Pregnancy Outcome

in South Australia 2023

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Abbreviations

ABS	Australian Bureau of Statistics
ASFR	age-specific fertility rate
APH	ante-partum haemorrhage
BMI	body mass index
CTG	cardiotocography
IPPV	intermittent positive pressure ventilation
FGR	fetal growth restriction (also referred to as intra-uterine growth restriction)
PPH	post-partum haemorrhage
SACC	Standard Australian Classification of Countries
SBR	Supplementary Birth Record
SD	Standard deviation

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Executive Summary

Number of births and fertility rates

The number of births notified in South Australia in 2023 was 18,517, which was 1,067 fewer births than in 2022, where the number of births decreased for the second successive year. The number of women who gave birth was 18,228. The total fertility rate was 1.48 live births per woman, compared with the rate of 1.62 in 2022. When compared with the age-specific fertility rates for 2022, there was a decrease in all age groups.

Age of women

Two hundred and eighty-four teenage women gave birth in 2023; accounting for 1.6% of women who gave birth in South Australia compared with 1.5% in 2022. The proportion of women aged 35 years and over who gave birth was 26.3% in 2023. The mean age of women giving birth has been increasing over the previous decade, and this peaked in 2023 at 31.1 years. As with previous years, the age-specific fertility rate in the 30-34 year age group was higher than in the 25-29 year age group.

Place of birth

In 2023, 61.7% of births occurred at the three metropolitan teaching hospitals which was stable when compared to 2022. A further 19.7% of all births occurred at metropolitan private hospitals. There were 244 women (1.3%) who gave birth at home, which was similar to 249 (1.3%) women in 2022. All 244 home births in 2023 were planned home births.

Country of birth

Seventy-one percent of women who gave birth in 2023 were Australian born. Of women born overseas who gave birth in South Australia, the largest proportions came from India (23.1%), United Kingdom (6.8%) and China (6.5%).

Body mass index

In 2023, amongst mothers for whom body mass index could be calculated, 58.4% were of an unhealthy weight. Of the overweight women giving birth, 15.5% were classified as obese and 11.9% severely or morbidly obese.

Antenatal care and length of stay

Around 84% of women attended antenatal care within the first 14 weeks of pregnancy. Of the women for whom the number of antenatal visits was reported, 83.7% attended seven or more antenatal visits. Many women had more than one type of antenatal care. However, the most common care types were public hospital clinics (54.6%), obstetricians in private practice (23.1%), public hospital shared care (16.6%) and midwifery group practice at a birth hospital (12.0%).

The median length of stay in hospital after birth for all women was three days; the median length of stay was two days for women who had a vaginal birth and four days for women who had a caesarean section. Amongst private patients, the median length of stay was two days longer for vaginal births and caesarean sections, compared with public patients.

Procedures

At least one ultrasound examination was performed for 96.1% of women who gave birth in 2023. Over a third of all labours were induced (36.4%), and 13.0% of women giving birth had labour augmented after spontaneous labour onset. The main reasons for induction of labour were pre-existing diabetes or gestational diabetes (19.5%), maternal choice (17.8%) and other obstetric or medical conditions (11.5%). Around 14% of inductions of labour were performed for other than defined indications. The two most common forms of analgesia for pain relief during labour was nitrous oxide and oxygen (55.0% of women) and epidurals (46.3% of women). Of women who gave birth vaginally, 26.2% had an episiotomy.

Method of birth

In 2023, 48.9% of women had normal spontaneous vaginal births, a further 5.8% were delivered by ventouse and 4.4% were delivered by forceps. The proportion of women giving birth by caesarean section was 40.8%, which was slightly higher than the proportion in 2022 (38.7%). The main reasons given for caesarean section were previous caesarean section (35.3%), failure to progress in labour (22.1%) and fetal distress (20.5%).

Plurality

In 2023, there were 577 multiple births comprising 574 twins and fewer than five triplets. Multiple births accounted for 3.1% of all births.

Aboriginal mothers and babies

Not all pregnancy outcomes are experienced equally across the population. Much of the data has been reported by Aboriginal status to enable Aboriginal and Torres Strait Islander people access to locally relevant data to monitor the implementation of efforts to Close the Gap.

