, the proportion varied across Primary Health Networks (PHNs), ranging from 81% in the Australian Capital Territory PHN to 99% in the Northern Sydney PHN.

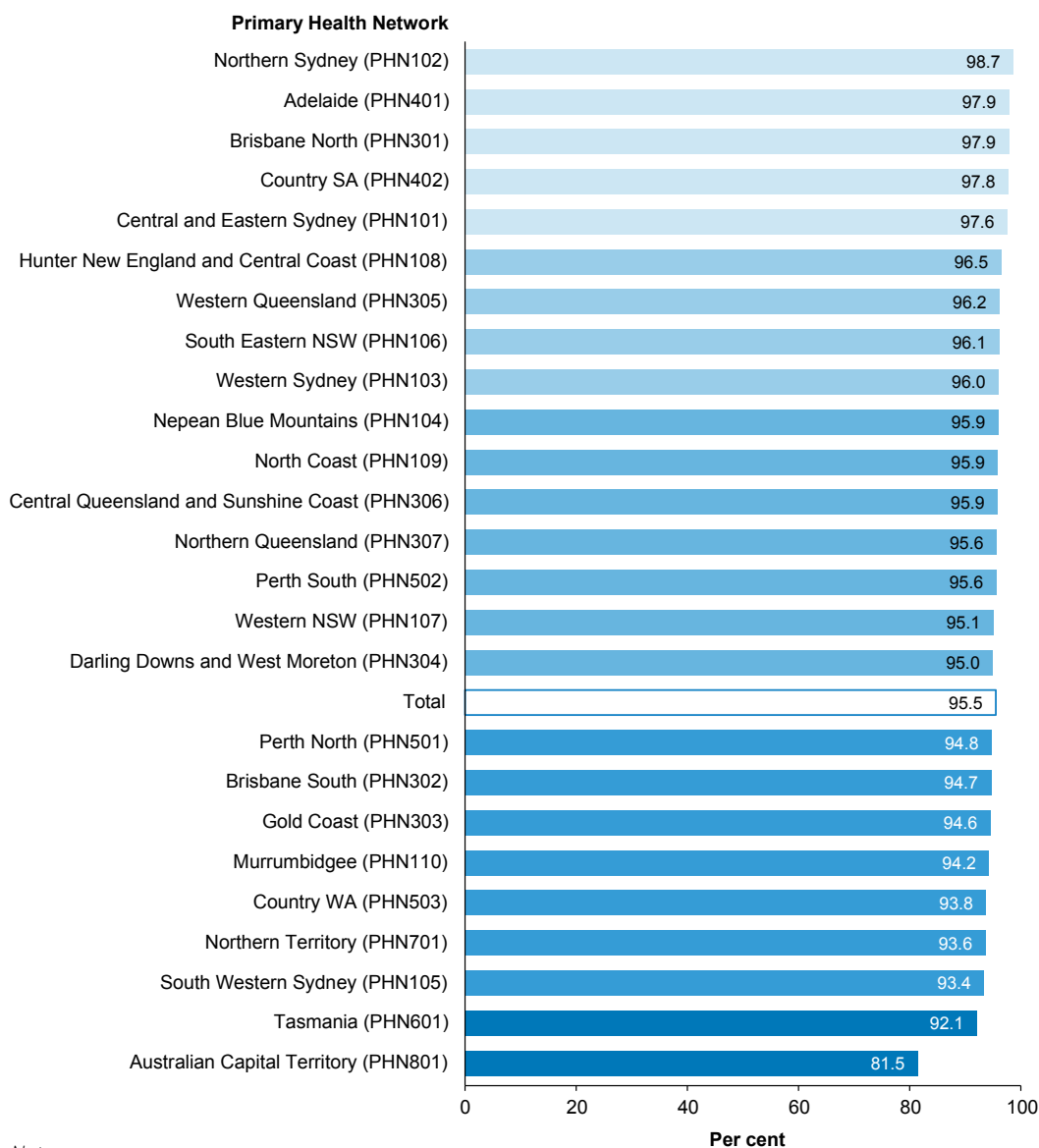
Map of percentage of mothers attending 5 or more antenatal visits, by Primary Health Network of usual residence, 2015



Notes

1. Data exclude very pre-term births (less than 32 weeks' gestation).
2. Based on 25 PHNs. Data exclude Victoria (see Appendix Table D2). Women who resided in Victoria and gave birth in another state or territory are not reported due to small numbers. The Murray PHN crosses the border of New South Wales and Victoria, and therefore a small number of women who gave birth in the Murray PHN in New South Wales are also not reported due to small numbers.
3. For the Australian Capital Territory, in many cases, early antenatal care provided by the woman's general practitioner is not reported.
4. See Supplementary Table 5.1 for detailed data.

Percentage of mothers attending 5 or more antenatal visits, by Primary Health Network of usual residence, 2015



Notes

1. Data exclude very pre-term births (less than 32 weeks' gestation).
2. Based on 25 PHNs. Data exclude Victoria (see Appendix Table D2). Women who resided in Victoria and gave birth in another state or territory are not reported due to small numbers. The Murray PHN crosses the border of New South Wales and Victoria, and therefore a small number of women who gave birth in the Murray PHN in New South Wales are also not reported due to small numbers.
3. For the Australian Capital Territory, in many cases, early antenatal care provided by the woman's general practitioner is not reported.
4. See Supplementary Table 5.1 for detailed data.

Smoking during pregnancy

Rates of smoking during pregnancy continue to fall

Tobacco smoking during pregnancy is the most common preventable risk factor for pregnancy complications, and is associated with poorer perinatal outcomes, including low birthweight, being small for gestational age, pre-term birth and perinatal death.

One in 10 mothers (31,268 or 10%) who gave birth in 2015 smoked at some time during their pregnancy, a decrease from 15% in 2009. More data on trends are available in Chapter 5.

Rates of smoking were slightly higher in the first 20 weeks of pregnancy (30,413 or 10%) compared with after 20 weeks of pregnancy (22,682 or 8%).

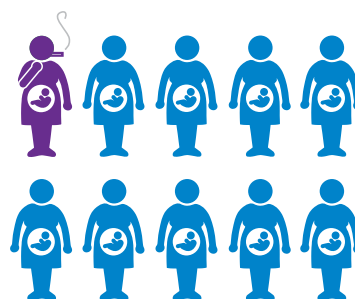
On average, mothers who smoked during pregnancy:

- attended their first antenatal visit later in pregnancy (14 weeks) than those who did not smoke (12 weeks)
- had 1 fewer antenatal care visits (9 visits) than those who did not smoke (10 visits).

These patterns were present even when taking into account the effect of differences in SES.

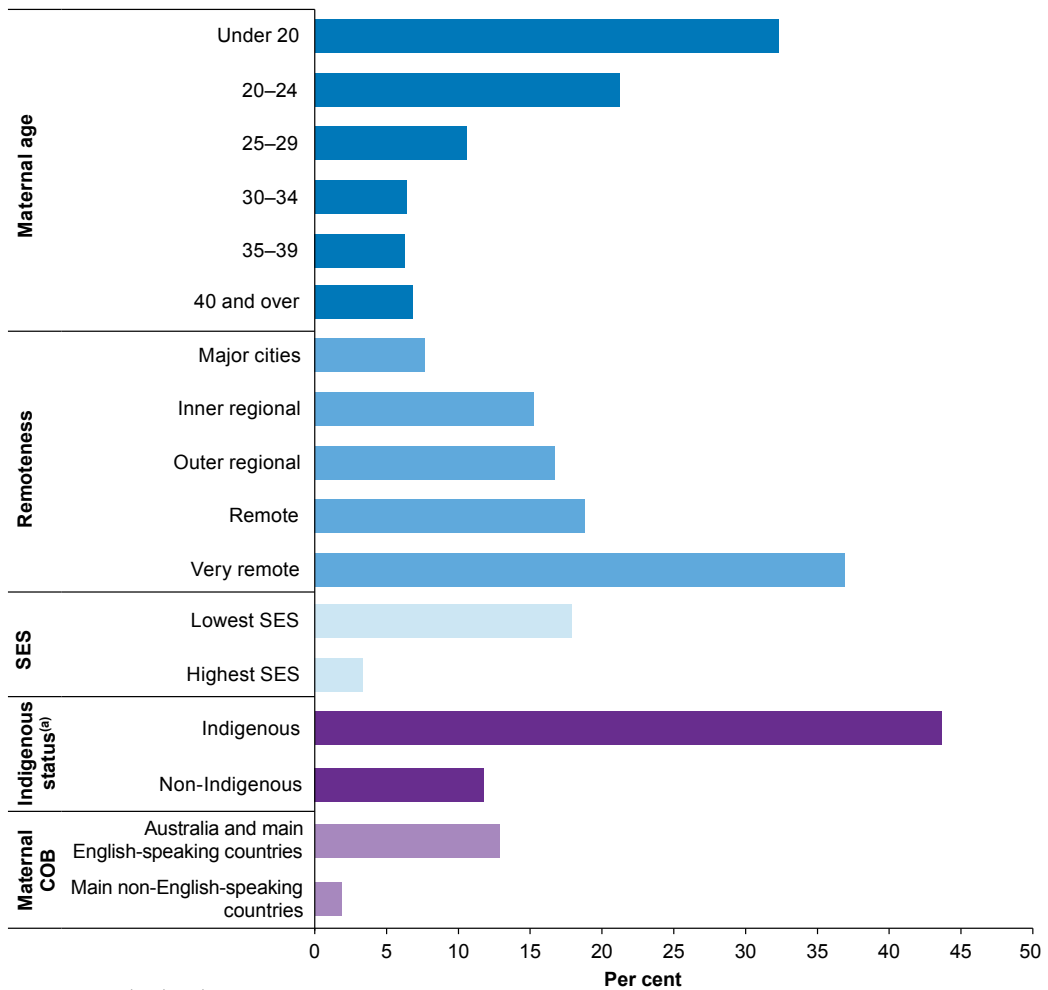
Some mothers were more likely than others to smoke in the first 20 weeks of pregnancy. In 2015, proportions were highest among the following mothers, noting that some may fall into more than 1 of these categories:

- younger mothers (aged under 20)—almost one-third (32%) smoked in the first 20 weeks of pregnancy compared with 6% of mothers aged 35–39 and 7% aged 40 and over
- mothers living in *Remote* and *Very remote* areas—more than one-third (37%) of mothers in *Very remote* and around one-fifth (19%) in *Remote* areas, compared with only 8% of those living in *Major cities*
- mothers living in the lowest SES areas—almost one-fifth (18%) smoked in the first 20 weeks of pregnancy, compared with 3% in the highest SES areas. The difference is still notable after adjusting for maternal age—19% compared with 8% (age-standardised percentages)
- mothers born in Australia or other main English-speaking countries—13% compared with 2% of mothers from main non-English-speaking countries
- Indigenous mothers—44% smoked in the first 20 weeks of pregnancy, compared with 12% of non-Indigenous mothers (age-standardised percentages).



Find out more in the *Perinatal dynamic data display: Antenatal period*

Mothers who smoked in the first 20 weeks of pregnancy, by selected maternal characteristics, 2015



Almost 1 in 4 smokers quit during pregnancy

Women who stop smoking during pregnancy can reduce the risk of adverse outcomes for themselves and their babies. Support for smoking cessation is widely available through antenatal clinics.

Almost 1 in 4 (7,069 or 23%) of the 30,413 mothers who gave birth in 2015 and who reported smoking during the first 20 weeks of pregnancy did not continue to smoke after 20 weeks of pregnancy.

Some women may continue to smoke before knowing they are pregnant, and cease once they find out they are pregnant. According to data from the 2016 National Drug Strategy Household Survey, around 1 in 6 (16%) women smoked before they knew they were pregnant, and this dropped to 1 in 10 (11%) after they found out they were pregnant (AIHW 2017).

Maternal health

Almost half of mothers are overweight or obese at their first antenatal visit

Obesity in pregnancy contributes to increased morbidity and mortality for both mother and baby. Pregnant women who are obese have an increased risk of thromboembolism, gestational diabetes, pre-eclampsia, post-partum haemorrhage and wound infections. They are also more likely to deliver via caesarean section. Babies of mothers who are obese have higher rates of congenital anomaly, stillbirth and neonatal death compared with babies of mothers who are not obese (CMACE & RCOG 2010).

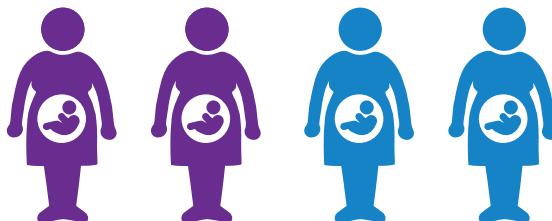
Body mass index (BMI) is a ratio of weight and height (kg/m^2). The normal range of BMI for non-pregnant women is 18.5 to 24.9. While increases in BMI are expected during pregnancy, a BMI of 30 or more at the first antenatal visit has been defined as obesity in pregnancy.

Data on maternal BMI were available for mothers in all states and territories except New South Wales in 2015. However, data collection methods vary between jurisdictions. These data cover more than two-thirds of mothers who gave birth in 2015.

Among mothers who gave birth in 2015 (excluding those in New South Wales):

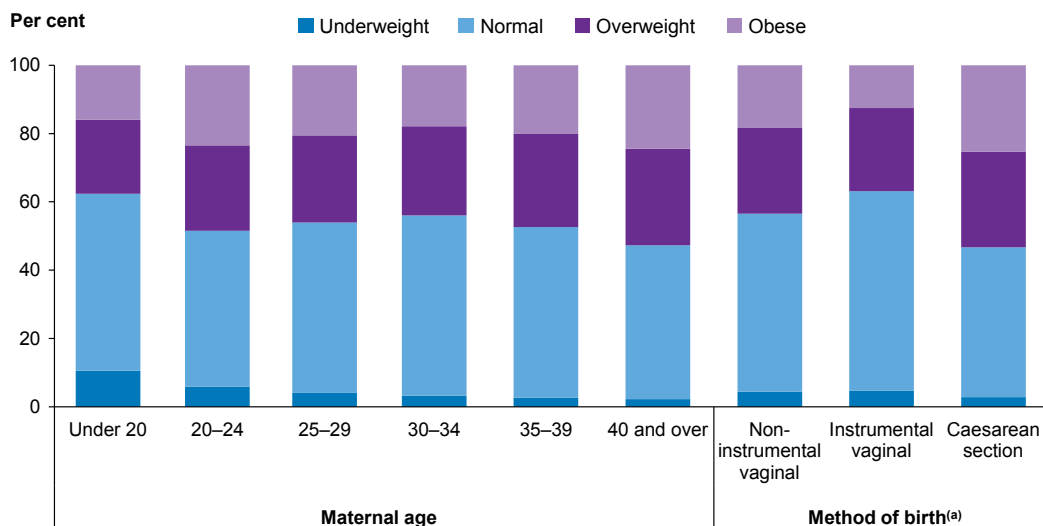
- one-fifth (20%) were classified as obese (with a BMI of 30.0 or more)
- one-quarter (26%) were overweight (BMI of 25.0–29.9)
- half (50%) were in the normal weight range (BMI of 18.5–24.9)
- one in 25 (4%) were underweight.

The proportion of mothers who were overweight or obese increased with age, from 38% of mothers aged under 20 to 53% of those aged 40 and over. Mothers who had a caesarean section were more likely to be overweight or obese (54%) than mothers who had a non-instrumental (43%) or instrumental vaginal birth (38%) (age-standardised).



Almost 1 in 2 mothers were overweight or obese at their first antenatal visit

Mothers, by body mass index group, maternal age and method of birth, selected states and territories, 2015



(a) Age-standardised percentages.

Note: BMI data exclude New South Wales (see Appendix Table D2). BMI source data and methods used for collection in states and territories are not uniform.

Information is also available on other maternal health conditions, including pre-existing or gestational hypertension and diabetes. A small number of mothers had these conditions in 2015:

- 8 per 1,000 mothers had chronic hypertension and 37 per 1,000 had gestational hypertension
- 11 per 1,000 had pre-existing diabetes and 94 per 1,000 had gestational diabetes.

Note that data collection methods for hypertension and diabetes vary across jurisdictions and data exclude Victoria (see Appendix Table D2).



Find out more in the *Perinatal dynamic data display: Antenatal period*

Place of birth



Almost all births in Australia occur in hospitals, in conventional labour wards. In 2015, 97% (296,602) of mothers gave birth in hospitals, while much smaller proportions gave birth in birth centres (1.8% or 5,491), at home (0.3% or 910) or in other settings including births occurring before arrival at hospital (0.4% or 1,265 mothers). Regardless of place of birth, almost all babies were liveborn (98% or more).

