The age of women at first birth has been increasing in Australia, with a 2015 average of 28.9 years (AIHW 2017a). In 2015, 2.7% of all births in Australia were to teenage mothers—for the purposes of this report ‘teenage’ refers to mothers aged under 20—most of whom were aged 18 or 19 (73.8%); 0.8% were aged under 15.

Teenage mothers remain of interest, as they are more likely than older mothers to experience broader disadvantage because of their younger age, including access to education, employment and social support (AIHW 2012; Marino et al. 2016; McArthur & Barry 2013).

Evidence also shows that babies born to teenage mothers are more likely to be pre-term, of low birthweight and more likely to suffer higher morbidity and mortality (AIHW 2012; AIHW 2016b; Marino et al. 2016).

Key findings

Compared with mothers aged 20–24, teenage mothers in 2015 were:

- more likely to have a spontaneous labour (and less likely to have a caesarean section)
- less likely to have diabetes.

However, teenage mothers were also more likely to:

- live in the lowest socioeconomic status (SES) areas
- live in remote areas
- smoke during pregnancy.

Babies born to teenage mothers were more likely to:

- be born pre-term
- be born with a low birthweight
- be small for gestational age
- need resuscitation.

One in 4 (24%) of all teenage mothers were Aboriginal and/or Torres Strait Islander. Indigenous teenage mothers had higher levels of antenatal risk factors and poorer baby outcomes than non-Indigenous teenage mothers in terms of pre-term birth and low birthweight.
Select characteristics and outcomes of teenage mothers and mothers aged 20–24, and their babies, 2015

<table>
<thead>
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<th>Indigenous</th>
<th>Non-Indigenous</th>
<th>Lowest SES area</th>
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<td>4.5%</td>
<td>90%</td>
<td>51%</td>
<td>5.2%</td>
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<tr>
<td>20–24 year old mothers</td>
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<td>7.9%</td>
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<td>2.0%</td>
<td>92%</td>
<td>55%</td>
<td>6.9%</td>
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<th>Smoking after 20 weeks of pregnancy</th>
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<tr>
<td>Teenage mothers</td>
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<td>2.5%</td>
<td>63%</td>
<td>6.1%</td>
<td>69%</td>
<td>13%</td>
<td>18%</td>
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<td>20–24 year old mothers</td>
<td>21%</td>
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<td>3.0%</td>
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<td>10.7%</td>
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<tr>
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<td>11.0%</td>
<td>9.9%</td>
<td>3,241 grams</td>
<td>0.6%</td>
<td>2.4%</td>
<td>97%</td>
<td>21%</td>
<td>10.6%</td>
</tr>
<tr>
<td>20–24 year old mothers</td>
<td>8.9%</td>
<td>7.6%</td>
<td>3,318 grams</td>
<td>0.4%</td>
<td>1.9%</td>
<td>98%</td>
<td>19%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

Notes: SES refers to socioeconomic status. An Apgar score is a numerical score used to indicate the baby's condition 5 minutes after birth, a score of less than 7 indicates complications for the baby.
Introduction to teenage mothers in Australia

In 2015, a total of 308,887 babies were born in Australia and 8,268 (2.7%) of these were born to teenage mothers (mothers aged under 20). This equates to a birth rate of 11.4 births per 1,000 women aged 15–19. The number of teenage mothers has been declining over the period from 2005 to 2015, down from 11,798 in 2005 to 8,203 in 2015. The teenage birth rate per 1,000 women aged 15–19 years also decreased by 35% over this period.

Nearly three-quarters (73.9%; 6,056) of teenage mothers in Australia were aged 18 or 19—only 0.8% (63) were under 15. Most of these mothers were born in Australia and were first-time mothers. They were also more likely to live in the lowest socioeconomic status (SES) areas and in the more remote areas.