Eight hundred and fifty-nine Aboriginal women gave birth in South Australia in 2023, accounting for 4.7% of all women who gave birth in the state. The Aboriginal status of babies was also collected independently of mothers. There were 1,275 Aboriginal babies, representing 6.9% of all babies born in South Australia in 2023. In 2023, 8.4% of Aboriginal women who gave birth were teenagers, which was lower than in 2022 (10.0%)

Of the Aboriginal women for whom gestation at the first antenatal visit was reported, 66.4% attended for antenatal care within the first 14 weeks of pregnancy (compared with 84.6% of non-Aboriginal women). Of the Aboriginal women for whom the number of antenatal visits was reported, 73.0% attended at least seven antenatal visits during pregnancy (compared with 84.3% of non-Aboriginal women).

In 2023, 38.9% of Aboriginal women with a known smoking status reported that they smoked tobacco at any time during their pregnancy, compared with 4.8% of non-Aboriginal women. Around two percent (2.3%) of Aboriginal women with a known status of alcohol consumption reported consuming alcohol at any time during their pregnancy, compared with 0.8% of non-Aboriginal women.

In 2023, the proportion of preterm births (<37 weeks gestation) was 16.6% among babies of Aboriginal women compared with 8.7% among babies of non-Aboriginal women. The proportion of babies born with a healthy birthweight in 2023 was 82.9% of Aboriginal women compared with 86.2% in 2022.

Perinatal mortality

Detailed data on maternal and perinatal mortality rates, demographics, death classifications and key learning points for South Australia are reported by the Maternal and Perinatal Mortality Committee, available at the Pregnancy Outcome Statistics Webpage.

Termination of pregnancy

For a more complete picture of pregnancy outcome in South Australia, please see the accompanying reports for Termination of Pregnancy and Maternal and Perinatal Mortality, available at the Pregnancy Outcome Statistics Webpage.

Background

Data Collection

Notifications for all births occurring in South Australia in 2023 were collected under the *South Australian Health Care Regulations 2008 – Part 5 Pregnancy Outcome Data and Statistics* until 15 August 2023 and then subsequently under *South Australian Health Care Regulations 2023 – Part 6 Pregnancy Outcome Data and Statistics.* This includes births to women who usually reside interstate however births of South Australian residents that occur in other states are not included. The perinatal data have been collected since 1981, with some changes to the data items collected over the years.

The perinatal data are compiled from notifications submitted by hospital midwives, privately practising midwives attending homebirths, and neonatal nurses using either the Supplementary Birth Record (SBR) data collection form (Appendix 1), or its electronic equivalent.

Data on congenital anomalies detected at birth or in the neonatal period (within 28 days of birth) are also provided as part of the perinatal statistics collection using the Congenital Abnormality Form (Appendix 2) or the SBR data collection form. Limited statistics on birth defects are included in this report as these are reported annually by the South Australian Birth Defects Register at the Women's and Children's Hospital[1]. The Birth Defects Register complements statistics on birth defects from the perinatal and medical termination collections with statistics on birth defects detected and notified after discharge from the birth hospital, up to the child's fifth birthday.

Note: A procedural change in July 2022 increased the ascertainment of births and perinatal deaths, particularly for terminations of pregnancy, and hence this is improved compared with historical data. We urge caution when comparing data across time presented in this report.

For a more complete picture of pregnancy outcome in South Australia please see the accompanying reports for Termination of Pregnancy and Maternal and Perinatal Mortality, available at the Pregnancy Outcome Statistics Webpage.

Additionally, pregnancy outcome data are available via Preventive Health SA's Open Data Portal including interactive summary visualisations.

Annual Report

The births described in this report include live births, stillbirths and terminations of pregnancy of at least 400g birthweight or 20 weeks of gestation. The 18,517 births in South Australia in 2023 comprised 18,277 live births and 240 stillbirths. The number of women who gave birth was 18,228. Definitions used in this report are provided in the Methods and Terminology section.

The term Aboriginal is used respectfully in this report as an all-encompassing term for Aboriginal and Torres Strait Islander mothers or babies.

The terms woman, women and mother are used in this report as most pregnant and birthing people identify with their birth sex. However, it is acknowledged that these terms include people who do not identify as women, including those with a non-binary identity.

Mothers

1.1 Place of residence

This table uses the ABS Australian Statistical Geography Standard boundaries (ASGS 2021), with Statistical Area Level 4 boundaries for the four Adelaide metropolitan regions, and Statistical Area Level 3 boundaries to present the nine non-metropolitan regions in South Australia. The distribution of births according to the mother's place of residence by these regions is provided in Table 1 together with the estimated resident population and crude birth rate. The crude birth rate in 2023 for South Australia was 9.9 per 1,000 population. It was lowest in the Fleurieu-Kangaroo Island and highest in Adelaide-North.