Hospitals are the most common place to give birth

The majority (73%) of mothers who gave birth in hospital gave birth in public hospitals, and the remaining 27% birthed in private hospitals. Almost two-thirds (63%) of mothers gave birth within 1 day of admission, and a further 27% gave birth within 2 days of admission. After birth, the median length of stay was 3 days. This was higher for mothers who delivered by caesarean section (4 days), and lower for those who had a vaginal birth (2 days). There has been a trend toward shorter postnatal stays between 2005 and 2015, with 21% of mothers discharged less than 2 days after giving birth (12% in 2005), and 65% of mothers discharged between 2 and 4 days after giving birth (62% in 2005) (based on mothers who were discharged to home and excludes data from Western Australia, see Appendix Table D2).

The average age of mothers who gave birth in hospitals was 30.3 years, and 43% were under the age of 30. Mothers who gave birth in public hospitals were younger on average (29.5) than those who gave birth in private hospitals (32.5). Mothers who gave birth in hospitals were more likely to be first-time mothers (43%) than in other settings.

Babies born in hospitals had a lower average birthweight (3,354 grams) and lower average gestational age (38.7 weeks) than in other birth settings. This may be due to the fact that babies requiring a higher level of care, including those who are pre-term or low birthweight, are more likely to be delivered in a hospital setting.

Mothers who give birth in birth centres are younger

The average age of mothers who gave birth in birth centres was 30.0 years, slightly younger than in other birth settings, and nearly half (44%) were under the age of 30. More than one-third (36%) of those who delivered in birth centres were first-time mothers. The average birthweight of babies born in birth centres was 3,533 grams and the average gestational age was 39.5 weeks.

Women giving birth at home are older and less likely to be first-time mothers

The average age of mothers who gave birth at home was higher than in other settings (32.0 years), and these mothers were less likely to be aged under 30 (30%) or first-time mothers (26%). Babies born at home had a higher average birthweight (3,643 grams) and higher average gestational age (39.7 weeks) than in other places of birth. These data should be interpreted with caution, due to the small numbers of mothers giving birth at home.



Find out more in the *Perinatal dynamic data display: Labour and birth*

Onset of labour

Younger mothers are more likely to have spontaneous labour and least likely to have no labour (caesarean section)

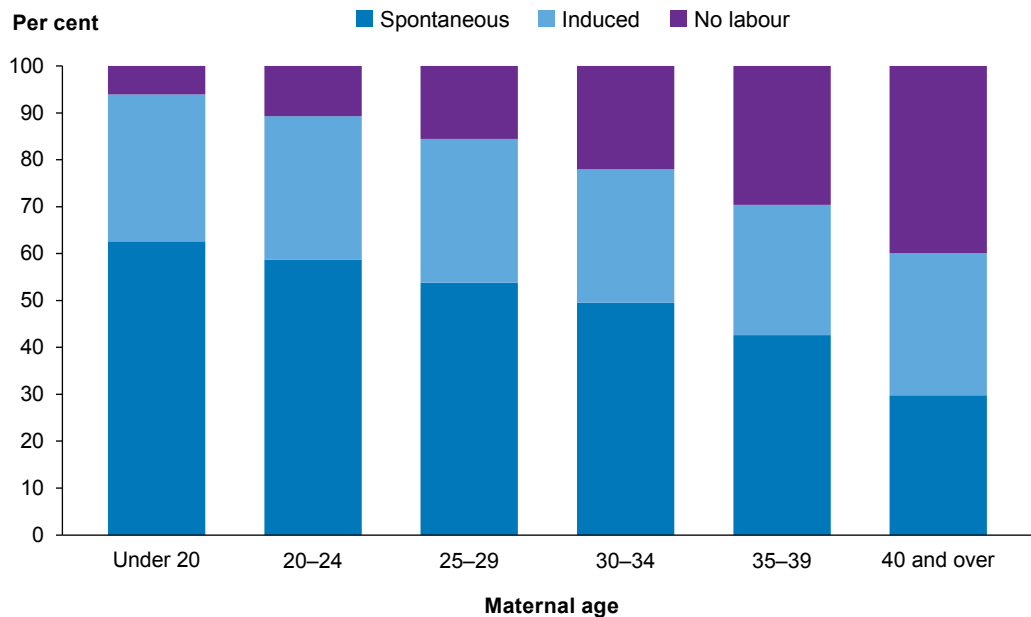
Labour can occur spontaneously or may be induced through medical or surgical intervention. If there is no labour onset, then a caesarean section is performed.

Overall, half of mothers who gave birth in 2015 (50% or 152,496) had a spontaneous labour, around 1 in 3 had an induced labour (29% or 89,298) and 1 in 5 had no labour onset (21% or 62,447).

However, labour onset varied considerably with maternal age. Younger mothers (under 20) were the most likely to have spontaneous labour onset (63%) and the least likely to have no labour onset (6%). Conversely, mothers aged 40 and over were least likely to have spontaneous labour onset and most likely to have no labour onset (30% and 40%, respectively). There was little difference in the proportion of mothers with induced labour between the age groups (ranging between 28% and 31%).

There were changes between 2005 and 2015 in the type of labour onset—a decrease in spontaneous labour (from 57% to 50%) and corresponding increases for the induction of labour (from 26% to 29%) and no labour onset (from 18% to 21%). See Chapter 5 for more data on trends.

Mothers, by onset of labour and maternal age, 2015



Induction type and reason

For mothers who were induced, a combination of medical and/or surgical types of induction were most commonly used (excludes data from Western Australia, see Appendix Table D2).

Several jurisdictions (Queensland, Tasmania and the Northern Territory) provide further information on the reason for induction of labour. Within these jurisdictions, prolonged pregnancy and maternal choice were the main reasons for induction (18% and 14%, respectively).

Augmentation of labour

Once labour starts, it may be necessary to intervene to speed up or augment the labour. Labour was augmented for 16% of mothers in 2015, which was equivalent to 32% of mothers with spontaneous onset of labour. The augmentation rate is higher among first-time mothers (43% of those with spontaneous labour onset) (excludes data from Western Australia, see Appendix Table D2).



Find out more in the *Perinatal dynamic data display: Labour and birth*

Method of birth

Two-thirds of mothers have vaginal births, one-third have caesareans

In 2015, 67% of mothers (202,890) had a vaginal birth and 33% (101,370) had a caesarean section. Mothers who had a caesarean section include all mothers who had no labour onset, as well as some mothers who required a caesarean section after labour started.

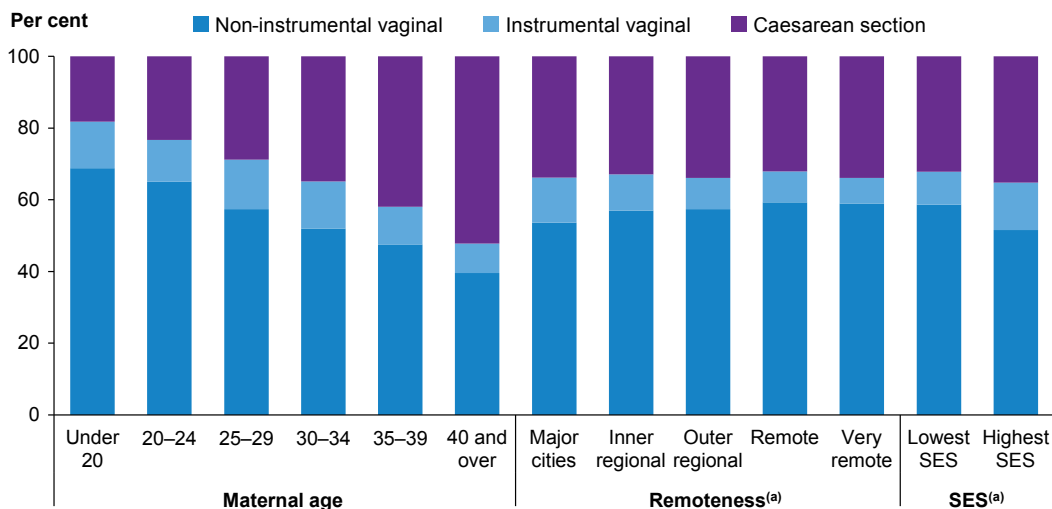
Most vaginal births (81%) were non-instrumental. When instrumental delivery was required, vacuum extraction was more commonly used than forceps (11% and 8%, respectively).

Non-instrumental vaginal delivery decreased with age and increased slightly with each category of remoteness:

- Non-instrumental vaginal delivery progressively decreased as maternal age increased (from 69% for teenage mothers to 40% for mothers 40 and over).
- Fewer mothers living in *Major cities* had a non-instrumental vaginal delivery (54%) compared with mothers in *Very remote* areas (59%) (age-standardised).
- Mothers living in the highest SES areas were less likely to have a non-instrumental vaginal delivery (52%) than those in the lowest SES areas (59%) (age-standardised).

Instrumental vaginal delivery decreased with age (from 13% for teenage mothers to 8% for mothers 40 and over) and with increasing remoteness (from 13% in *Major cities* to 7% in *Very remote* areas, age-standardised). Instrumental vaginal delivery was more common among mothers living in the highest SES areas (13%) compared with the lowest SES areas (9%) (age-standardised).

Mothers, by method of birth and selected maternal characteristics, 2015



(a) Age-standardised percentages.

Perineal status after vaginal birth

One-quarter of mothers had an intact perineum after vaginal birth (26%) while around half had either a first degree laceration or vaginal graze (24%) or a second degree laceration (28%). A small proportion of mothers had a third or fourth degree laceration (3%) or other types of laceration (7%). Around 1 in 5 mothers had an episiotomy (21%), and of these, 41% also had a laceration of some degree. Therefore, these figures do not sum to 100%.

Internationally, Australia's rate of third and fourth degree lacerations was higher than the average for Organisation for Economic Co-operation and Development (OECD) countries in 2013 for both non-instrumental and instrumental vaginal births:

- 2.4 per 100 non-instrumental vaginal births compared with the OECD average of 1.6.
- 7.3 per 100 instrumental vaginal births compared with the OECD average of 6.0 (OECD 2015).

Variation between countries is likely affected by differences in clinical practice and reporting (ACSQHC 2017).

Caesareans sections are more common among older mothers

Caesarean section rates increased with age, but differed little by remoteness and SES. Mothers aged 40 and over were almost 3 times as likely to deliver by caesarean section as teenage mothers (52% and 18%).

The overall rate of primary caesarean section (that is, caesarean sections to mothers with no previous history of caesarean sections) was 23%; this rate was higher for first-time mothers (34%) and lower for mothers who had previously given birth (11%).

The vast majority (85%) of mothers who had had a previous caesarean section had a repeat caesarean section, while the remainder had a vaginal birth (12% had a non-instrumental vaginal birth and almost 4% had an instrumental vaginal birth).

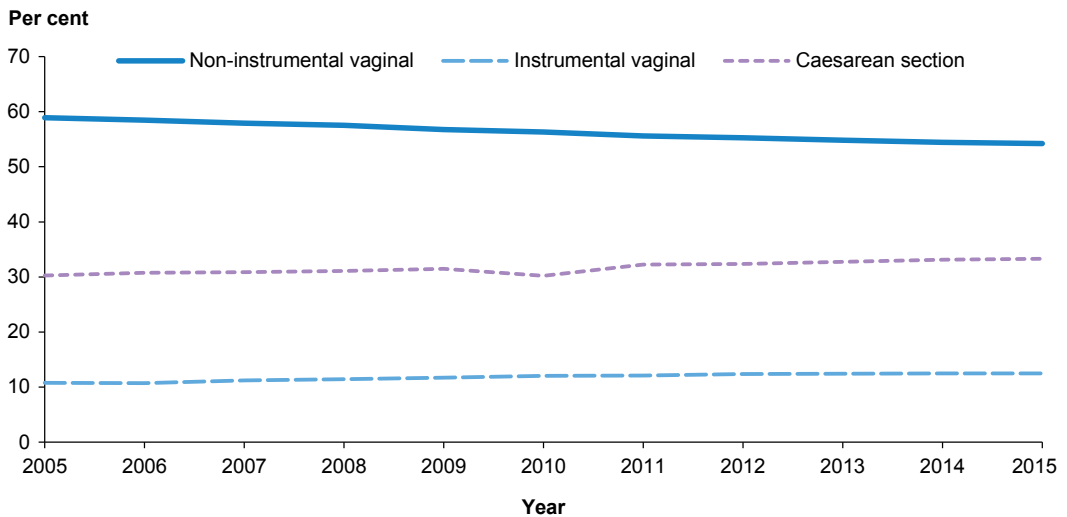
Having had a previous caesarean section was the most common main reason for having a caesarean (based on data from Queensland, Western Australia, Tasmania and the Northern Territory).

Caesarean sections have increased over time

Since 2005, vaginal non-instrumental delivery has fallen 5 percentage points (decreasing from 59% in 2005 to 54% in 2015) whereas the caesarean section rate has increased by 3 percentage points (from 30% in 2005 to 33% in 2015). Vaginal delivery with instruments has remained relatively stable between 11% and 12% throughout this period. These trends remain when changes in maternal age over time are taken into account. See Chapter 5 for more data on trends.

Internationally, the caesarean section rate has been increasing in most OECD countries. The OECD average increased from a rate of 20 per 100 live births in 2000 to 28 per 100 in 2013. Australia's rate remained higher than the OECD average over this time and ranked 22nd out of 32 OECD countries in 2013 with a rate of 32 per 100 live births (caesarean section rates are ranked from lowest to highest). The rate was lowest in Iceland (15 per 100 live births) and highest in Turkey (50 per 100 live births) (OECD 2015).

Mothers, by method of birth, 2005 to 2015



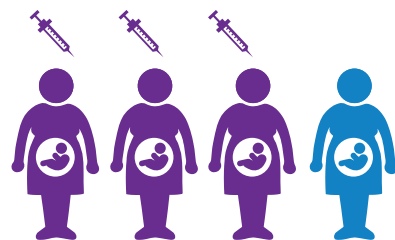
Pain relief during labour and operative delivery

Analgesia is used to relieve pain during labour (spontaneous or induced), while anaesthesia is used for operative delivery (caesarean section or instrumental vaginal birth). More than 1 type of analgesic or anaesthetic can be administered.

Of the 241,794 mothers who had labour in 2015, around 3 in 4 received pain relief (77%). The most common types were nitrous oxide (inhaled) (54%), followed by regional analgesic (35%) and systemic opioids (18%). Mothers who did not receive pain relief were more likely to be older, to have given birth before, to be Indigenous, and to live in the lowest SES areas or more remote areas, compared with those who received pain relief.

All mothers who have a caesarean section receive a type of anaesthetic, except in the rare case of post-mortem delivery. In 2015, the vast majority (95%) of mothers who had a caesarean section had a regional anaesthetic and 6% had a general anaesthetic (note that some mothers had both).

Most mothers who had an instrumental vaginal delivery also received an anaesthetic (88%). A regional anaesthetic was most common (62% of mothers who had an instrumental vaginal delivery), followed by a local anaesthetic to the perineum (28%).



3 in 4 mothers with labour onset received pain relief



Find out more in the *Perinatal dynamic data display: Labour and birth*

3

Babies

Gestational age

The vast majority of babies are born at term but 1 in 10 are pre-term

Gestational age is the duration of pregnancy in completed weeks.

In 2015, the average gestational age for all babies was 38.6 weeks, with the vast majority (91%) born at term (37–41 weeks).

Average gestational age varied by birth status—38.7 weeks for liveborn babies, and considerably lower for stillborn babies (26.8 weeks).

Pre-term birth (before 37 completed weeks' gestation) is associated with a higher risk of adverse neonatal outcomes. Overall, 8.7% of babies were born pre-term in 2015, with most of these births (81%) occurring at gestational ages of between 32 and 36 completed weeks. The average gestational age for all pre-term births was 33.4 weeks.

Most stillbirths were pre-term (85%) compared with only 8% of live births. Conversely, the vast majority of live births (91%) were born at term while only 15% of stillbirths occurred at term. Less than 0.5% of all babies were born post-term (42 weeks and over).

From 2005 to 2015, the proportion of babies born between 37 and 39 weeks increased, while the proportion born from 40 weeks onwards decreased.