Indigenous teenage mothers were overrepresented and had more concerning trends for both mothers and babies. The link between maternal Indigenous status, socioeconomic disadvantage and living in a remote area is an important pattern: Indigenous mothers are more likely to live in the lowest SES areas and in more remote areas.

In the latest Organisation for Economic Co-operation and Development (OECD) report (using 2013 data), Australia’s birth rate for 15–19 year old women (14.2 births per 1,000 women) was the same as the OECD average of 25 countries. Korea had the lowest teenage birth rate (1.7 births per 1,000 women) while Mexico had the highest (73.6 per 1,000) (OECD 2017).
Why report on teenage mothers?

Maternal age (the age at which a woman gives birth) can be a risk factor for maternal and perinatal outcomes, with adverse outcomes more likely to occur in women aged under 20 and over 40 (AIHW 2017a). Teenage mothers have been reported in the literature to be at risk of social stigma, with teen motherhood potentially affecting social determinants of health that include access to education, employment and social support (AIHW 2012; Marino et al. 2016; McArthur & Barry 2013).

Babies born to teenage mothers are more likely to have poor birth outcomes, such as pre-term birth and low birthweight, as well as poorer long-term emotional, cognitive and behavioural outcomes (AIHW 2012; Marino et al. 2016).

This report shows that teenage mothers were more likely to live in low SES areas, where they had higher rates of smoking during pregnancy and diabetes. Babies of teenage mothers from low SES areas were also more likely to be pre-term and of low birthweight. However, this report shows some positive trends, such as more spontaneous onset of labour, lower caesarean section rates and less diabetes for teenage mothers overall.

In order to provide some context for the lives of teenage women in Australia, the diagram to the right shows key statistics for 15–19 year old females using a person-centred approach.

Data sources and methods

This report draws on data from the AIHW National Perinatal Data Collection and historical data for time trends. Where the term ‘teenage mother’ is used the analysis is based on women who gave birth aged under 20. Where analysis is based on women who gave birth aged 15–19, for example for calculating rates and population-level proportions, this is specified in the text.

Mothers aged 20–24 is the comparison group for teenage mothers aged under 20 for analysis of antenatal risk factors, labour and birth outcomes and baby outcomes. This group was selected as the most biologically comparable to teenage mothers and will assist in determining whether differences in characteristics of, and outcomes for, teenage mothers and their babies may be due to factors of biology, or social determinants. See ‘About the data’ (page 16) for further information on data and methods. Detailed supplementary data tables are available online.
Characteristics of teenage mothers

To provide context around the circumstances of women who become mothers at a young age it is important to explore their characteristics: who they are and where they live.

Most teenage mothers are 19

In 2015, almost half of teenage mothers were aged 19 (46.3%; 3,795), followed by 18 (27.6%; 2,261), 17 (15.8%; 1,296) and 16 (6.9%; 567). Only a small proportion were aged 15 (2.7%; 221) or under (0.8%; 63). The overall average age of teenage mothers was 18.1 years.

Between 2005 and 2015, the proportion of younger teenage mothers decreased, while the proportion of older teenage mothers increased. For example, more mothers were aged 16 in 2005 (8.7%; 1,028) than in 2015 (6.9%; 567) and fewer mothers were aged 19 in 2005 (41.8%; 4,931) than in 2015 (46.3%; 3,795).

Teenage mothers more likely to live in regional areas

The proportion of teenage mothers varied greatly across the 31 Primary Health Network (PHN) areas.

Overall, in 2015, teenage mothers were more likely to live in regional PHNs (average of 18.3 births per 1,000 women aged 15–19) than in metropolitan PHNs (7.5 births per 1,000).

Northern Sydney PHN had the lowest teenage birth rate, with 1.0 births per 1,000 women aged 15–19, and Western Queensland PHN had the highest rate with 49.0 births per 1,000 women aged 15–19.
What is a Primary Health Network?

Primary Health Networks (PHNs) are local organisations that connect health services across a specific geographic area, with the boundaries defined by the Australian Government Department of Health.