Table 1: Births and crude birth rate by ABS Statistical Geographical Boundaries (ASGS 2021), South Australia, 2023.

Mother's residence	Total births		Live births	Estimated resident population[1]	Crude birth rate per 1,000 population
	Number	Percent	Number	Number	
Adelaide - Central and Hills	2,602	14.1	2,576	327,442	7.9
Adelaide - North	5,679	30.7	5,617	476,138	11.8
Adelaide - South	3,721	20.1	3,678	387,387	9.5
Adelaide - West	2,597	14.0	2,575	255,413	10.1
Barossa	311	1.7	308	39,850	7.7
Lower North	198	1.1	193	23,211	8.3
Mid North	278	1.5	278	27,692	10.0
Yorke Peninsula	227	1.2	227	28,003	8.1
Eyre Peninsula and South West	630	3.4	622	59,207	10.5
Outback - North and East	297	1.6	295	26,555	11.1
Fleurieu - Kangaroo Island	402	2.2	398	58,417	6.8
Limestone Coast	659	3.6	653	69,137	9.4
Murray and Mallee	682	3.7	668	73,832	9.0
Interstate	234	1.3	189	-	-
Total	**18,517**	**100.0**	**18,277**	**1,852,284**	**9.9**

[1] Australian Bureau of Statistics. population estimates by age and sex, Regions of South Australia, 2023. Canberra: ABS, 2024 (Catalogue No 3235.0).

1.2 Maternal Aboriginal status

The distribution of women who gave birth, by Aboriginal status, is provided in Table 2. In 2023, there were 859 births to Aboriginal mothers, which represented 4.7% of all women. The Aboriginal status of the baby was also collected independently of the mother. There were 1,275 Aboriginal babies, representing 6.9% of all babies born in South Australia in 2023. They comprised 1,194 (93.6%) Aboriginal, 19 (1.5%) Torres Strait Islander and 62 (4.9%) Aboriginal and Torres Strait Islander babies.

Table 2: Aboriginal status of women who gave birth, South Australia, 2023.

Aboriginal status	Number of women	% Women
Aboriginal	859	4.7
Non-Aboriginal	17,369	95.3
Total	**18,228**	**100.0**

1.3 Maternal age

Table 3 shows the age and Aboriginal status of women who gave birth in South Australia in 2023. The largest number of women who gave birth in South Australia were in the 30-34 year age group. The proportion of women in this age group (36.9%) has exceeded that of the 25-29 years age group (26.6%) since 2001. Teenage women accounted for 1.6% of women who gave birth, and 26.3% of women who gave birth were aged 35 years or more. Aboriginal women were generally younger than non-Aboriginal women; 8.4% were teenagers and 13.5% were aged 35 years or older.

Table 3: Age and Aboriginal status of women who gave birth, South Australia, 2023.

Age Group	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
<20	72	8.4	212	1.2	284	1.6
20-24	219	25.5	1,362	7.8	1,581	8.7
25-29	262	30.5	4,585	26.4	4,847	26.6
30-34	190	22.1	6,541	37.7	6,731	36.9
35-39	97	11.3	3,803	21.9	3,900	21.4
40-44	17	2.0	805	4.6	822	4.5
45+	<5	0.2	61	0.4	63	0.3
Total	**859**	**100.0**	**17,369**	**100.0**	**18,228**	**100.0**

The five-year age-specific fertility rate was highest in the 30-34 year age group (107.2 per 1,000 women), followed by the 25-29 year age group (79.2 per 1,000 women, Table 4. There were decreases in all age groups compared to the rates for 2022. The general fertility rate (see Methods and Terminology) was 51.6 per 1,000 women aged 15-44 years, which is lower than the general fertility rate in 2022 (56.5 per 1,000 women). The total fertility rate in 2023 was 1.48 live births per woman (compared with 1.62 live births per woman in 2022), which remains below the replacement level of 2.1 children per woman[2].

Table 4: Age-specific fertility rates (ASFR), South Australia, 2023.