8.7% pre-term



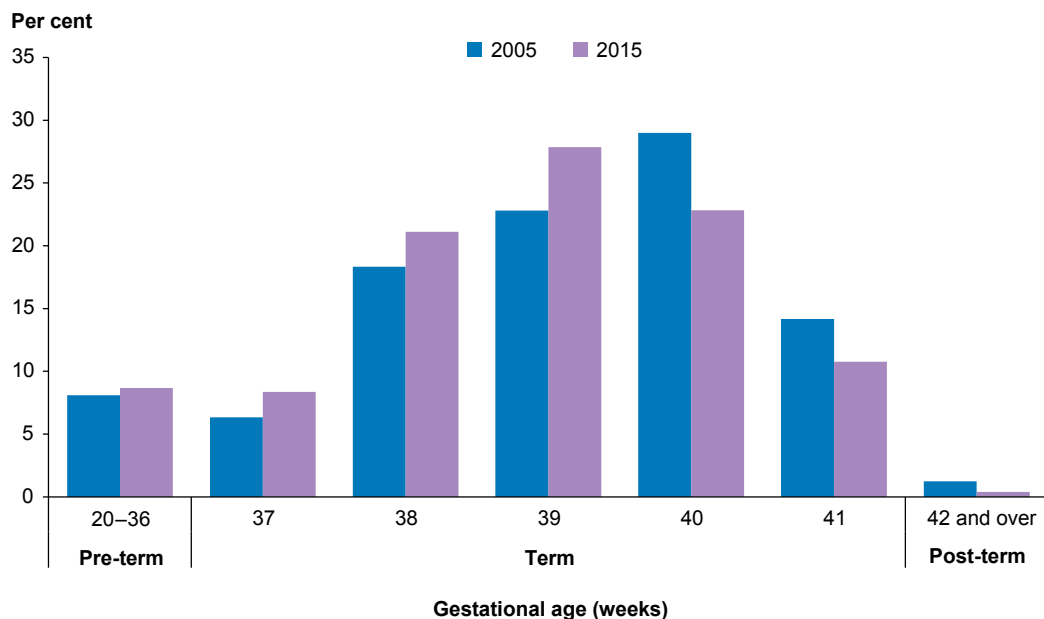
91% born at term



<1% post-term

Gestational age of babies in 2015

Babies, by gestational age, 2005 and 2015



Note: Pre-term births include a small number of births of less than 20 weeks' gestation.

Likelihood of pre-term birth much higher for multiple births

Babies born in multiple births were vastly more likely to be born pre-term—around 64% of twins and all other multiples (triplets and higher) were born pre-term in 2015. These rates compared with 7% of singleton babies.

Other characteristics were also associated with increased likelihood of pre-term birth, noting that some babies may have had more than 1 of these characteristics. These included:

- babies of Indigenous mothers—14% born pre-term compared with 8% of babies of non-Indigenous mothers
- babies whose mothers smoked during pregnancy—13% born pre-term compared with 8% of babies whose mothers did not smoke
- babies born to mothers usually residing in more remote areas—13% in *Very remote* areas compared with 8% in *Major cities*
- babies of younger (under 20) and older (40 and over) mothers—11% and 12% were pre-term, compared with 8% of babies with mothers aged 20–39.



Find out more in the *Perinatal dynamic data display: Baby outcomes*

Birthweight

The vast majority of liveborn babies are in the normal birthweight range

A baby's birthweight is a key indicator of infant health and a determinant of a baby's chances of survival and health later in life. This section provides an overview of birthweight; the following sections focus on low birthweight and small for gestational age babies.

In 2015, the mean birthweight of all babies was 3,327 grams. The mean was slightly higher for liveborn babies (3,342 grams), with the vast majority of these born in the normal birthweight range (92% or 282,530); 6.5% (19,852) were low birthweight, and a small proportion were high birthweight (1.4% or 4,263).

Birthweight differed markedly according to whether a baby was stillborn or liveborn—the mean birthweight of stillborn babies (1,125 grams) being far lower than for liveborn babies (3,342 grams). Four in 5 (81%) stillborn babies were low birthweight, and more than half (65%) were extremely low birthweight (under 1,000 grams).

Birthweight ranges

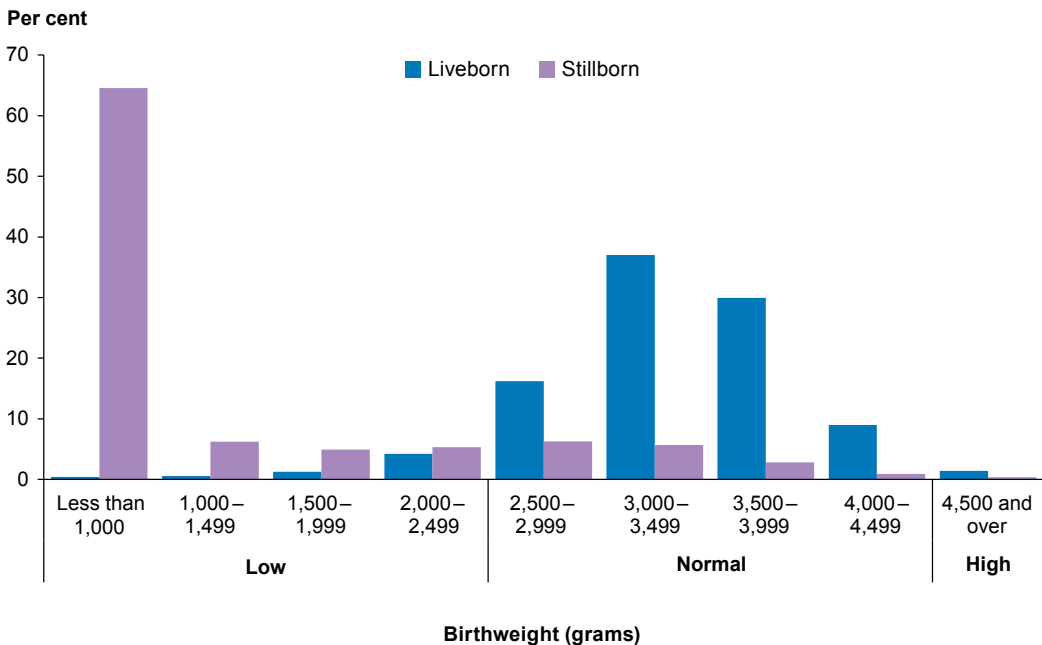
High: 4,500 grams and over

Normal: 2,500 to 4,499 grams

Low: less than 2,500 grams

(WHO 1992)

Babies, by birthweight and birth status, 2015



Low birthweight

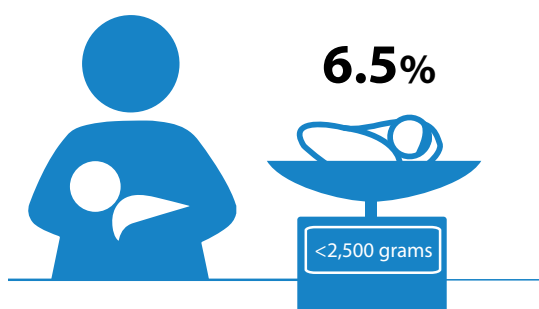
1 in 16 liveborn babies are low birthweight

Babies are considered to be of low birthweight when their weight at birth is less than 2,500 grams. Low birthweight is closely associated with pre-term birth—almost 3 in 4 low birthweight babies were pre-term, and 1 in 2 pre-term babies were low birthweight in 2015.

This section looks at low birthweight in more detail, and relates to live births only.

In 2015, 6.5% (19,852) of liveborn babies were of low birthweight. Of these babies:

- 15% or 2,937 were of very low birthweight (less than 1,500 grams) and
- 6% or 1,267 were extremely low birthweight (less than 1,000 grams).



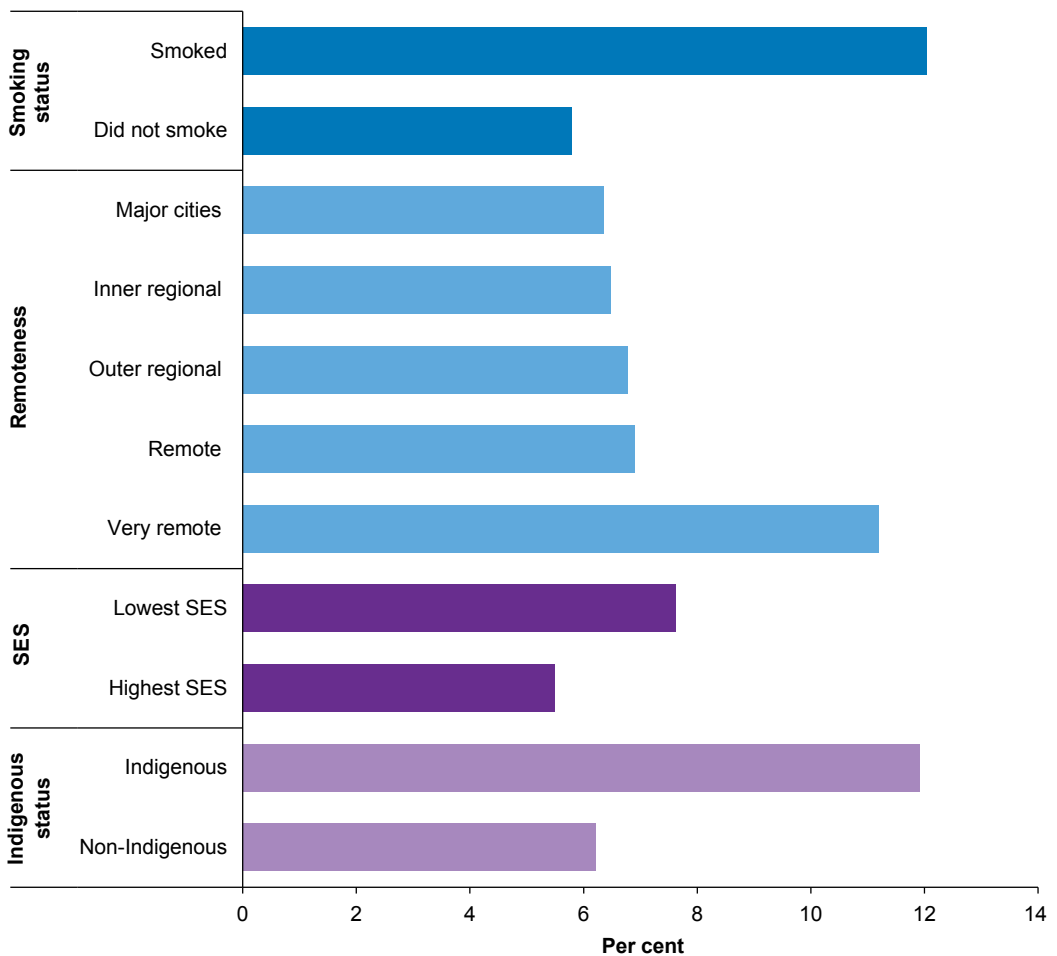
Between 2005 and 2015, there was little change in the proportion of low birthweight babies, with the proportion remaining between 6.1% and 6.5% over this time.

The proportion of low birthweight babies was higher among:

- female babies (7.0%) compared with male babies (6.0%)
- twins (54%) and other multiples (98%) compared with singletons (5.0%)
- babies born in public hospitals (7.0%) compared with private hospitals (5.0%)
- babies with mothers who smoked during pregnancy (12.0%) compared with babies whose mothers did not (5.8%)
- babies of Indigenous mothers (11.9%) compared with those of non-Indigenous mothers (6.2%) (see Chapter 4 for more information).

Internationally, the proportion of low birthweight babies in Australia in 2012 (6.2%) was lower than the OECD average (6.6%), with Australia ranked 15th out of 34 OECD countries. The rate was lowest in Iceland (3.7%) and highest in Japan (9.6%) (OECD 2015).

Low birthweight liveborn babies, by selected maternal characteristics, 2015



Find out more in the *Perinatal dynamic data display: Baby outcomes*

Small for gestational age

Babies of mothers who smoked during pregnancy were more likely to be small for gestational age

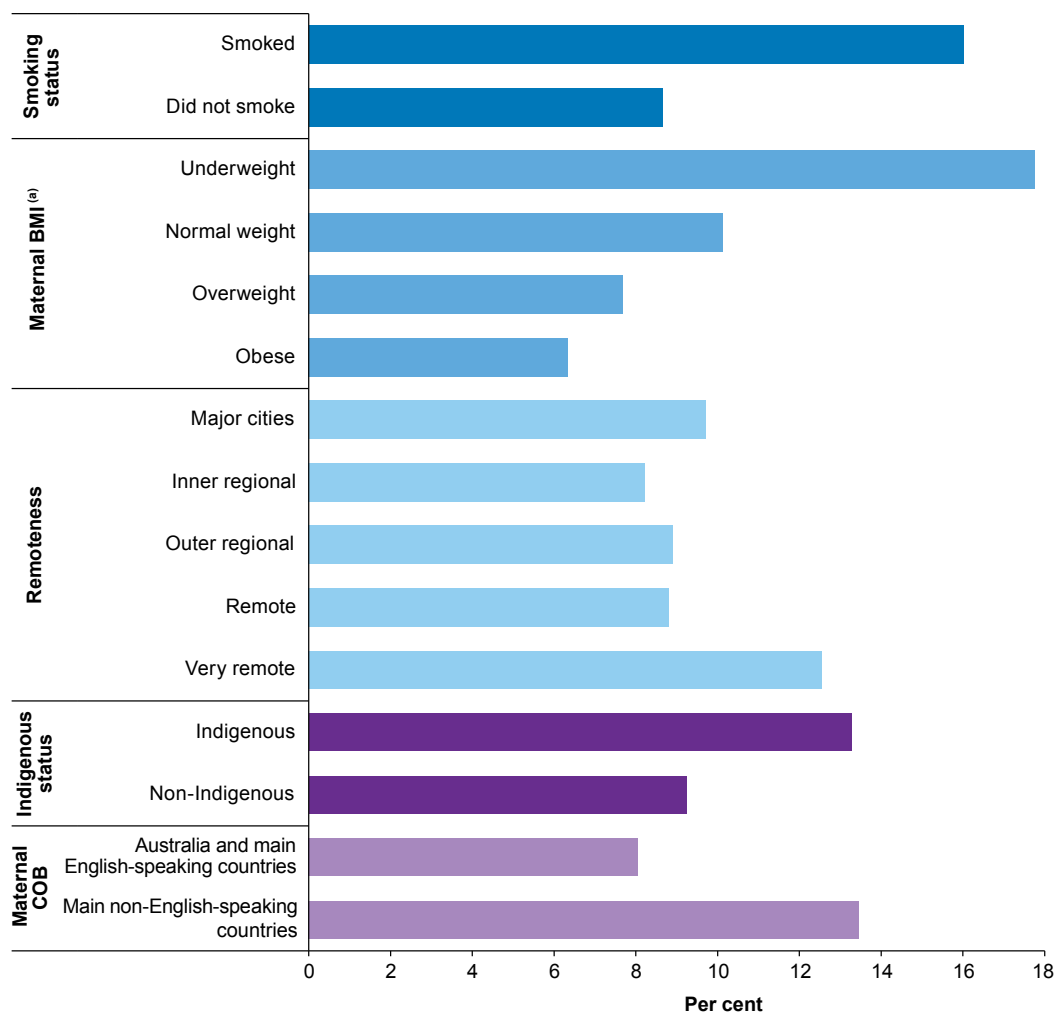
A baby may be small due to being born early (pre-term) or be small for gestational age, which indicates a possible growth restriction within the uterus. Poor fetal growth is associated with increased risk of fetal death and with fetal distress during labour, and may predispose babies to long-term conditions in later life.

Babies are defined as small for gestational age if their birthweight is below the 10th percentile for their gestational age and sex, according to national birthweight percentiles. The latest birthweight percentiles were developed for Australia using information about liveborn singleton babies born between 2004 and 2013 (Johnson et al. 2016, for more detail see Appendix D). Data in this section relate to singleton live births only.

Certain characteristics were associated with increased likelihood of being small for gestational age in 2015, noting that some babies may have had more than 1 of these characteristics. These included:

- babies of Indigenous mothers—13% were small for gestational age compared with 9% of babies of non-Indigenous mothers
- babies of mothers born in main non-English-speaking countries—13% compared with 8% of babies whose mothers were born in Australia or other main English-speaking countries
- babies born to mothers usually residing in more remote areas—13% in *Very remote* areas compared with 10% in *Major cities*
- babies of mothers living in the lowest SES areas—11% compared with 9% in the highest SES areas
- babies of younger (under 20) mothers—13% were small for gestational age, compared with 9% of babies with mothers aged 20–39
- babies whose mothers were underweight—18% compared with 10% of babies whose mothers were in the normal weight range according to BMI (excludes data from New South Wales, see Appendix Table D2)
- babies whose mothers smoked during pregnancy—16% compared with 9% of babies whose mothers did not smoke.

Small for gestational age babies, by selected maternal characteristics, 2015



(a) Maternal BMI data exclude New South Wales (see Appendix Table D2). BMI source data and methods used for collection in states and territories are not uniform.