Determining Remoteness

This report uses the Australian Statistical Geography Standard Remoteness Structure, which groups geographic areas into five classes of Remoteness Area based on their relative access to services using the Accessibility/Remoteness Index of Australia.

Birth rate per 1,000 women aged 15–19, by Primary Health Network, 2015

Note: See supplementary table S5.1 for detailed data.
Remoteness of residence

In 2015, the population rate of 15–19 year old mothers tended to increase with increasing remoteness. The population rate was 64.5 per 1,000 females in Very remote areas—8 times the rate of Major cities (7.9 per 1,000).

The age of teenage mothers decreased as the area they lived in became more remote. For example, teenage mothers in Very remote areas were almost 3 times as likely to be aged 15 (5.8%; 21) as teenage mothers in Major cities (2.1%; 87), and less likely to be aged 19 (42%; 154 compared with 47%; 1,921).

Socioeconomic disadvantage

Socioeconomic disadvantage is a known factor in teenage pregnancy and motherhood (Marino et al. 2016). The population rate of 15–19 year old mothers living in the lowest SES areas in 2015 was 24.9 per 1,000 females, which was 9 times as high as the rate of those living in the highest SES areas (2.8 per 1,000).

There is also an interplay between socioeconomic status and remoteness. While teenage mothers were more likely to be from the lowest SES areas, teenage mothers who lived in Remote and Very remote areas were almost 5 times as likely to live in the lowest SES areas (12.8%; 439) as in the highest SES areas (2.6%; 11). Those who lived in Major cities were more likely to be in the highest SES areas than the lowest SES areas (83% compared to 43%).
Mostly Australian-born and first-time mothers

Most teenage mothers were born in Australia (89.0%; 7,298). A further 4.8% (390) were born in other English-speaking countries and the remainder born in mainly non-English speaking countries (5.8%; 475).

This is a slightly different composition to the Australian population of 15–19 year old females—of whom 85.4% were born in Australia, 5.1% were from other English-speaking countries and 9.5% were from mainly non-English speaking countries (ABS 2011).

The majority of teenage mothers (83%) were first-time mothers. Of those mothers who were not having their first baby, most were aged 19 (63%) or 18 (26%).

Antenatal risk factors

Factors related to the antenatal period, such as maternal health behaviours and receiving antenatal care, play a major role in the wellbeing of both mothers and babies (AIHW 2012).

Fewer antenatal visits and presenting at later gestational ages

Teenage mothers were slightly less likely to have 5 or more antenatal visits (90%) than 20–24 year old mothers (92%). They were also less likely to have at least 1 antenatal visit in the first trimester (within a gestational age of 13 completed weeks) (52% compared with 56%).

Compared to 20–24 year old mothers, teenage mothers attended their first antenatal visit at later gestational ages:

- Around half (51%) of teenage mothers sought their first antenatal visit in the first trimester (compared with 55% of 20–24 year old mothers).
- Around a quarter (24%) sought their first visit at 20 weeks’ gestation or later (compared with 19%).

Higher smoking rates

Compared to 20–24 year old mothers, teenage mothers were 1.5 times as likely to smoke in the first 20 weeks of pregnancy (32% compared with 21%) and after 20 weeks of pregnancy (25% compared with 16%).

Teenage mothers were more likely to smoke than 20–24 year old mothers in all SES areas, but smoking rates decreased with increasing SES.
For example, 35% of teenage mothers in the lowest SES areas smoked before 20 weeks of pregnancy, compared with 23% in the highest SES areas. Likewise, 27% of teenage mothers in the lowest SES areas smoked after 20 weeks of pregnancy, compared with 17% in the highest SES areas.

There was considerable variation in the smoking rates of teenage mothers at the PHN level. The proportion of teenage mothers who smoked at any stage in their pregnancy can be seen in the map to the below.

Note: See supplementary table S2.3 for detailed data.