Age group (years)	Number of live births	Estimated resident female population[1]	Age-specific fertility rate per 1,000 women (ASFR)[2,3]
15-19	268	52,561	5.1
20-24	1,542	54,783	28.1
25-29	4,873	61,563	79.2
30-34	6,783	63,302	107.2
35-39	3,921	63,504	61.7
40-44	828	58,499	14.2
45+	62	na	na
Total	**18,277**	**354,212**	**51.6**

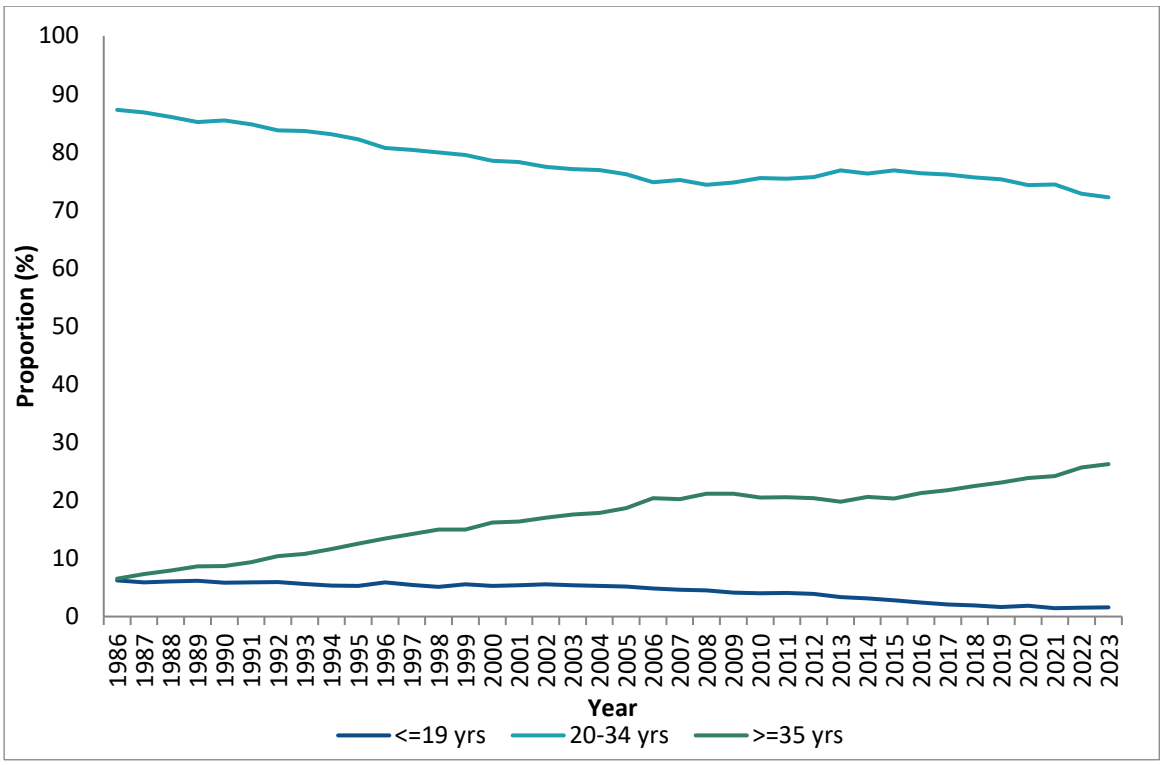
[1] Australian Bureau of Statistics. Population estimates by age and sex, Regions of South Australia, 2023. Canberra: ABS, 2024.

[2] The number of live births and fertility rate for women aged 15-19 years include live births for younger ages, and the number and rate for women aged 40-44 years include live births for older ages. The total number and rate include all live births.

[3] Sum of 5-year ASFRs = 295.5 per 1,000 women. Total fertility rate = 295.5 x 5 = 1477.3 live births per 1,000 women = 1.48 live births per woman.

Figure 1 presents the proportion of women giving birth by broad age groups since 1986. The proportion of women aged 35 years or older has increased from 6.5% in 1986 to 26.3% in 2023.

Figure 1: Broad age groups of women who gave birth, South Australia, 1986 – 2023.



1.4 Country of birth

The distribution of the mother's country of birth is provided in Table 5 by group, and in Table 6 by the specified country. Of the 29.3% of women born outside of Australia who gave birth in South Australia in 2023, the largest proportions were born in India (23.1%), the United Kingdom (6.8%) and China (6.5%).

Table 5: Country of birth group[1] for women who gave birth, South Australia, 2023.