Note: Includes liveborn singleton babies only.

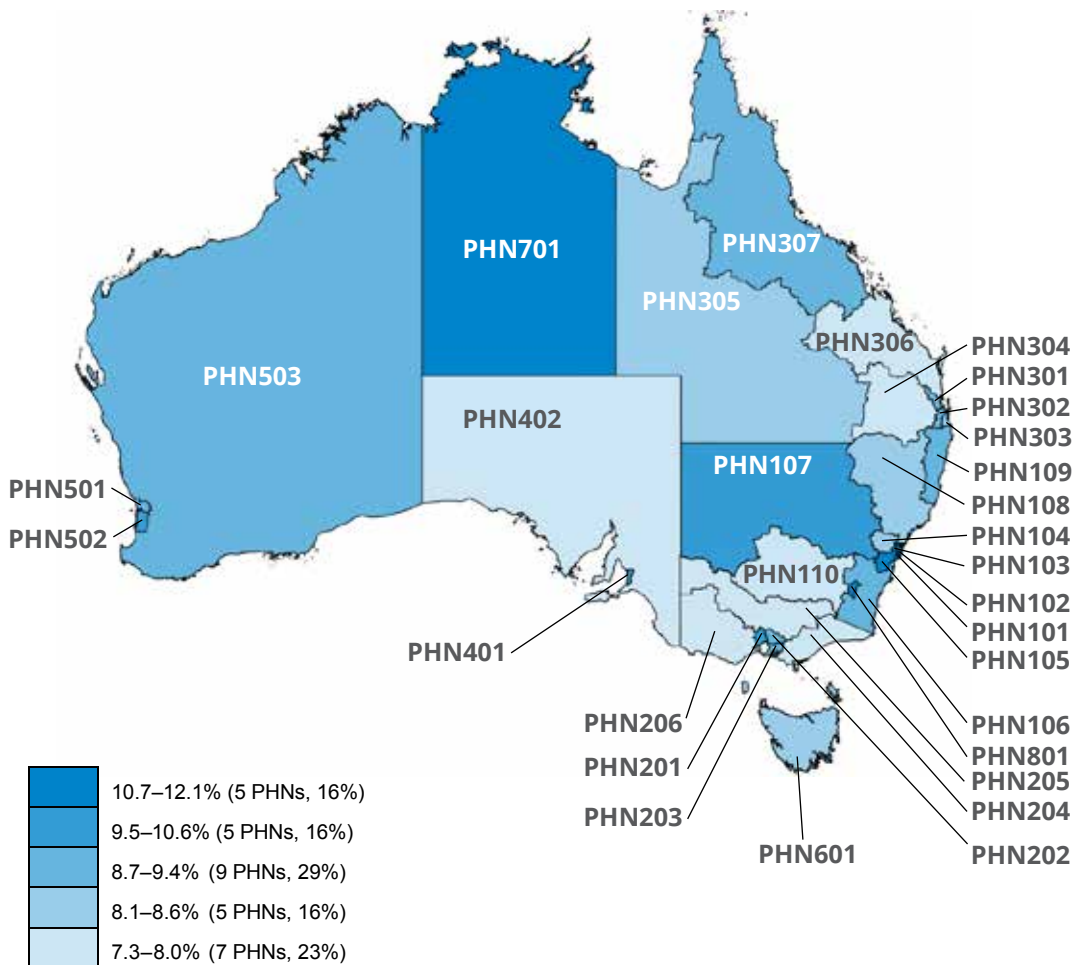


Find out more in the *Perinatal dynamic data display: Baby outcomes*

Rates of small for gestational age babies vary depending on where mothers live

The proportion of liveborn singleton babies who were small for gestational age varied across the 31 PHNs in Australia in 2015. The proportions ranged from 7.3% in the Western Victoria PHN to 12.1% in the Western Sydney PHN.

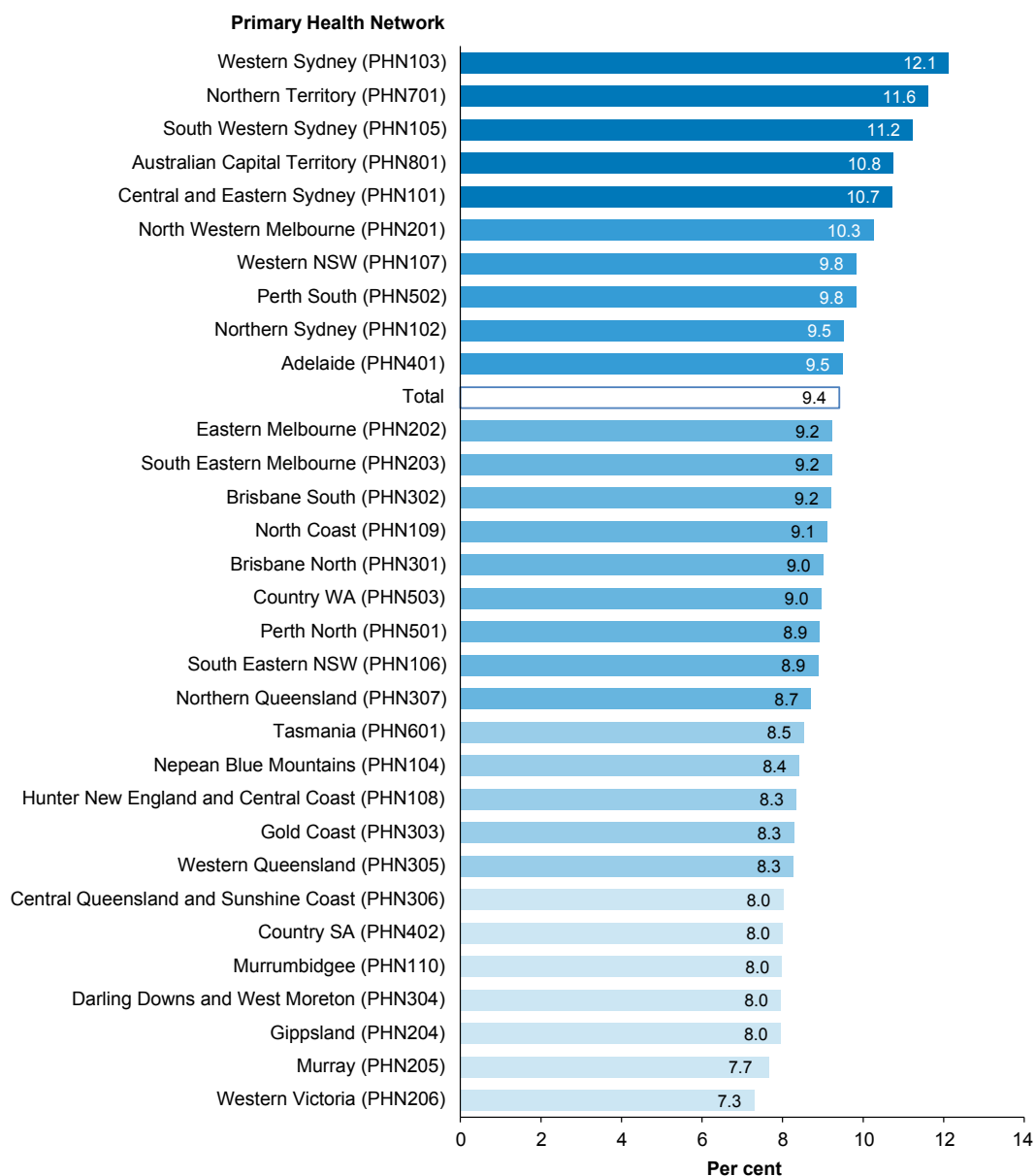
Map of percentage of small for gestational age babies, by Primary Health Network of mother's usual residence, 2015



Notes

1. See Supplementary Table 5.2 for detailed data.
2. Includes liveborn singleton babies only.

Percentage of small for gestational age babies, by Primary Health Network of mother's usual residence, 2015



Notes

1. See Supplementary Table 5.2 for detailed data.
2. Includes liveborn singleton babies only.

Baby presentation and method of birth

3 in 10 multiple births are non-vertex presentations

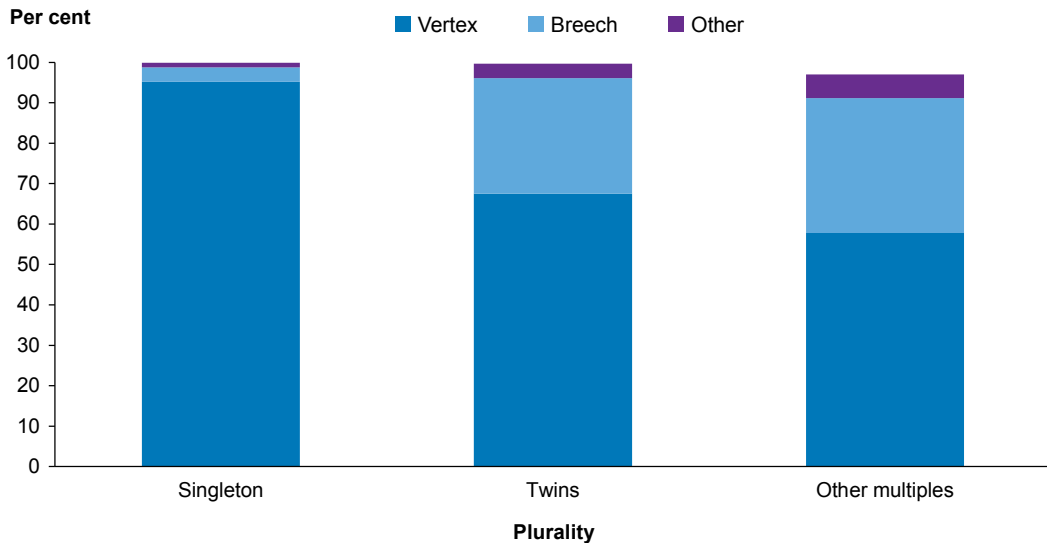
The presentation of the baby at birth refers to the anatomical part of the baby that is facing down the birth canal.

In 2015, the vast majority of babies (94% or 291,361) were in a vertex presentation at birth, in which the top of the head is facing down the birthing canal. Small proportions of babies had different (non-vertex) presentations:

- around 1 in 25 babies (4.3% or 13,424) were in a breech presentation (where the baby exits buttocks or feet first)
- around 1 in 100 babies (1.3% or 3,880) were in other presentations including face, brow, shoulder/transverse and compound presentations.

In 2015, multiple births were almost 7 times as likely to be in non-vertex presentation as singletons (32% compared with 5%, respectively). The proportion was greater for higher-order multiples (triplets and higher) (39%) than for twins (32%). Non-vertex presentation increased with birth order for multiple births, from 24% among babies who were born first to 41% among subsequent babies.

Babies, by presentation at birth and plurality, 2015



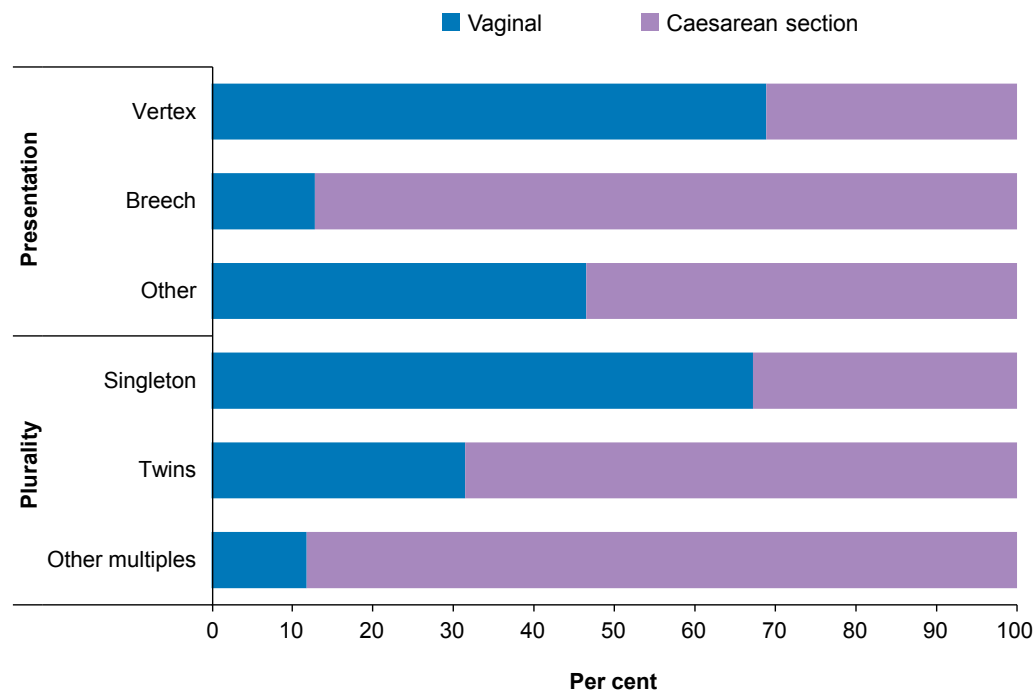
Note: 'Other' includes face, brow, shoulder/transverse and compound presentations.

A baby's presentation at birth can affect the method of birth. Most babies in a vertex presentation were delivered by vaginal birth (69%), with 31% delivered via caesarean section. Conversely, almost 9 in 10 babies (87%) presenting in breech position were delivered via caesarean section, with only 13% delivered by vaginal birth.

Baby's method of birth also varies by plurality. The likelihood of vaginal delivery decreases as plurality increases, from two-thirds (67%) of singleton babies, to around one-third (31%) of twins and 12% of other multiples. This pattern is reversed for caesarean sections, which are least common among singletons (33%) and most common among multiple births (68% of twins and 88% of other multiples).

See Chapter 2 for more information on method of birth for mothers, where the method of birth of the first-born baby in multiple births is used.

Babies, by method of birth and selected baby characteristics, 2015



Note: 'Other' presentation includes face, brow, shoulder/transverse and compound presentations.



Find out more in the *Perinatal dynamic data display: Baby outcomes*

Apgar scores

Apgar scores are highest among babies born at term

Apgar scores are clinical indicators of a baby's condition shortly after birth. The measure is based on the assessment of 5 characteristics of the baby: skin colour, pulse, breathing, muscle tone and reflex irritability. Each characteristic is given between 0 and 2 points, with a total score between 0 and 10 points.

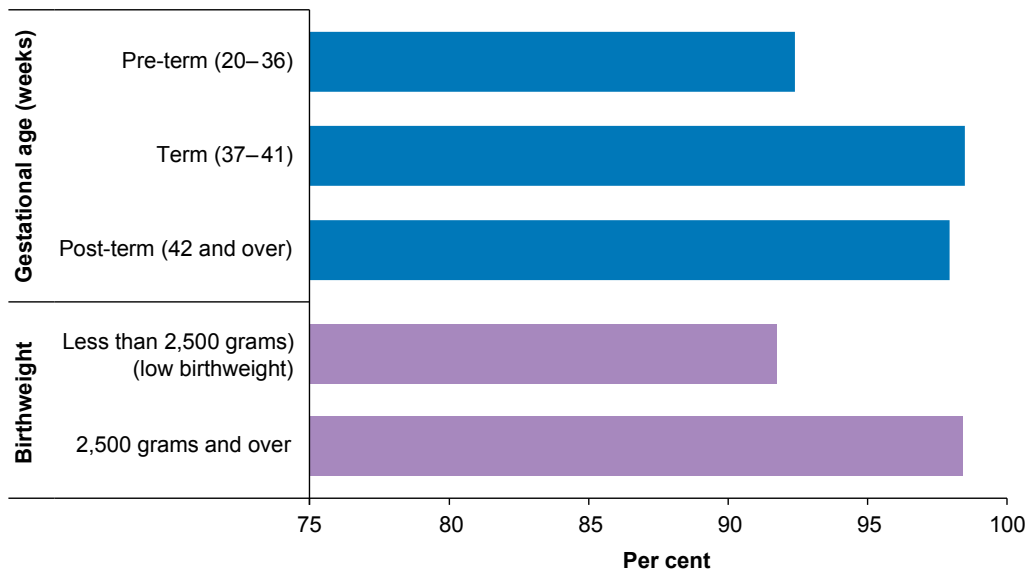
An Apgar score of 7 or more at 5 minutes after birth indicates the baby is adapting well to the environment, while a score of less than 7 indicates complications for the baby.

In 2015, almost all liveborn babies (98%) had an Apgar score of 7 or more while only 1.8% had an Apgar score of 0 to 6. Apgar scores of 0–3 were recorded for just 0.3% of all live births and scores of 4–6 were recorded for 1.5% of liveborn babies.