Proportion of teenage mothers who smoked at any time in pregnancy, by Primary Health Network, 2015

Lower proportions with diabetes

Teenage mothers were less likely to have diabetes (5.2%) than 20–24 year old mothers (6.9%), and were also less likely to have gestational diabetes (4.5% compared with 6.1%). Teenage mothers from the lowest SES areas were 1.4 times as likely to have diabetes as those from the highest SES areas (5.6% compared with 3.9%).
Labour and birth

Labour and birth relates to the mothers’ experience around the birth event.

The large majority (98%) of teenage mothers (and mothers aged 20–24) gave birth in hospital. The remaining proportion of mothers gave birth in other settings, including birth centres or at home.

Most teenage mothers were public patients (96%), a higher proportion than for 20–24 year old mothers (91%).

The proportion of teenage mothers who were private patients increased according to SES, from 2.7% for those in the lowest SES areas to 9.5% in the highest SES areas.

There was very little difference in baby presentation between teenage mothers and 20–24 year old mothers. Both groups had the same proportion of vertex presentations (96%) and very similar proportions of breech presentations (2.5% compared with 3.0%).

More likely to have spontaneous onset of labour

Teenage mothers were 1.1 times as likely to have a spontaneous onset of labour (without intervention)—63% compared with 59% of 20–24 year old mothers—and were almost half as likely to have no labour (6.1% compared with 10.7%). There were similar proportions of induced labour for both groups (both 31%).

Teenage mothers 20% less likely to have a caesarean section

Teenage mothers were more likely to have a vaginal delivery (69%) than 20–24 year old mothers (65%). Where instrumentation was used—such as vacuum or forceps delivery—teenage mothers were likely to require instrumentation at a similar rate (13% compared with 12%).

Teenage mothers had lower proportions of caesarean sections (18%) than 20–24 year olds (23%).

The likelihood of having a caesarean section increased with socioeconomic status for teenage mothers (from 18% for the lowest SES areas to 21% for the highest SES areas).

Teenage mothers were more likely to have an intervention if they birthed as a private patient than as a public patient (18% instrumental delivery compared with 13%; 20% caesarean section compared with 18%). This pattern was more pronounced for 20–24 year old mothers (17% instrumental delivery compared with 11%; 31% caesarean section compared with 23%).
**Perineum less likely to be intact**

Teenage mothers were less likely to have an intact perineum than 20–24 year old mothers (26% compared with 30%). They also had higher proportions of first-degree lacerations (31% compared with 27%) and episiotomies (20% compared with 18%).

Teenage mothers were less likely to have a second-degree laceration than 20–24 year old mothers (21% compared with 24%) and had similar rates of a third- or fourth-degree laceration (2.9% compared with 2.7%).

A higher proportion of teenage mothers from the highest SES areas had an intact perineum (29%) than those from the lowest SES areas (25%).

*Note:* proportions for perineal status may not sum to 100% as some women can have both a perineal laceration and an episiotomy.

**Similar maternal length of stay**

Overall, teenage mothers had similar postnatal lengths of stay in hospital (after giving birth) to 20–24 year old mothers.

Teenage mothers were slightly less likely than 20–24 year old mothers to have a hospital stay of 3 days or less (82% compared with 84%) and were slightly more likely to have a hospital stay of 4 days or more (18% compared with 16%).

**Baby outcomes**

Teenage motherhood has been associated with poorer health and wellbeing outcomes for their babies (AIHW 2012). This section explores outcomes for babies in the first 28 days of life.

The vast majority of teenage mothers (98.9%) and 20–24 year old mothers (99.2%) gave birth to live born babies.

**Babies of teenage mothers are more likely to be pre-term...**

Babies of teenage mothers were 1.2 times as likely as babies of 20–24 year old mothers to be born pre-term, that is, born at or before 36 weeks’ gestation (11.0% compared with 8.9%). The most noticeable difference in gestational age for pre-term babies was for babies born at 32–36 weeks (8.5% compared with 7.0%).