Country of birth group	Number	%
Oceania	13,035	71.5
North-West Europe	480	2.6
Southern and Eastern Europe	205	1.1
North Africa and Middle East	311	1.7
South-East Asia	830	4.6
North-East Asia	517	2.8
Southern and Central Asia	2,139	11.7
Americas	240	1.3
Sub-Saharan Africa	462	2.5
Unknown	9	0.0
Total	**18,228**	**100.0**

[1] Australian Bureau of Statistics. Standard Australian Classification of Countries 2016 (SACC). Canberra: ABS.

Table 6: Specified country of birth[1] for women who gave birth, South Australia, 2023.

Specified country of birth	Number	% of women	% of women born overseas who gave birth (n=5,334)
Australia (includes External Territories)	12,885	70.7	-
India	1,234	6.8	23.1
United Kingdom, Channel Islands and Isle of Man	361	2.0	6.8
China (excludes SARs and Taiwan)	348	1.9	6.5
Nepal	301	1.7	5.6
Philippines	287	1.6	5.4
Afghanistan	218	1.2	4.1
Pakistan	189	1.0	3.5
Vietnam	168	0.9	3.1
New Zealand	111	0.6	2.1
Malaysia	110	0.6	2.1
South Africa	101	0.6	1.9
Sri Lanka	90	0.5	1.7
Sudan	80	0.4	1.5
Myanmar	72	0.4	1.3
Thailand	72	0.4	1.3
Iran	70	0.4	1.3
Bangladesh	66	0.4	1.2
United States of America	62	0.3	1.2
Kenya	54	0.3	1.0
Brazil	53	0.3	1.0
Nigeria	52	0.3	1.0
Cambodia	50	0.3	0.9
Hong Kong (SAR of China)	48	0.3	0.9
Korea, Republic of (South)	48	0.3	0.9
Congo, Republic of	46	0.3	0.9
Colombia	45	0.2	0.8
All other countries	998	5.5	18.7
Unknown	9	0.0	-
Total	**18,228**	**100.0**	**-**

[1] Australian Bureau of Statistics. Standard Australian Classification of Countries 2016 (SACC). Cat No. 1269.0. Canberra: ABS.

1.5 Occupation of mother and partner

The distribution of occupations for mothers giving birth in 2023, and their partners, are presented in Table 7. The most common occupation type for mothers was professionals (23.8%), salespersons and personal service workers (17.1%) and home duties (13.9%). The most common occupations for partners were tradespersons (21.9%), professionals (18.2%) and managers and administrators (14.5%).

Table 7: Occupation[1] of mother and partner, South Australia, 2023.

Occupation	Mother		Partner	
	Number	%	Number	%
Clerks	1,602	8.8	420	2.3
Labourers and related workers	696	3.8	2,183	12.0
Managers and administrators	1,916	10.5	2,639	14.5
Para professionals	1,895	10.4	1,334	7.3
Plant and machine operators and drivers	106	0.6	1,449	7.9
Professionals	4,339	23.8	3,312	18.2
Salespersons and personal service workers	3,118	17.1	1,260	6.9
Tradespersons	654	3.6	3,990	21.9
Home duties	2,540	13.9	46	0.3
Pensioners	9	0.0	21	0.1
Students	436	2.4	153	0.8
Unemployed	558	3.1	628	3.4
Other	86	0.5	83	0.5
Unknown	273	1.5	710	3.9
Total	**18,228**	**100.0**	**18,228**	**100.0**

[1] Australian Bureau of Statistics. ASCO. First Edition. Occupation Definitions. Canberra: ABS,1990. (Catalogue No. 1223.0).

1.6 Body mass index (BMI)

Reported height and weight at the first antenatal visit were used to calculate the body mass index (BMI) for women who gave birth. This was considered valid only for women who attended the first antenatal visit before 20 weeks of gestation. Among these 16,966 women (93.1% of all women who gave birth), height and weight were not reported for 384 women (2.3%). Therefore, BMI was calculated for 16,582 women who gave birth in 2023 (97.7% of women who attended the first antenatal visit before 20 weeks of gestation). Table 8 shows that 56.6% of these women recorded a BMI of 25 or higher, which is above the normal weight range.