Apgar scores differed by gestational age and birthweight:

- 92% of babies born pre-term had an Apgar score of 7 or more compared with 98% of babies born at term.
- 92% of low birthweight babies (less than 2,500 grams) had an Apgar score of 7 or more compared with 98% of babies weighing 2,500 grams or more.

Liveborn babies, Apgar score of 7 or more at 5 minutes, by gestational age and birthweight, 2015



Find out more in the *Perinatal dynamic data display: Baby outcomes*

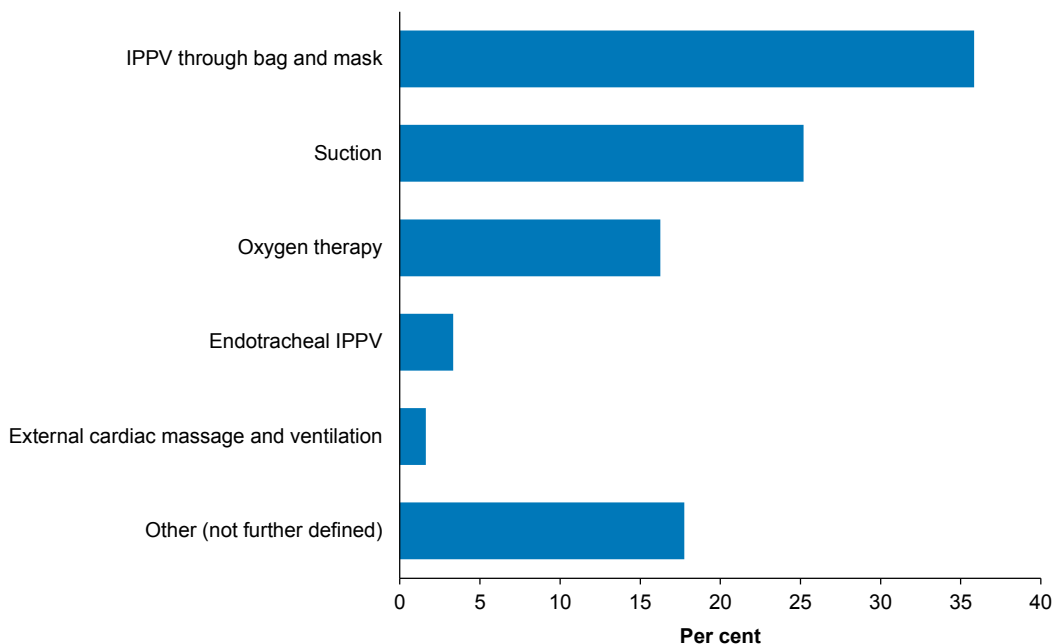
Resuscitation

1 in 5 liveborn babies require active resuscitation

Resuscitation is undertaken to establish independent respiration and heartbeat or to treat depressed respiratory effect and to correct metabolic disturbances. Types of resuscitation range from least severe (suction) to most severe (external cardiac massage and ventilation). If more than 1 type of resuscitation is performed, the most severe type is recorded.

Almost one-fifth (19%) of liveborn babies required some form of active resuscitation immediately after birth in 2015 (excludes data from Western Australia, see Appendix Table D2). Around two-fifths of those requiring resuscitation received suction or oxygen therapy (41%) and a similar proportion (39%) received ventilatory assistance by intermittent positive pressure ventilation (IPPV) through a bag and mask or via endotracheal intubation. Around 2% of babies who received resuscitation required external cardiac massage and ventilation.

Liveborn babies that received active resuscitation, by resuscitation measure, 2015



Note: Excludes data from Western Australia (see Appendix Table D2).



Find out more in the *Perinatal dynamic data display: Baby outcomes*

Hospital births and length of stay

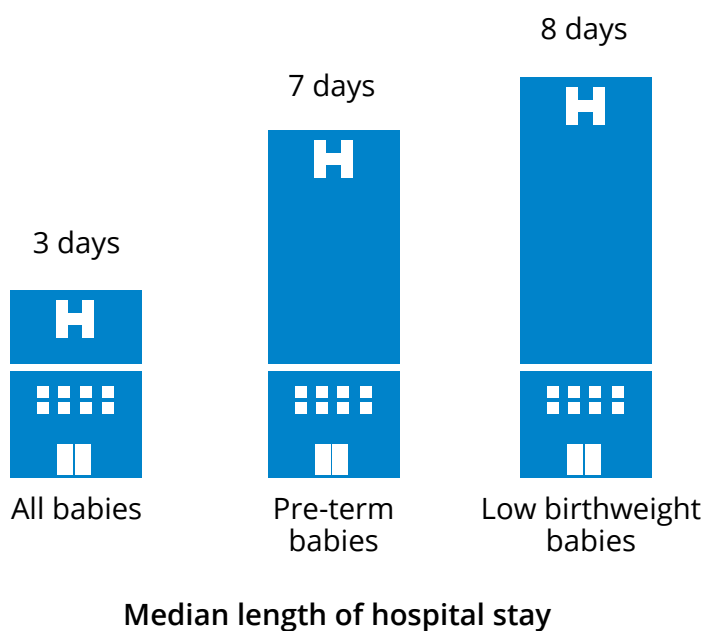
Pre-term babies, low birthweight babies and multiple births stayed in hospital longer

The vast majority of babies were born in hospital (98% or 301,210 babies in 2015), and of these, most were discharged to home (96% or 255,487). A small proportion of babies (3%) were transferred to another hospital and 1% were perinatal deaths (stillbirths or neonatal deaths occurring in the hospital of birth). Note that all data presented for this topic exclude data from Western Australia (see Appendix Table D2).

Among babies who were discharged to home, the median length of stay was 3 days with around 92% staying 5 days or less.

A number of factors influence a baby's length of stay in hospital, including birthweight and gestational age: low birthweight babies had a median stay of 8 days (compared with 3 days for normal birthweight babies) and pre-term babies had a median stay of 7 days (compared with 3 days for babies delivered at term).

As discussed in earlier sections, babies who are part of a multiple birth are more likely to be of low birthweight and to be born pre-term. This is reflected in the median length of stay in hospital, which was higher for twins (6 days) and for other multiples (30 days) than for singletons (3 days).



Admission to special care nurseries and neonatal intensive care units

Pre-term babies and multiple births are more likely to be admitted to an SCN or NICU

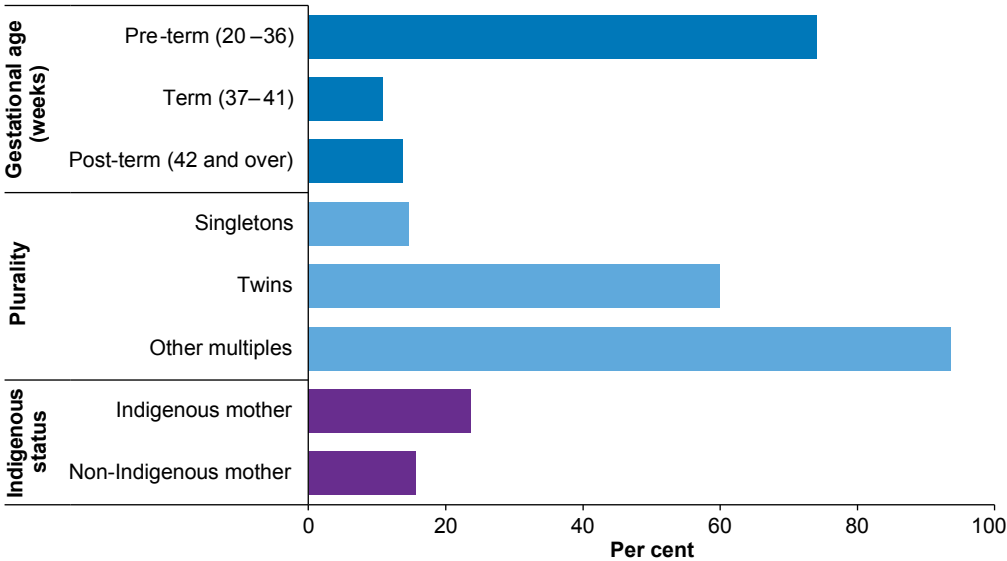
Some liveborn babies require more specialised treatment and care than is available on the postnatal ward. Of all liveborn babies, 16% (43,348) were admitted to a special care nursery (SCN) or neonatal intensive care unit (NICU) in 2015. Note that babies who were transferred between hospitals (around 3% of all babies) and who were then admitted to an SCN or NICU may not be included in these data and data also exclude Western Australia (see Appendix Table D2).

Pre-term babies were more likely to be admitted to an SCN or NICU (74%) than babies delivered at term (11%) or post-term (14%). Most pre-term babies are of low birthweight, and 74% of low birthweight babies were admitted compared with 12% of normal birthweight babies and 24% of those with a high birthweight.

The majority of multiple births are pre-term, and twins and other multiples were therefore more likely to be admitted than singletons (60% and 94% compared with 15%, respectively).

Babies born to Indigenous mothers were 1.5 times as likely to be admitted to an SCN or NICU as those of non-Indigenous mothers.

Liveborn babies, by admission to a special care nursery or neonatal intensive care unit, by selected baby characteristics, 2015



Note: Excludes data from Western Australia (see Appendix Table D2).

Perinatal deaths

Gestational age and birthweight are the biggest predictors of perinatal death

Counting perinatal deaths

Various definitions are used for reporting and registering perinatal deaths in Australia. The National Perinatal Data Collection defines perinatal deaths as all fetal deaths (stillbirths) and neonatal deaths (deaths of liveborn babies aged less than 28 days) of at least 400 grams birthweight or at least 20 weeks' gestation.

Fetal and neonatal deaths may include late termination of pregnancy (20 weeks or more gestation).

Perinatal and fetal death rates are calculated using all live births and stillbirths in the denominator. Neonatal death rates are calculated using live births only.

Neonatal deaths may not be included for babies transferred to another hospital, re-admitted to hospital after discharge or who died at home after discharge. The AIHW has established a separate National Perinatal Mortality Data Collection to capture complete information on these deaths. The latest report is available from the AIHW website <www.aihw.gov.au>.

Perinatal and infant death periods used by the National Perinatal Data Collection

Labour	Birth	28 days	1 year
At least 20 weeks or 400 grams	0–27 days	28 days–<1 year	
Fetal deaths (stillbirths)	Neonatal deaths		Postneonatal deaths
Perinatal deaths			
			Infant deaths

In 2015, there were 9 perinatal deaths for every 1,000 births, a total of 2,849 perinatal deaths. This included:

- 2,160 fetal deaths (stillbirths) or 7 fetal deaths per 1,000 births
- 689 neonatal deaths, a rate of 2 neonatal deaths per 1,000 live births.

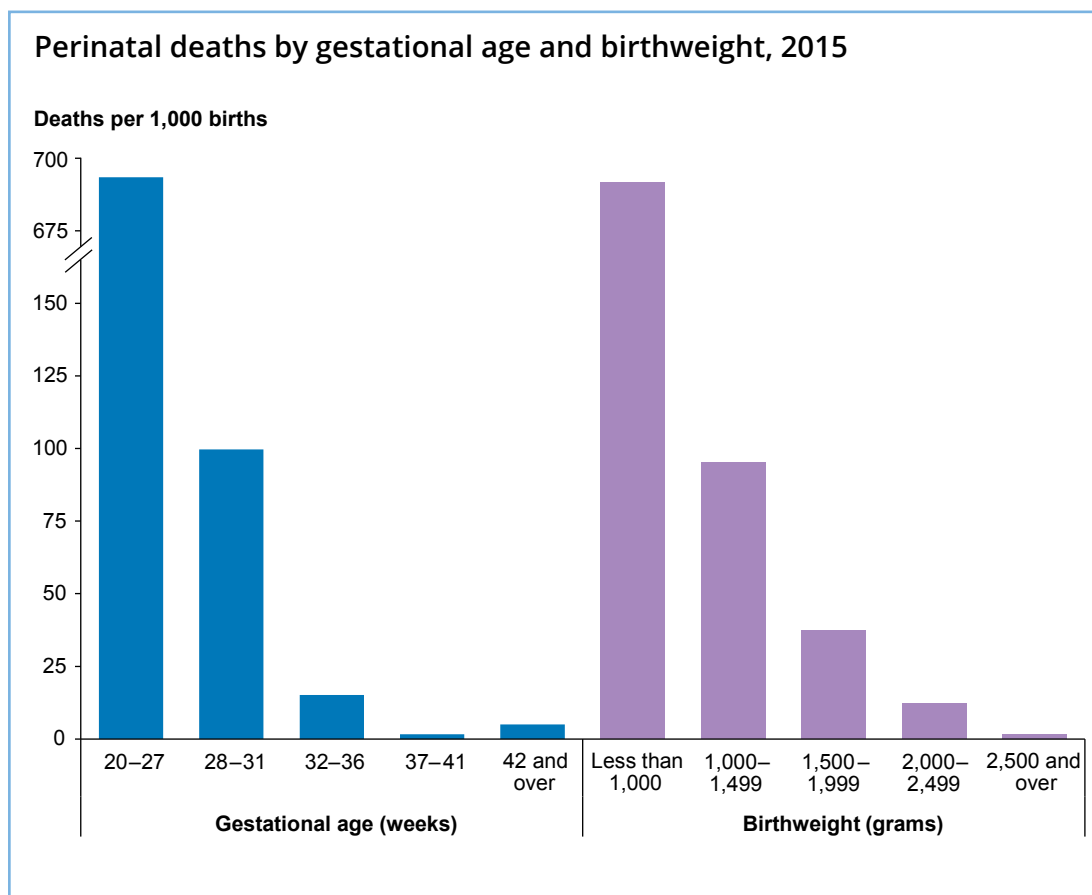
Perinatal death rates decreased dramatically as gestational age and birthweight increased:

- Gestational age—rates were highest among babies born at 20–27 weeks' gestation (693 per 1,000 births) and lowest among babies born at term (37–41 weeks) (2 per 1,000 births).
- Birthweight—rates were highest among extremely low birthweight babies (less than 1,000 grams) (691 per 1,000 births) and lowest among babies with birthweight 2,500 grams or higher (2 per 1,000 births).

Other factors were also associated with higher rates of perinatal death (although to a lesser extent than gestational age and birthweight), including:

- maternal age—babies born to mothers under 20, 20–24 and 40 and over had the highest rates of perinatal death (16, 11 and 10 deaths per 1,000 births, respectively). Babies of mothers aged 30–34 had the lowest rate (8 per 1,000)
- maternal Indigenous status—perinatal death rates among babies of Indigenous mothers (12 per 1,000 births) were 1.4 times those of non-Indigenous mothers (9 per 1,000) (see Chapter 4 for more information)
- multiple births—twins and other multiples had perinatal death rates around 4 and 9 times that of singletons (32 and 80 deaths per 1,000 births compared with 8, respectively).

Patterns by these characteristics were similar for both fetal and neonatal deaths, noting that fetal death rates were consistently higher than neonatal death rates.



Congenital abnormalities are the leading cause of perinatal deaths

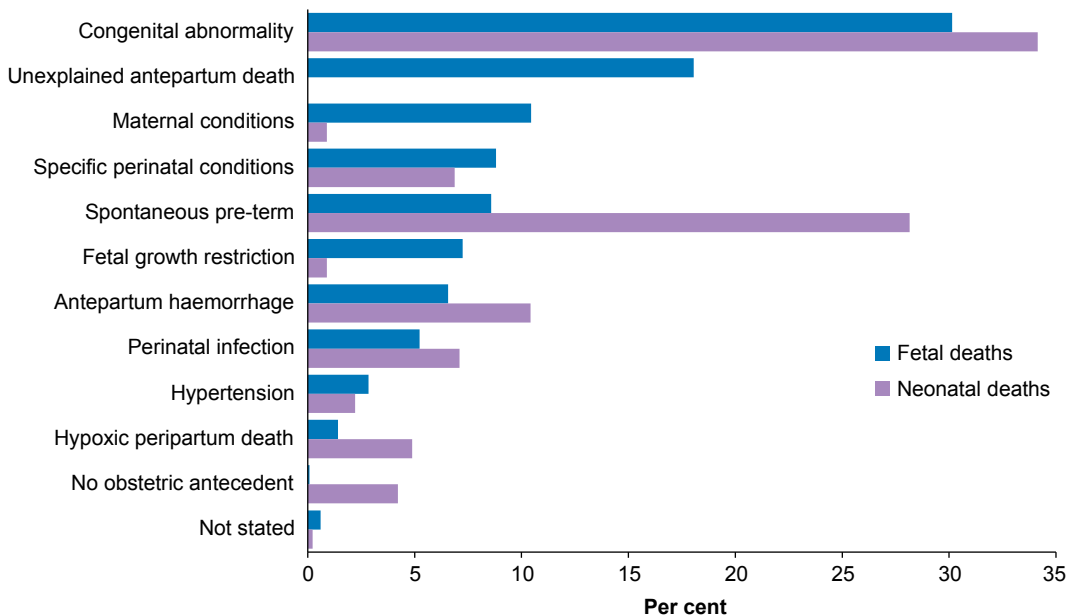
Classifying perinatal deaths

Causes of death for perinatal deaths are classified according to the Perinatal Society of Australia and New Zealand Clinical Practice Guideline for Perinatal Mortality Perinatal Death Classification (PSANZ-PDC).