Babies born to teenage mothers from the lowest SES areas were more likely to be born pre-term than those babies born to teenage mothers from the highest SES areas (12.0% compared with 9.9%).
...and have lower birthweights

Babies born pre-term are more likely to be of low birthweight (a birthweight of less than 2,500 grams). Since teenage mothers are more likely to give birth to pre-term babies, their babies are also more likely to be of low birthweight.

Babies born to teenage mothers had lower birthweights than those born to 20–24 year old mothers. The average birthweight of babies born to teenage mothers was 3,241 grams, compared with 3,318 grams for those babies born to 20–24 year old mothers.

Babies born to teenage mothers were 1.3 times as likely to be of low birthweight as babies born to 20–24 year old mothers.

Babies born to teenage mothers from the lowest SES areas were 1.4 times as likely to be of low birthweight as babies born to teenage mothers from the highest SES areas (11.5% compared with 8.0%).

Babies born to teenage mothers were also more likely to be small for their gestational age (defined as a birthweight below the 10th percentile for their gestational age and sex) (13%) than babies born to 20–24 year old mothers (11%).

There was considerable variation in the low birthweight rates of babies born to teenage mothers at the PHN level. The proportion of low birthweight babies can be seen in the map below.

There was little difference in Apgar scores (numerical score used to indicate the baby’s condition 5 minutes after birth, with a score of less than 7 indicating complications for the baby) for babies born to teenage mothers compared to those of 20–24 year old mothers. For scores of 0–3, the respective proportions were 0.6% and 0.4%; for 4–6 (2.4% and 1.9%) and for 7–10 (97% and 98%).
More likely to need advanced resuscitation methods

Babies born to teenage mothers were more likely to require resuscitation (21%) than babies born to 20–24 year old mothers (19%). They were 1.2 times as likely to require more advanced resuscitation methods such as endotracheal intubation, external cardiac massage and ventilation (10.6% compared with 8.8%).

Babies born to teenage mothers were also more likely than babies born to 20–24 year old mothers to be admitted to a special care nursery or a neonatal intensive care unit (21% compared with 17%).

Babies born to teenage mothers stay longer in hospital

Babies of teenage mothers were slightly less likely than babies of 20–24 year old mothers to have a hospital stay of 3 days or less (78% compared with 80%) and more likely to have a hospital stay of 4 days or more (22% compared with 20%).

Higher rates of perinatal deaths

For the period 2011–2012 there were 18.2 perinatal deaths per 1,000 births for babies born to mothers aged under 20, compared with 10.7 deaths per 1,000 births for babies born to 20–24 year old mothers (AIHW 2016b).

Both the stillbirth and neonatal death rates were higher for babies born to mothers aged under 20: 13.9 compared with 7.8 stillbirths per 1,000 births and 4.3 compared with 2.9 neonatal deaths per 1,000 live births.

Indigenous teenage mothers

Indigenous teenage mothers are over-represented

One in 4 (24%) teenage mothers identified as Aboriginal and/or Torres Strait Islander in 2015.

This means that Indigenous women were over-represented amongst teenage mothers, given Indigenous women aged 15–19 account for only 5.3% of the overall population of Australian females of the same age.

Indigenous mothers are younger than average

The average age of Indigenous teenage mothers (17.8 years) was lower than for non-Indigenous mothers (18.1 years).

Indigenous teenage mothers were 4.5 times as likely to be aged under 15 (1.8%; 35) as non-Indigenous teenage mothers (0.4%; 27) and less likely to be aged 19 (37.4%; 744 compared with 49.1%; 3,048).
More likely to live in remote areas

The proportion of Indigenous mothers in Australia is higher in Remote and Very remote areas, and teenage Indigenous mothers also follow this pattern.