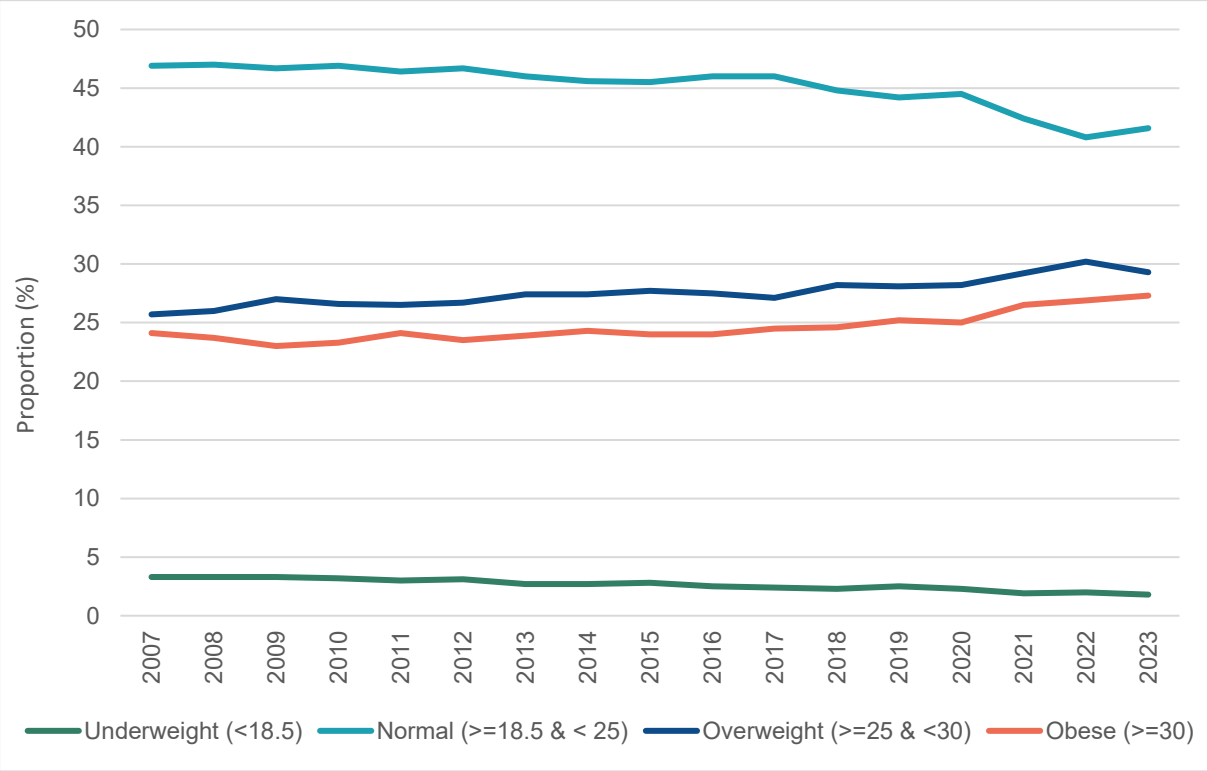
Table 8: BMI of women at the first antenatal visit, South Australia, 2023.

BMI[1]		Number	%	Adjusted % (excluding unknown n=16,582)
<18.5	underweight	299	1.8	1.8
18.5 – 24.9	normal	6,893	40.6	41.6
25.0 – 29.9	overweight	4,856	28.6	29.3
30.0 – 34.9	obese	2,568	15.1	15.5
35.0 – 39.9	severely obese	1,232	7.3	7.4
≥40	morbidly obese	734	4.3	4.4
Unknown		384	2.3	-
Total		**16,966**	**100.0**	**100.0**

[1] based on height and weight at first antenatal visit, where gestation at first antenatal visit was <20 weeks.

Figure 2 presents the proportion of women giving birth by BMI category since 2007. The proportion of women with a recorded BMI of 30 or higher (obese) has increased from 24.1% in 2007 to 27.3% in 2023.

Figure 2: Body Mass Index of women at the first antenatal visit (excluding unknown), South Australia, 2007 – 2023.