Information about cause of death is based on data for 6 states and territories (Victoria, Queensland, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory). Perinatal deaths in these 6 jurisdictions represented two-thirds of all perinatal deaths in 2015 (1,882 deaths).

The most common cause of all perinatal deaths was congenital abnormalities (anomalies), accounting for around 3 in 10 (31%) perinatal deaths. This was followed by unexplained antepartum death and spontaneous pre-term birth (both 14%). However, the leading causes of death vary between fetal and neonatal deaths.

Fetal and neonatal deaths, by cause of death (PSANZ-PDC), 2015



Note: Excludes data from New South Wales and Western Australia (see Appendix Table D2).

These patterns were influenced by gestational age, maternal age and plurality; for example:

- perinatal deaths due to congenital abnormalities increased with increasing maternal age
- spontaneous pre-term birth decreased with increasing gestational age
- the most common cause of death among singleton babies was congenital abnormalities, while spontaneous pre-term birth and specific perinatal conditions were the most common causes of death among twins and other multiples
- most perinatal deaths of babies born to mothers aged under 20 were due to maternal conditions, while congenital abnormalities were the most common cause of perinatal death for babies whose mothers were 40 and over.

4 Aboriginal and Torres Strait Islander mothers and their babies

Most Indigenous mothers and their babies are doing well, with improvements in outcomes for mothers and babies observed in recent years. There has been a notable increase in the proportion of Indigenous mothers attending an antenatal visit in the first trimester and a slight increase in the proportion attending 5 or more antenatal visits. The rate of Indigenous mothers smoking during pregnancy has decreased, as has the proportion of low birthweight babies of Indigenous mothers. Despite these improvements, significant gaps remain between outcomes for Indigenous and non-Indigenous mothers and babies.

Although a range of data by Indigenous status has been presented in earlier chapters, this chapter provides more in-depth information on Indigenous mothers and their babies.

In 2015, 4.3% of all women who gave birth identified as being Aboriginal and/or Torres Strait Islander. These 13,017 women gave birth to 13,204 babies. Around 1 in 19 (5.4% or 16,798) of all babies born were Aboriginal and/or Torres Strait Islander (based on the Indigenous status of the baby).



Indigenous mothers

Indigenous mothers are more likely to be teenagers, and to live in remote or disadvantaged areas than non-Indigenous mothers

Younger maternal age, remoteness and socioeconomic disadvantage of areas of usual residence are associated with increased risk of a number of poorer maternal and perinatal outcomes.

In 2015, Indigenous mothers, compared with non-Indigenous mothers, were:

- 7 times as likely to be teenage mothers (15% compared with 2%). Conversely, only 9% of Indigenous mothers were aged 35 and over compared with 23% of non-Indigenous mothers
- around 14 times as likely to live in *Remote* and *Very Remote* areas as non-Indigenous mothers (22% compared with 1.6%, respectively)—similar to the pattern for all women of reproductive age in the population
- 2.4 times as likely to live in the lowest socioeconomic status (SES) areas as non-Indigenous mothers. Almost 1 in 2 Indigenous mothers lived in the lowest SES areas compared with 1 in 5 non-Indigenous mothers.

More Indigenous mothers are accessing antenatal care in the first trimester

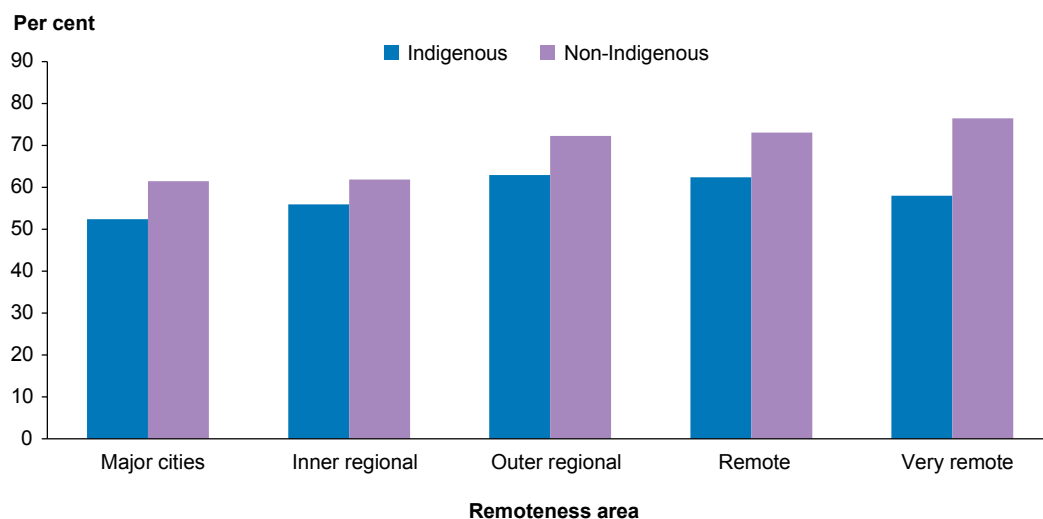
On average, in 2015 Indigenous mothers attended 1 fewer antenatal visits than non-Indigenous mothers (9 and 10 visits, respectively—data exclude very pre-term births and data from Victoria, see Appendix Table D2). Indigenous mothers were also more likely to attend antenatal care slightly later in pregnancy than non-Indigenous mothers (the average duration of pregnancy at the first antenatal visit was 14 and 12 weeks, respectively).

Fewer Indigenous mothers attended their first antenatal visit in the first trimester of pregnancy (less than 14 completed weeks)—over half (57%) of Indigenous mothers compared with 63% of non-Indigenous mothers (age-standardised).

The age-standardised proportion of mothers receiving antenatal care in the first trimester was highest in *Outer regional* areas for Indigenous mothers (63%), compared with 52% in *Major cities* and 58% in *Very remote* areas. For non-Indigenous mothers, the proportion was highest in *Very remote* areas (76%) and lowest in *Major cities* (61%).

The proportion of Indigenous mothers who attended antenatal care in the first trimester increased between 2010 and 2015, from 41% to 57%. In comparison, there was little change for non-Indigenous mothers over this time, with proportions remaining between 61% and 63% (age-standardised; excludes data from New South Wales, see Appendix Table D2). This has resulted in a narrowing of the gap between Indigenous and non-Indigenous mothers.

Antenatal visit in the first trimester (less than 14 completed weeks), by remoteness and Indigenous status (age-standardised), 2015



Indigenous mothers who gave birth at 32 weeks or more were also less likely to attend 5 or more antenatal visits than non-Indigenous mothers: 87% of Indigenous mothers had 5 or more visits compared with 95% of non-Indigenous mothers (age-standardised, excludes data from Victoria, see Appendix Table D2).

Between 2011 and 2015, the proportion of mothers attending 5 or more visits has increased slightly for Indigenous mothers (from 84.8% to 87.7%) while remaining similar for non-Indigenous mothers (95.1% compared with 95.6%) (age-standardised; excludes data from Western Australia and Victoria, see Appendix Table D2).

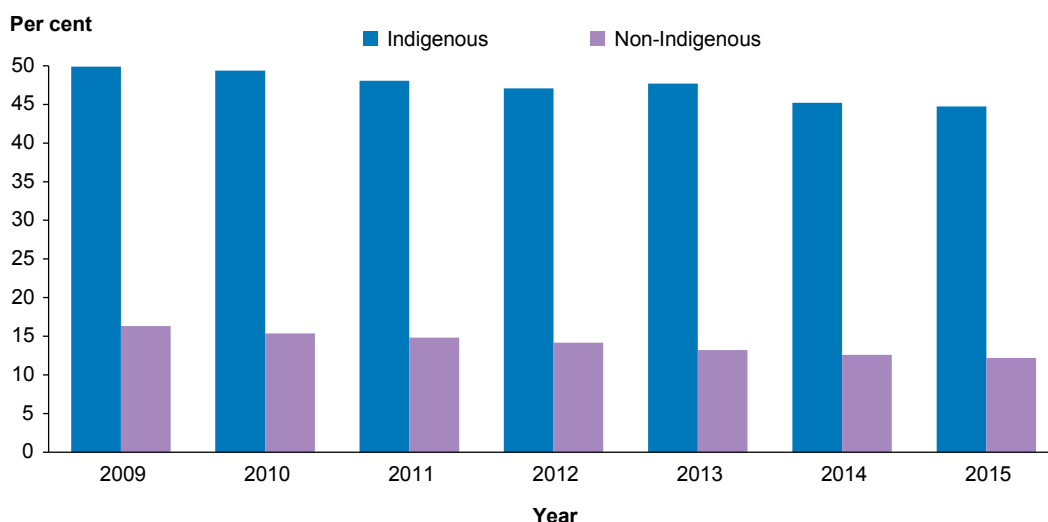
Fewer Indigenous mothers are smoking during pregnancy

Indigenous mothers accounted for 19% of mothers who smoked tobacco at any time during pregnancy in 2015, despite accounting for only around 4% of mothers. Almost 1 in 2 Indigenous mothers reported smoking during pregnancy—45% compared with 12% of non-Indigenous mothers (age-standardised).

The age-standardised proportion of Indigenous mothers who smoked at any time during pregnancy decreased from 50% in 2009 to 45% in 2015. There was a similar trend for non-Indigenous mothers, with a decrease in the rate of smoking from 16% in 2009 to 12% in 2015.

The age-standardised rate of smoking cessation during pregnancy among Indigenous mothers was 14%, which is lower than that of non-Indigenous mothers (25%) (based on mothers who reported smoking in the first 20 weeks of pregnancy and not smoking after 20 weeks of pregnancy).

Maternal smoking at any time during pregnancy, by Indigenous status (age-standardised), 2009 to 2015



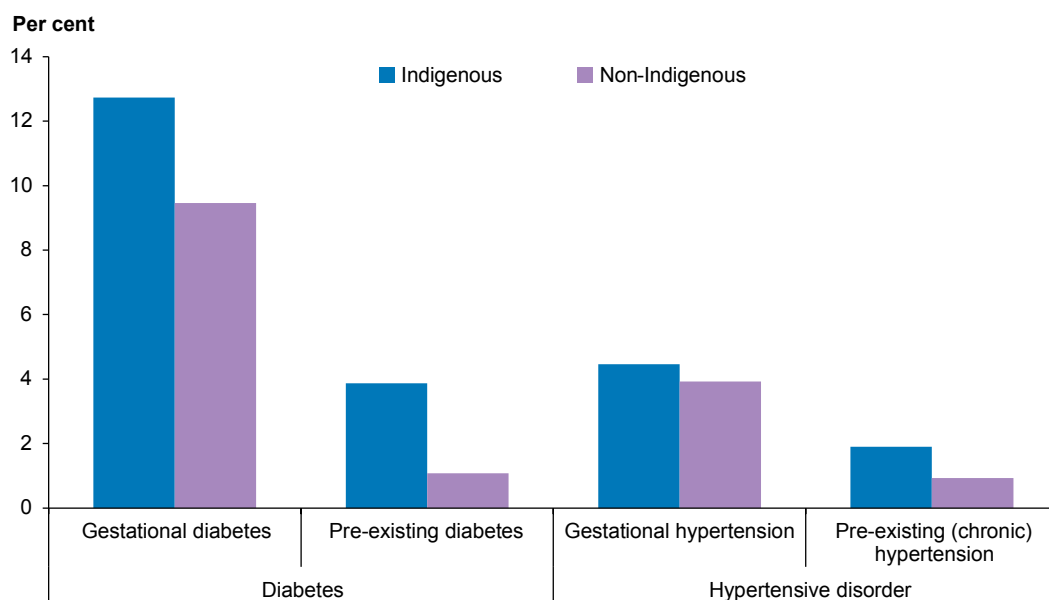
Note: Definitions and methods used for data collection differ by state and territory.

Indigenous mothers were more likely to be obese or to have pre-existing diabetes or hypertension

Indigenous mothers were:

- 1.6 times as likely to be obese as non-Indigenous mothers (33% compared with 20%) (age-standardised; excludes data from New South Wales, see Appendix Table D2)
- 1.3 times and 3.6 times as likely to have gestational diabetes (13%) and pre-existing diabetes (3.8%), respectively, compared with non-Indigenous mothers (9% and 1.1%, respectively) (age-standardised; excludes data from Victoria, see Appendix Table D2)
- twice as likely to have pre-existing (chronic) hypertension (1.9%) compared with non-Indigenous mothers (0.9%). Rates of gestational hypertension were similar for both Indigenous and non-Indigenous mothers (4.5% and 3.9%, respectively) (age-standardised; excludes data from Victoria, see Appendix Table D2).

Selected maternal medical conditions during pregnancy, by Indigenous status (age-standardised), 2015



Note: Definitions and methods used for data collection differ by state and territory. Excludes data from Victoria (see Appendix Table D2).

Indigenous mothers were slightly more likely to have spontaneous labour onset

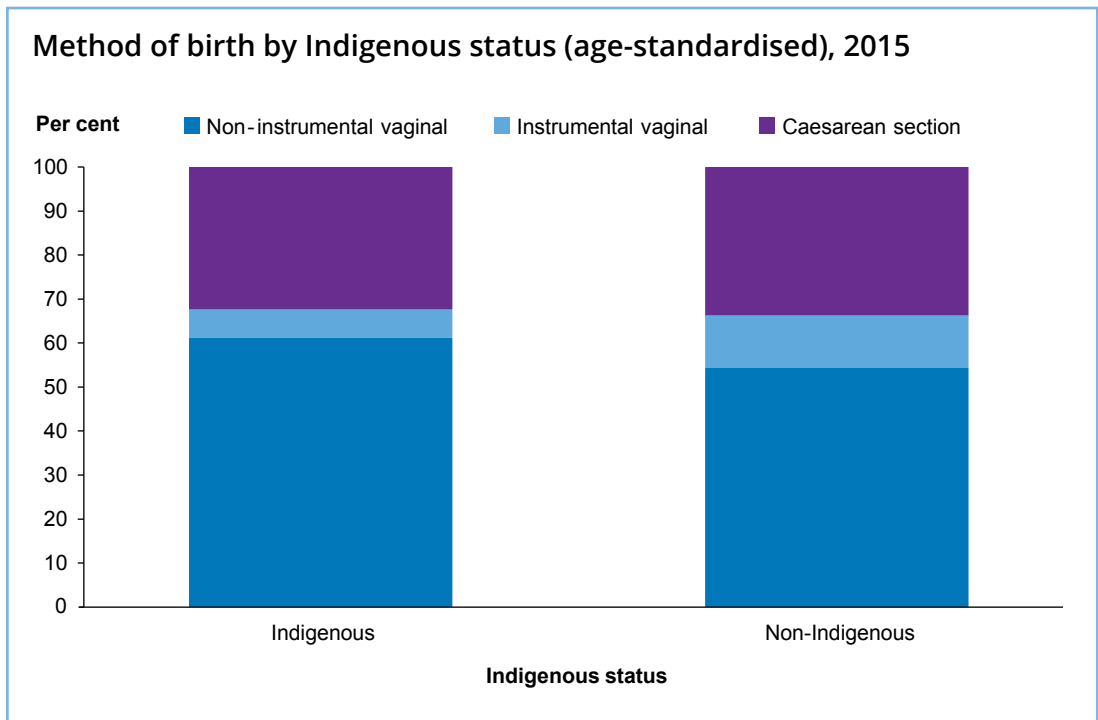
Spontaneous onset of labour was slightly more common among Indigenous mothers than non-Indigenous mothers (51% and 49%, respectively), while rates of labour induction or no labour were similar for both Indigenous and non-Indigenous mothers—29% compared with 30% for labour induction and 20% compared with 21% for no labour, respectively (age-standardised).

Indigenous mothers who had labour were slightly less likely to receive pain relief during labour compared with non-Indigenous mothers (72% compared with 78%, respectively; age-standardised).

Non-instrumental vaginal births were more common for Indigenous mothers

Method of birth is influenced by maternal age, but even when controlling for differences in age structure between Indigenous and non-Indigenous mothers, some differences remain. Indigenous mothers were:

- more likely to have a non-instrumental vaginal birth (61%) than non-Indigenous mothers (54%)
- less likely to have an instrumental vaginal delivery (6% compared with 12% of non-Indigenous mothers)
- slightly less likely to have a caesarean section (32% compared with 34% of non-Indigenous mothers; age-standardised).