In 2015, the Indigenous population rate for 15–19 year old mothers living in Remote and Very remote areas was 84.9 per 1,000 females, which was 5.5 times the non-Indigenous rate (15.2 per 1,000).

The population rate for 15–19 year old Indigenous mothers was also higher for women living in Major cities at 40.7 per 1,000 for Indigenous women compared with 7.1 per 1,000 for non-Indigenous women.

Fewer and later antenatal visits

Indigenous teenage mothers generally attended fewer antenatal visits than non-Indigenous teenage mothers, with higher proportions of 1 visit (1.5% compared with 0.9%) and 2–4 visits (9.5% compared with 6.1%) and lower proportions of 5 or more visits (86% compared with 91%).

They were 1.1 times as likely to attend their first antenatal visit at 20 weeks gestation or more (25% compared with 23%).

More likely to smoke

Compared to non-Indigenous teenage mothers, Indigenous teenage mothers were:

- 1.5 times as likely to smoke in the first 20 weeks of pregnancy (43% compared with 28%)
- 1.7 times as likely to smoke after 20 weeks (36% compared with 21%).

Higher rates of diabetes

Indigenous teenage mothers were 1.2 times as likely as non-Indigenous teenage mothers to have diabetes (6.0% compared with 4.9%) and gestational diabetes (5.1% compared with 4.2%).

Onset of labour, method of birth and perineal status

In 2015, Indigenous teenage mothers were more likely than their non-Indigenous counterparts to have spontaneous labour (66% compared with 62%), and less likely to have induced labour (28% compared with 32%), but equally likely to have no labour (both 6.1%).

Compared to non-Indigenous teenage mothers, Indigenous teenage mothers were slightly more likely to:

- have a caesarean section (19% compared with 18%)
- have an intact perineum (27% compared with 26%).
Indigenous teenage mothers have longer stays in hospital after birth

Indigenous teenage mothers:

• were less likely to have stays of 3 days or less (77% compared with 83%)
• were 1.4 times as likely to have a stay of 4 days or more (23% compared with 17%).

More pre-term and low birthweight babies born to Indigenous teenage mothers

Babies born to Indigenous teenage mothers were 1.3 times as likely to be born pre-term as babies born to non-Indigenous teenage mothers (13% compared with 10%).

Babies born to Indigenous teenage mothers had a lower average birthweight (3,146 grams) than babies born to non-Indigenous teenage mothers (3,272 grams).

They were also:

• 1.4 times as likely to be of low birthweight (12.5%, compared with 8.9% for non-Indigenous teenage mothers)
• 1.3 times as likely to be small for gestational age (16% compared with 12%).

Indigenous babies had more admissions to special care nurseries and longer stays in hospital

Babies born to Indigenous teenage mothers were more likely than those of non-Indigenous teenage mothers to be admitted to the special care nurseries (24% compared with 20%).

Babies born to Indigenous teenage mothers:

• were less likely to have a stay of 3 days or less (73% compared with 79%)
• were more likely to stay 4 days or more (27% compared with 21%).
More information

About the data
The data in this report are from the AIHW National Perinatal Data Collection (NPDC), a national population-based cross-sectional collection of data on pregnancy and childbirth.

The denominator used to calculate rates is the Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) of Australian females aged 15–19 at 30 June in the respective year.

A small number (63) of mothers younger than 15 are included in the numerators. Females aged 10–14 (686,241 in 2015) are excluded from the denominators to obtain a rate representative of the population in which the vast majority of teenage births occur (that is, 15–19 years).

Given the strong relationship between teenage motherhood and SES, stratification by SES area was undertaken for all analyses to check for potential confounding.

Confidence intervals are available upon request.


The Data Quality Statement for the NPDC is available at: <http://meteor.aihw.gov.au/content/index.phtml/itemId/681798>.

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Glossary
For definitions of terms used in this report, see: <https://www.aihw.gov.au/reports-statistics/population-groups/mothers-babies/glossary>.

References


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