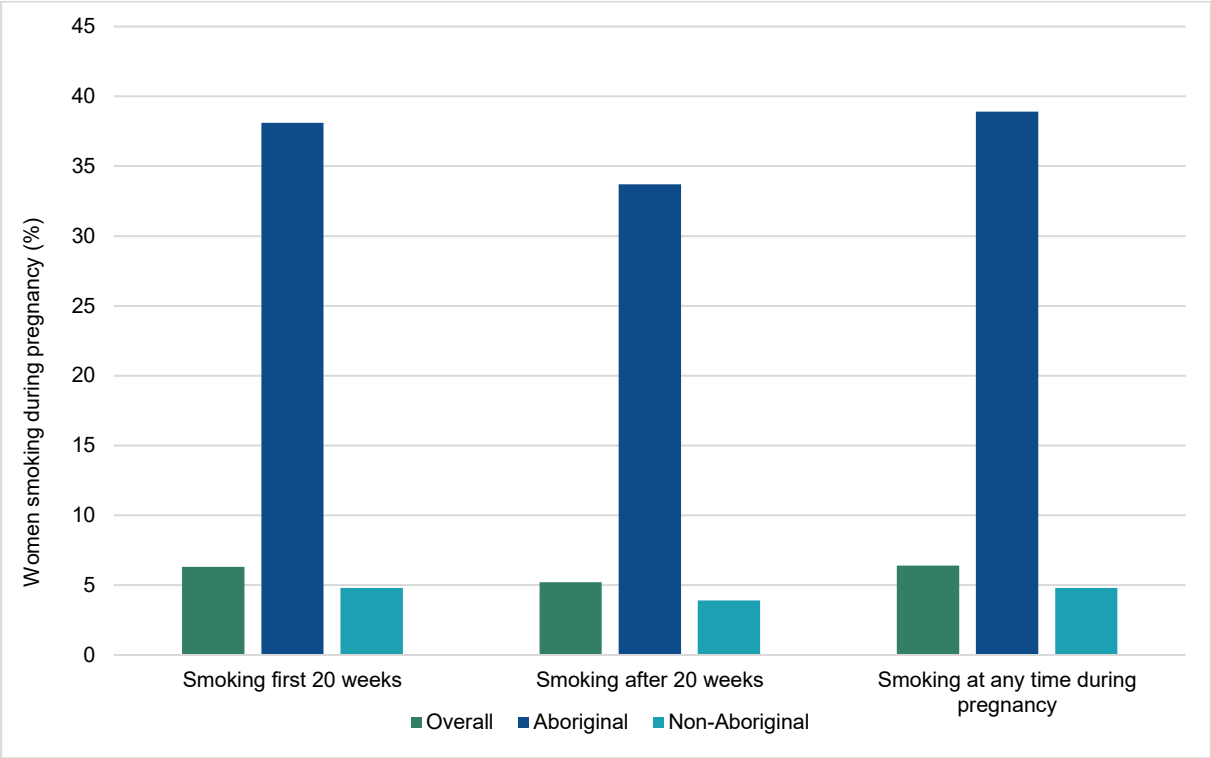
1.7 Tobacco smoking status

Data are collected for tobacco smoking status during the first 20 weeks of pregnancy and the second 20 weeks of pregnancy and are used to calculate a tobacco smoking status for women at any time during pregnancy. A new tobacco smoking data element was implemented in 2020 to align with national reporting, and data are not comparable to reports before 2020.

Tobacco smoking status was unknown for 714 women during the first 20 weeks and 755 women during the second 20 weeks of pregnancy. This results in a known smoking status for 17,457 women who gave birth (95.7%) in 2023. Among these, 6.4% of women were reported to be tobacco smokers at any time during their pregnancy, and this was higher among Aboriginal women (38.9%) than non-Aboriginal women (4.8%).

A higher proportion of women reported smoking during the first 20-weeks of their pregnancy (6.3%), compared with after 20-weeks (5.2%, Figure 3) and this has declined slightly when compared to 2022; 6.6% of women during the first 20 weeks of pregnancy and 5.4% of women after 20 weeks of pregnancy.

Figure 3: Proportion of women smoking during pregnancy by Aboriginal status, South Australia, 2023 (excludes unknown)[1].



[1] Tobacco smoking status unknown for n=714 women during first 20 weeks, n=755 women after 20 weeks and n=771 women at any time during pregnancy.

In 2023, the highest proportion of smoking at any time during pregnancy was among women aged under 25 years (16.5%). The proportions of Aboriginal women smoking at any time during pregnancy were higher across all age groups compared to non-Aboriginal women (Table 9).

Table 9: Tobacco smoking status at any time during pregnancy by age and Aboriginal status, South Australia, 2023[1].

Age (years)	Non-Smoker		Smoker		Total	
	Number	%	Number	%	Number	%
Total						
<25	1,481	83.5	292	16.5	1,773	100.0
25-34	10,546	94.6	604	5.4	11,150	100.0
≥35	4,310	95.1	224	4.9	4,534	100.0
Total	**16,337**	**93.6**	**1,120**	**6.4**	**17,457**	**100.0**
Aboriginal						
<25	171	62.4	103	37.6	274	100.0
25-34	259	60.9	166	39.1	425	100.0
≥35	64	58.2	46	41.8	110	100.0
Total	**494**	**61.1**	**315**	**38.9**	**809**	**100.0**
Non-Aboriginal						
<25	1,310	87.4	189	12.6	1,499	100.0
25-34	10,287	95.9	438	4.1	10,725	100.0
≥35	4,246	96.0	178	4.0	4,424	100.0
Total	**15,843**	**95.2**	**805**	**4.8**	**16,648**	**100.0**

[1] Tobacco smoking status unknown for n=771 women at any time during pregnancy.