Find out more in the *Perinatal dynamic data display*

Babies of Indigenous mothers

Babies of Indigenous mothers are more likely to be pre-term

In 2015, the average gestational age of babies of Indigenous mothers was 38.2 weeks, which was slightly lower than for those of non-Indigenous mothers (38.6 weeks).

Around 1 in 7 babies of Indigenous mothers (14%) were born pre-term, compared with 8% of babies of non-Indigenous mothers.

Babies of Indigenous mothers who smoked were 1.3 times as likely to be born pre-term as babies born to non-Indigenous mothers who smoked.

Low birthweight rates are decreasing among babies of Indigenous mothers

In 2015, the average liveborn baby of an Indigenous mother weighed 135 grams less than a baby of a non-Indigenous mother (3,213 grams and 3,348 grams, respectively).

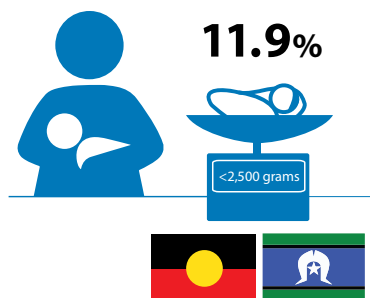
For liveborn babies with Indigenous mothers, 11.9% (1,561) were of low birthweight, compared with 6.2% (18,244) of babies with non-Indigenous mothers. These proportions were made up of:

- 10.0% of babies of Indigenous mothers and 5.3% of babies of non-Indigenous mothers in the low birthweight range of 1,500–2,499 grams
- 1.9% of babies of Indigenous mothers and 0.9% of babies of non-Indigenous mothers were of very low birthweight (less than 1,500 grams)
- 1.5% of babies of Indigenous mothers and 0.8% of babies of non-Indigenous mothers were of extremely low birthweight (less than 1,000 grams).

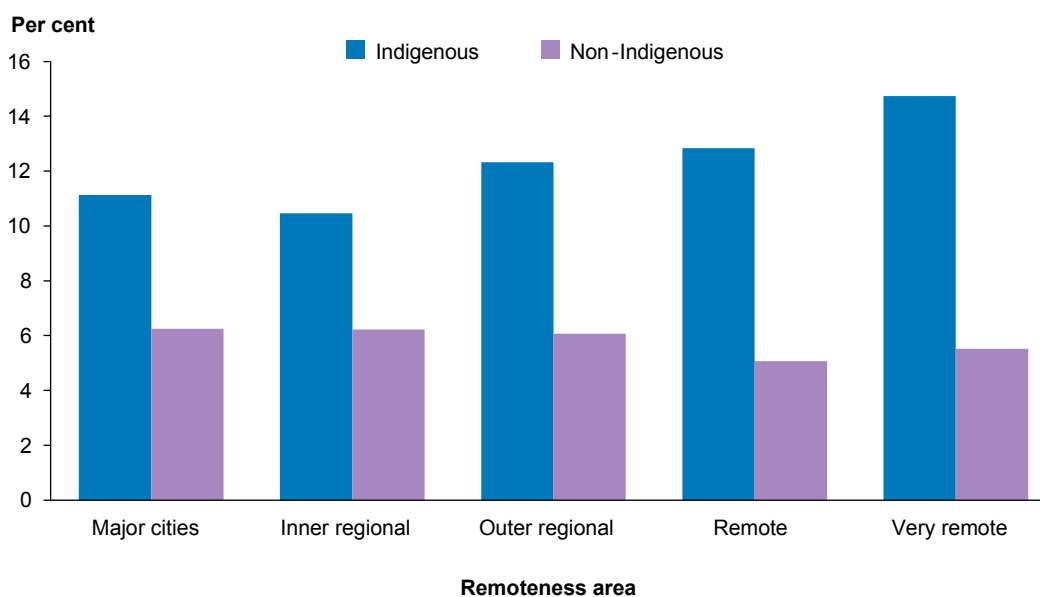
There was a slight decrease in the proportion of low birthweight babies born to Indigenous mothers between 2005 and 2015, from 13.2% to 11.9%. The proportion of low birthweight babies with non-Indigenous mothers remained between 5.9% and 6.2% over this time. See Chapter 5 for more data on trends.

Low birthweight of babies of non-Indigenous mothers varied by remoteness, ranging from 6.3% in *Major cities* to 5.1% in *Remote* areas. However, for babies of Indigenous mothers, the proportion was lowest in *Major cities* (11.1%) and highest in *Very remote* areas (14.7%).

Babies of Indigenous mothers were also 1.4 times as likely to be small for gestational age (13.3%) as babies of non-Indigenous mothers (9.2%).



Low birthweight of liveborn babies, by Indigenous status of mother and remoteness, 2015



Babies of Indigenous mothers are more likely to be admitted to SCN or NICU

Apgar scores, use of resuscitation and admission to special care nurseries (SCNs) or neonatal intensive care units (NICUs) can give an indication of the health of newborn babies.

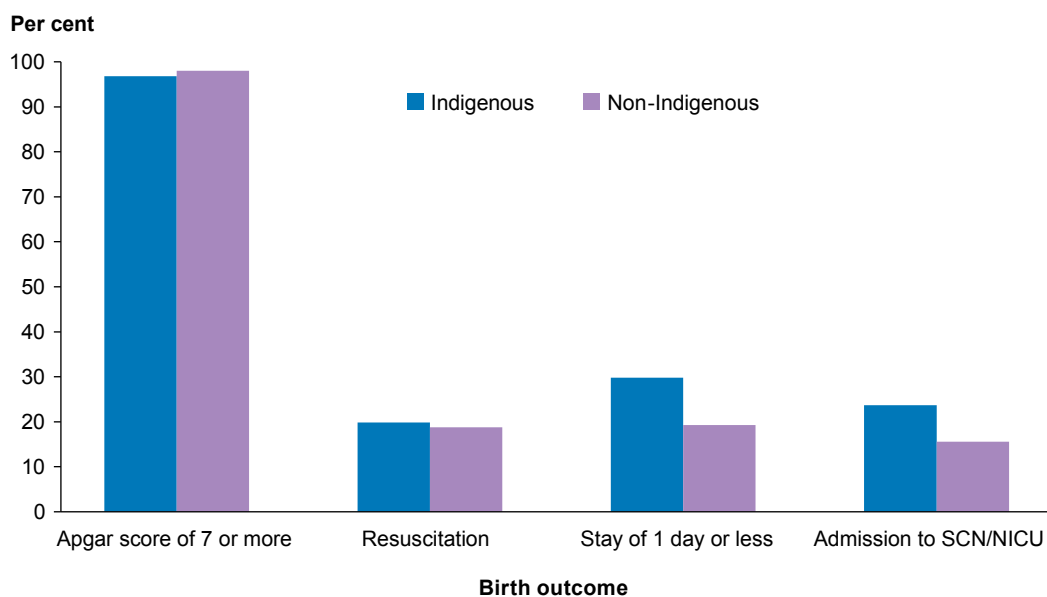
Liveborn babies to Indigenous mothers were more likely to be admitted to an SCN or NICU (24%) than babies of non-Indigenous mothers (16%) in 2015 (excludes data from Western Australia, see Appendix Table D2).

In 2015, similar proportions of liveborn babies to Indigenous and non-Indigenous mothers:

- had an Apgar score of 7 or more at 5 minutes (97% and 98%, respectively)
- required some form of resuscitation (20% and 19%, respectively; excludes data from Western Australia, see Appendix Table D2).

Babies of Indigenous mothers, born in hospital and discharged home, had a shorter median length of stay (2 days) than those of non-Indigenous mothers (3 days). Almost 1 in 3 babies of Indigenous mothers (30%) stayed for 1 day or less, compared with around 1 in 5 babies (19%) of non-Indigenous mothers. However, babies of Indigenous mothers were 1.6 times as likely as those of non-Indigenous mothers to stay in hospital for 6 or more days (excludes data from Western Australia, see Appendix Table D2).

Liveborn babies, by Indigenous status of mother and selected birth outcomes, 2015



Note: Data for resuscitation, length of stay and admission to SCN/NICU exclude Western Australia (see Appendix Table D2).

Higher rates of perinatal death among babies of Indigenous mothers

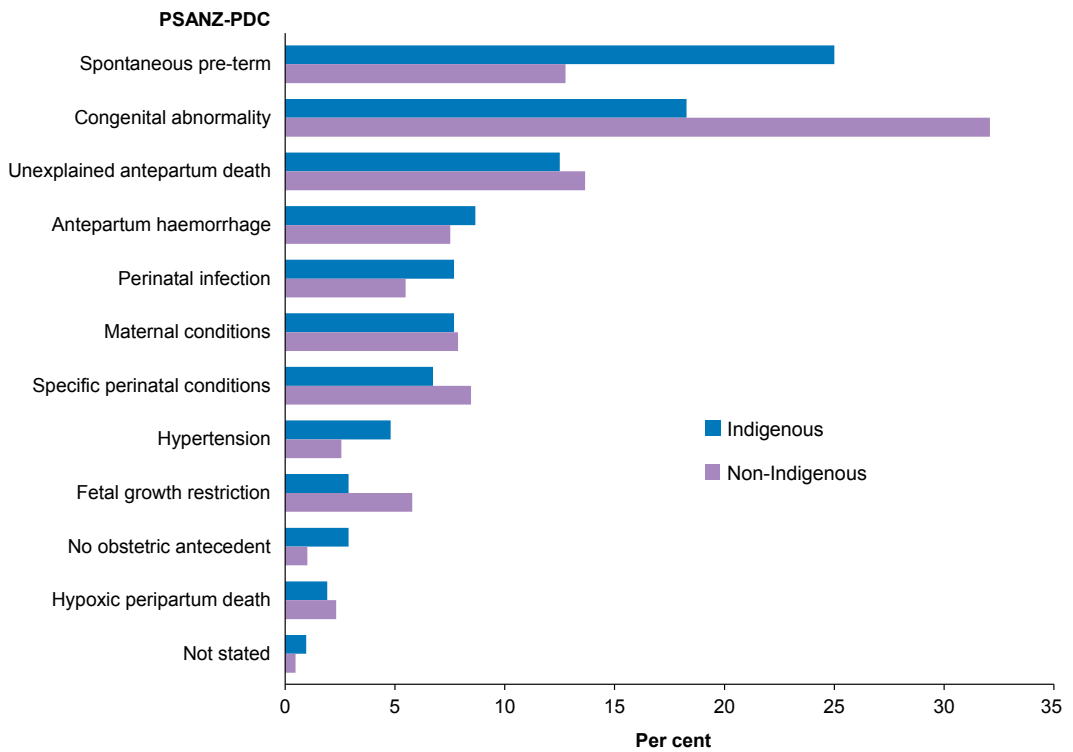
In 2015, there were 12 perinatal deaths for every 1,000 births among babies of Indigenous mothers—1.4 times the rate for those of non-Indigenous mothers (9 per 1,000 births). This included:

- 9 fetal deaths (stillbirths) per 1,000 births for babies with Indigenous mothers and 7 fetal deaths per 1,000 births for those with non-Indigenous mothers
- 4 neonatal deaths per 1,000 live births for babies of Indigenous mothers and 2 neonatal deaths per 1,000 live births for those with non-Indigenous mothers.

Data on cause of death are available for Victoria, Queensland, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory. The most notable differences in cause of death between babies of Indigenous and non-Indigenous mothers in the perinatal period are for spontaneous pre-term births and congenital abnormalities:

- One-quarter (25%) of perinatal deaths of babies with Indigenous mothers are due to spontaneous pre-term birth, compared with 13% of babies with non-Indigenous mothers.
- Congenital abnormalities accounted for a smaller proportion of perinatal deaths among babies of Indigenous mothers (18%) compared with non-Indigenous mothers (32%).

Perinatal deaths, by Indigenous status of mother and cause of death, 2015



Notes

1. See 'Perinatal deaths' in Chapter 3 for more information on the PSANZ-PDC.
2. Excludes data from New South Wales and Western Australia (see Appendix Table D2).

5 Key statistics and trends

Key trends for Australia's mothers and babies, 2005 to 2015

Topic	Unit	Year										Annual Per cent change ^(a)		
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		2015	
Mothers														
Women who gave birth	Number	267,795	277,440	289,499	292,159	294,547	295,456	297,343	307,570	304,777	307,844	304,268	3,486	*12.6
Women who gave birth per 1,000 women of reproductive age (15–44 years)	Rate	62.2	64.0	65.8	65.3	64.6	63.9	63.7	64.8	63.2	63.0	61.6	-0.2	-2.4
Average maternal age (years)														
All mothers	Average	29.7	29.8	29.9	29.9	30.0	30.0	30.0	30.1	30.1	30.2	30.3	0.0	*1.6
Indigenous mothers	Average	24.9	25.0	25.2	25.1	25.2	25.2	25.3	25.2	25.3	25.5	25.6	0.1	*2.3
First-time mothers	Average	28.1	28.2	28.2	28.2	27.9	28.3	29.0	28.4	28.6	28.7	28.9	0.1	*2.9
Maternal age (years)														
Under 25	Per cent	19.0	18.9	18.7	18.7	18.3	18.0	17.5	17.2	16.9	16.0	15.3	-0.4	*-18.3
25–34	Per cent	60.5	59.7	59.0	58.4	58.9	59.0	59.8	60.4	60.9	61.9	62.3	0.3	*4.3
35 and over	Per cent	20.4	21.4	22.3	22.9	22.9	23.0	22.7	22.4	22.3	22.1	22.3	0.1	4.7
Antenatal visits														
5 or more antenatal visits ^(b)														
All mothers	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	95.0	95.4	95.5	95.3	95.6	0.1	*0.5
Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	84.8	86.1	86.3	86.7	87.7	0.6	*3.0
Non-Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	95.1	95.3	95.5	95.3	95.6	0.1	*0.4

(continued)

Key trends for Australia's mothers and babies, 2005 to 2015 (continued)

Topic	Unit	Year											Annual change ^(a)	Per cent change ^(a)	
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
<i>Antenatal visit in the first trimester^(a)</i>															
All mothers	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	62.8	62.0	62.7	62.4	62.4	64.7	0.3	2.4	
Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	n.a.	41.4	46.6	50.2	52.6	52.1	56.6	2.7	*31.4	
Non-Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	n.a.	61.4	60.9	61.5	60.9	61.1	63.3	0.3	2.2	
<i>Tobacco smoking during pregnancy</i>															
<i>Smoked at any time during pregnancy</i>															
All mothers	Per cent	n.a.	n.a.	n.a.	n.a.	14.6	13.7	13.2	12.5	11.7	11.0	10.4	-0.7	*-28.8	
Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	49.9	49.4	48.1	47.1	47.7	45.2	44.7	-0.9	*-10.3	
Non-Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	16.3	15.4	14.8	14.2	13.2	12.6	12.2	-0.7	*-25.8	
<i>Smoked in the first 20 weeks of pregnancy</i>															
All mothers	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12.9	12.1	11.3	10.6	10.1	-0.7	*-22.3	
Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	47.2	46.5	46.6	44.4	43.6	-0.9	*-7.9	
Non-Indigenous mothers	AS per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	14.5	13.8	12.8	12.2	11.8	-0.7	*-19.3	
<i>Postnatal stay</i>															
Less than 2 days	Per cent	12.3	12.7	13.8	14.4	17.0	16.3	17.2	18.0	19.6	20.5	20.7	0.9	*73.2	
2-4 days	Per cent	62.4	64.3	64.9	65.3	63.7	66.3	65.9	65.4	65.0	64.9	64.9	0.2	2.5	
5 or more days	Per cent	23.2	21.9	20.7	19.3	18.2	17.4	16.9	16.5	15.4	14.5	14.3	-0.9	*-39.4	
<i>Onset of labour</i>															
Spontaneous labour	Per cent	56.5	56.6	56.6	57.0	56.2	56.0	54.8	54.2	52.7	51.3	50.1	-0.7	*-11.3	
Induced labour	Per cent	25.6	25.1	25.3	24.8	25.3	25.2	26.0	26.3	27.6	28.4	29.3	0.4	*15.9	
No labour	Per cent	17.9	18.3	18.1	18.2	18.4	18.8	19.1	19.4	19.7	20.3	20.5	0.3	*15.2	

(continued)

Key trends for Australia's mothers and babies, 2005 to 2015 (continued)

Topic	Unit	Year										Annual Per cent change ^(a)		
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		2015	
Method of birth														
Non-instrumental vaginal delivery	Per cent	58.9	58.5	57.9	57.5	56.8	56.3	55.6	55.2	54.8	54.4	54.2	-0.5	*-8.5
Instrumental vaginal delivery	Per cent	10.8	10.7	11.2	11.4	11.7	12.0	12.1	12.4	12.4	12.5	12.5	0.2	*18.2
Caesarean section	Per cent	30.3	30.8	30.9	31.1	31.5	30.2	32.3	32.4	32.8	33.1	33.3	0.3	*10.1
Multiple pregnancies														
Multiple pregnancies per 1,000 mothers	Rate	16.9	16.7	16.0	16.1	15.6	15.9	15.5	15.0	15.2	15.0	14.9	-0.2	*-11.6
Babies														
Babies born	Number	272,421	282,173	294,208	296,928	299,227	300,215	302,025	312,251	309,489	312,548	308,887	3,483	*12.4
Gestational age														
Pre-term (20–36 weeks)	Per cent	8.1	8.2	8.1	8.2	8.2	8.3	8.3	8.5	8.6	8.6	8.7	0.1	*7.2
Term (37–41 weeks)	Per cent	90.7	90.6	90.9	90.9	90.8	90.9	91.0	90.9	90.9	90.9	90.9	0.0	*0.2
Post-term (42 weeks and over)	Per cent	1.2	1.1	0.9	0.9	0.9	0.8	0.7	0.6	0.5	0.5	0.4	-0.1	*-68.3
Birthweight ^(a)														
Low birthweight	Per cent	6.4	6.4	6.2	6.1	6.2	6.2	6.3	6.2	6.4	6.4	6.5	0.0	1.9
Low birthweight babies with Indigenous mothers	Per cent	13.2	12.4	12.5	12.4	12.0	12.0	12.6	11.8	12.2	11.8	11.9	-0.1	*-7.5
Low birthweight babies with non-Indigenous mothers	Per cent	6.1	6.2	5.9	5.9	5.9	6.0	6.0	6.0	6.1	6.2	6.2	0.0	2.0
Low birthweight Indigenous babies	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11.1	10.8	11.1	-0.0	-0.4
Low birthweight non-Indigenous babies	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6.1	6.1	6.2	0.0	*1.3

(continued)

Key trends for Australia's mothers and babies, 2005 to 2015 (continued)

Topic	Unit	Year											Annual Per cent change ^(e)		
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
Birthweight ^(d) (continued)															
Low birthweight singleton	Per cent	4.8	4.8	4.7	4.7	4.7	4.8	4.8	4.8	4.8	4.8	4.9	5.0	0.0	*3.3
Low birthweight singleton babies with Indigenous mothers	Per cent	12.0	11.3	11.2	11.2	10.9	10.7	11.2	10.5	10.9	10.5	10.5	10.4	-0.1	*-10.6
Low birthweight singleton babies with non-Indigenous mothers	Per cent	4.6	4.6	4.5	4.4	4.5	4.5	4.5	4.5	4.6	4.7	4.7	4.8	0.0	*3.9
Low birthweight singleton Indigenous babies	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.8	9.6	9.6	9.6	-0.1	-2.3
Low birthweight singleton non-Indigenous babies	Per cent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.5	4.6	4.6	4.7	0.1	*4.1
Perinatal deaths															
Perinatal deaths per 1,000 births	Rate	10.5	10.4	10.3	10.2	7.4	10.2	10.2	10.2	9.7	9.6	9.6	9.2	-0.1	-8.7
Stillbirths per 1,000 births	Rate	7.3	7.4	7.4	7.4	7.8	7.3	7.4	7.2	7.1	7.0	7.0	7.0	-0.0	*-5.7
Neonatal deaths per 1,000 live births	Rate	3.2	3.0	2.9	2.8	2.2	2.9	2.8	2.4	2.6	2.5	2.2	2.2	-0.1	*-23.1

n.a. Not available

* Indicates results with statistically significant increases or decreases at the $p < 0.05$ level over the period 2005 to 2015. See Appendix D for further information on methods.

(a) Determined by linear regression (see Appendix D for further information on methods). The annual change is the estimated average annual change between 2005 and 2015. The percentage change is the percentage change between 2005 and 2015.

(b) Based on women who gave birth at 32 weeks' or more gestation (excluding unknown gestation). Trend data excludes Victoria and Western Australia (see Appendix Table D2).

(c) Trend data excludes New South Wales due to a change in data collection practice introduced in 2011.

(d) Includes liveborn babies only.

Notes

1. Results should be interpreted with caution due to changes in data collection methods over time.
2. Age-standardised (AS) per cents have been directly age-standardised to the Australian female population aged 15–44 as at 30 June 2001.

Key statistics by maternal characteristics and baby outcomes, 2015

Maternal characteristics	Mothers						Babies								
	Antenatal visit in first trimester		5 or more antenatal visits ^(a)		Smoked in the first 20 weeks of pregnancy		Caesarean section ^(b)		Pre-term		Low birthweight ^(c)		Apgar score less than 7 at 5 mins ^(d)		
	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	
Mother's Indigenous status ^(e)															
Indigenous	56.9	0.9	86.9	0.9	43.6	3.7	32.4	1.0	13.7	1.6	10.4	2.2	2.9	1.6	
Non-Indigenous	63.1	..	95.5	..	11.8	..	33.7	..	8.4	..	4.8	..	1.8	..	
Maternal age															
Under 20	51.8	..	91.3	1.0	32.3	..	18.2	..	11.0	..	8.2	..	3.0	..	
20-24	55.7	1.1	93.3	1.0	21.2	0.7	23.3	1.3	8.9	0.8	5.8	0.7	2.2	0.7	
25-29	62.2	1.2	95.3	1.0	10.6	0.3	28.8	1.6	8.0	0.7	4.8	0.6	1.8	0.6	
30-34	67.8	1.3	96.4	1.1	6.4	0.2	34.9	1.9	8.2	0.7	4.5	0.6	1.6	0.5	
35-39	69.3	1.3	96.3	1.1	6.3	0.2	42.0	2.3	9.3	0.8	4.9	0.6	1.8	0.6	
40 and over	68.3	1.3	96.4	1.1	6.8	0.2	52.2	2.9	12.3	1.1	6.3	0.8	2.0	0.7	
Remoteness															
Major cities	64.0	..	95.8	..	7.7	..	33.8	..	8.4	..	4.8	..	1.7	..	
Inner regional	62.6	1.0	95.5	1.0	15.2	2.0	33.0	1.0	9.1	1.1	5.2	1.1	2.2	1.3	
Outer regional	72.7	1.1	94.8	1.0	16.7	2.2	33.9	1.0	9.3	1.1	5.4	1.1	2.2	1.3	
Remote	71.0	1.1	94.1	1.0	18.8	2.4	32.1	0.9	9.3	1.1	5.7	1.2	2.1	1.2	
Very remote	65.0	1.0	90.8	0.9	36.9	4.8	33.9	1.0	13.0	1.5	9.6	2.0	3.1	1.9	
Socioeconomic status (SES)															
Lowest SES	58.6	0.8	93.9	1.0	17.9	5.3	32.2	0.9	9.5	1.2	6.3	1.6	2.1	1.5	
Highest SES	69.9	..	96.3	..	3.4	..	35.2	..	7.8	..	3.9	..	1.5	..	

(continued)

Key statistics by maternal characteristics and baby outcomes, 2015 (continued)

	Mothers						Babies							
	Antenatal visit in first trimester		5 or more antenatal visits ^(a)		Smoked in the first 20 weeks of pregnancy		Caesarean section ^(b)		Pre-term		Low birthweight ^(c)		Apgar score less than 7 at 5 mins ^(d)	
	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio
Duration of pregnancy at first antenatal visit (weeks)														
<i>Less than 14 (first trimester)</i>	..	..	97.4	..	8.2	..	35.3	..	8.9	..	4.7	..	1.7	..
14-19	..	..	95.4	1.0	10.8	1.3	30.7	0.9	7.3	0.8	4.6	1.0	1.9	1.1
20 and over	..	..	85.6	0.9	18.0	2.2	30.8	0.9	9.0	1.0	6.4	1.4	2.0	1.2
Number of antenatal visits														
None	..	..	..	..	51.5	5.4	17.5	0.5	37.2	4.9	20.4	4.6	6.1	3.7
1	31.4	0.4	..	..	19.6	2.1	26.1	0.8	20.1	2.6	11.2	2.6	3.9	2.4
2-4	47.6	0.7	..	..	26.3	2.8	29.6	0.9	26.6	3.5	17.3	3.9	4.9	3.0
5 or more	70.4	..	..	..	9.5	..	34.2	..	7.6	..	4.4	..	1.7	..
Smoked in the first 20 weeks of pregnancy														
Smoked	52.8	0.8	88.5	0.9	..	..	31.2	0.9	12.7	1.6	10.6	2.4	2.6	1.5
<i>Did not smoke</i>	65.9	..	96.3	..	..	..	34.1	..	8.1	..	4.3	..	1.7	..
Baby outcomes														
Gestational age														
Pre-term	66.1	1.0	89.9	0.9	15.6	1.6	46.7	1.4	..	..	50.7	27.4	7.2	5.3
<i>Term</i>	64.5	..	95.9	..	9.6	..	32.6	..	..	..	1.8	..	1.3	..
Post-term	60.1	0.9	95.8	1.0	8.7	0.9	29.0	0.9	..	..	0.2	0.1	1.9	1.4

(continued)

Key statistics by maternal characteristics and baby outcomes, 2015 (continued)

	Mothers						Babies							
	Antenatal visit in first trimester		5 or more antenatal visits ^(a)		Smoked in the first 20 weeks of pregnancy		Caesarean section ^(b)		Pre-term		Low birthweight ^(c)		Apgar score less than 7 at 5 mins ^(d)	
	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio	%	Rate ratio
Birthweight														
Low (less than 2,500 grams)	63.3	1.0	89.8	0.9	19.5	2.0	46.0	1.4	72.5	18.6	..	..	7.7	5.5
Normal (2,500 to 4,499 grams)	64.7	..	95.8	..	9.5	..	32.8	..	3.9	..	..	..	1.4	..
High (4,500 grams and over)	62.6	1.0	97.3	1.0	6.4	0.7	43.5	1.3	1.0	0.3	..	..	2.7	1.9
Plurality														
Singletons	..	..	..	..	..	..	33.3	..	7.0	..	5.0	..	1.7	..
Twins	..	..	..	..	..	..	67.0	2.0	62.8	9.0	54.0	10.8	4.3	2.5
Other multiples	..	..	..	..	..	..	70.3	2.1	100.0	14.3	97.7	19.5	5.4	3.1
Total	64.6	..	94.9	..	10.1	..	33.3	..	8.7	..	5.0	..	1.8	..

.. Not applicable

(a) Based on women who gave birth at 32 weeks' or more gestation (excluding unknown gestation). Excludes data from Victoria (see Appendix Table D2).

(b) Per cents for caesarean section delivery have been directly age-standardised to the Australian female population aged 15–44 as at 30 June 2001, with the exception of the maternal age category.

(c) Includes liveborn singleton babies only, with the exception of the plurality category.

(d) Includes liveborn babies only.

(e) Per cents by mother's Indigenous status for antenatal visit in the first trimester, 5 or more antenatal visits, smoked in the first 20 weeks of pregnancy and caesarean section have been directly age-standardised to the Australian female population aged 15–44 as at 30 June 2001.

Note: Reference categories for rate ratios are indicated in italics. See Appendix D for further information on methods.

Glossary

age-specific rate: A rate for a specific age group. The numerator and denominator relate to the same age group.

age standardisation: A method of removing the influence of age when comparing populations with different **age structures**. This is usually necessary because the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure, and then the disease rates that would have occurred with that structure are calculated and compared.

age structure: The relative number of people in each age group in a population.

antenatal: The period covering conception up to the time of birth. Synonymous with prenatal.

Apgar score: Numerical score used to indicate the baby's condition at 1 minute and at 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. The total score is between 0 and 10.

augmentation of labour: Intervention after the spontaneous 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 (stillborn or liveborn).

birthweight: The first weight of the baby (stillborn or liveborn) obtained after birth (usually measured to the nearest 5 grams and obtained within 1 hour of birth).

breech presentation: A fetal presentation in which the buttocks are at the opening of the uterus. In a frank breech, the legs are straight up in front of the body. In a complete breech the legs are folded, but the feet are above the buttocks. In an incomplete breech, the feet are below the buttocks.

caesarean section: A method of birth in which a surgical incision is made into the mother's uterus via the abdomen to directly remove the baby.

diabetes (diabetes mellitus): A chronic condition in which the body cannot properly use its main energy source, the sugar glucose. This is due to a relative or absolute deficiency in insulin. Insulin, a hormone produced by the pancreas, helps glucose enter the body's cells from the bloodstream and then be processed by them. Diabetes is marked by an abnormal build-up of glucose in the blood and can have serious short- and long-term effects.

episiotomy: An incision of the perineum and vagina to enlarge the vulval orifice.

fetal death (stillbirth): Death, before 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. 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.

fetal death rate: Number of fetal deaths per 1,000 total births (fetal deaths plus live births).

first degree laceration: Graze, laceration, rupture or tear of the perineal skin during delivery that may be considered to be slight or that involves fourchette, labia, vagina or vulva.

forceps: Handheld, hinged obstetric instrument applied to the fetal head to assist birth.

fourth degree laceration: Perineal laceration, rupture or tear, as in **third degree laceration**, occurring during delivery and also involving anal mucosa or rectal mucosa.

gestational age: 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.

high blood pressure/hypertension: Definitions vary but a well-accepted one is from the World Health Organization (WHO): a systolic blood pressure of 140 mmHg or more or a diastolic blood pressure of 90 mmHg or more, or [the person is] receiving medication for high blood pressure.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander.

induction of labour: Intervention to stimulate the onset of labour.

instrumental delivery: Vaginal delivery using **forceps** or **vacuum extraction**.

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

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: Weight of a baby at birth that is 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.

neonatal death: Death of a liveborn baby within 28 days of birth.

neonatal mortality rate: Number of neonatal deaths per 1,000 live births.

non-Indigenous: People who have indicated that they are not of Aboriginal or Torres Strait Islander descent.

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.

perinatal mortality rate: Number of perinatal deaths per 1,000 total births (fetal deaths plus live births).

perineal status: State of the perineum following birth. Perineal status is categorised as intact, **first, second, third, or fourth degree laceration, episiotomy**, or as another type of perineal laceration, rupture or tear.

plurality: Number of births resulting from a pregnancy.

postneonatal death: Death of a liveborn baby after 28 days and within 1 year of birth.

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

presentation at birth: The part of the fetus that presents first at birth.

pre-term birth: Birth before 37 completed weeks of gestation.

primary caesarean section: Caesarean section to a mother with no previous history of caesarean section.

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.

second degree laceration: Perineal laceration, rupture or tear, as in **first degree laceration**, occurring during delivery and also involving pelvic floor, perineal muscles or vaginal muscles.

spontaneous labour: Onset of labour without intervention.

stillbirth: See **fetal death (stillbirth)**.

teenage mother: Mother aged younger than 20 at the birth of her baby.

third degree laceration: Perineal laceration, rupture or tear, as in **second degree laceration**, occurring during delivery and also involving the anal floor, rectovaginal septum or sphincter not otherwise specified.

vacuum extraction: Assisted birth using traction or rotation on a suction cap applied to the baby's head.

Abbreviations

ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
BMI	body mass index
COB	country of birth
IPPV	intermittent positive pressure ventilation
NCMI	National Core Maternity Indicators
NICU	neonatal intensive care unit
NMDDP	National Maternity Data Development Project
NMDS	national minimum data set
NPDC	National Perinatal Data Collection
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
PHN	Primary Health Network
PSANZ-PDC	Perinatal Society of Australia and New Zealand Clinical Practice Guideline for Perinatal Mortality Perinatal Death Classification
Qld	Queensland
SA	South Australia
SCN	special care nursery
SES	socioeconomic status
Tas	Tasmania
Vic	Victoria
WA	Western Australia
WHO	World Health Organization

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Appendixes

- Appendixes are available for download from the AIHW website on the *Australia's mothers and babies 2015—in brief* web page
<www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies-2015-in-brief>:
- Appendix A: About the National Perinatal Data Collection
- Appendix B: Perinatal national minimum data set items
- Appendix C: State and territory perinatal data collections
- Appendix D: Data quality, methods and interpretation.



Australia's mothers and babies 2015—in brief presents key statistics and trends on pregnancy and childbirth of mothers, and the characteristics and outcomes of their babies. This publication is designed to accompany the perinatal dynamic data display available online at www.aihw.gov.au/reports/mothers-babies/perinatal-dynamic-data-displays.



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