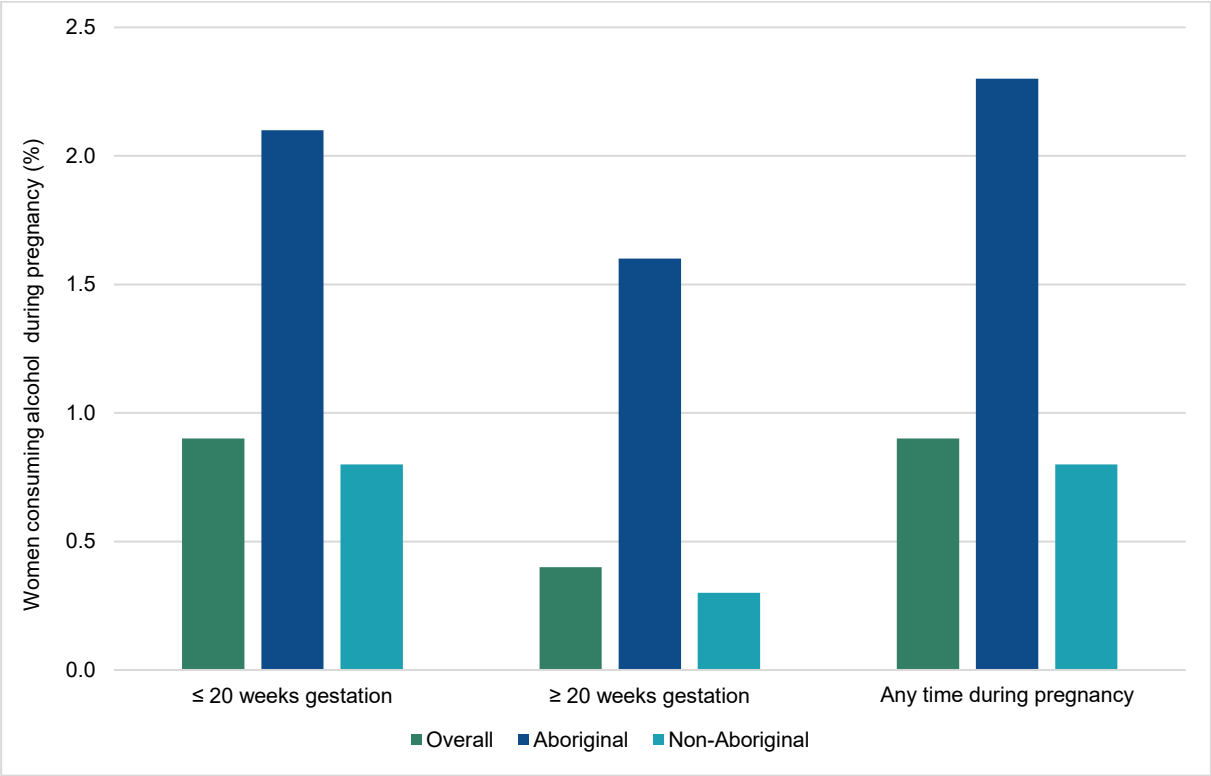
1.8 Alcohol consumption

Data collection regarding alcohol consumption during pregnancy commenced in 2020. Data are collected for alcohol consumption during the first 20 weeks of pregnancy and the second 20 weeks of pregnancy and are used to calculate an alcohol consumption status for women at any time during pregnancy.

Alcohol consumption status was unknown for 773 women during the first 20 weeks of pregnancy and 783 women during the second 20 weeks of pregnancy. This results in a known alcohol consumption status for 17,385 women who gave birth in 2023 (95.4%). Among these women, 0.9% consumed alcohol at any time during their pregnancy, and this was higher among Aboriginal women (2.3%) than non-Aboriginal women (0.8%)

A higher proportion of women reported consuming alcohol during the first 20 weeks of their pregnancy (0.9%) compared with after 20 weeks (0.4%, Figure 4).

Figure 4: Proportion of women consuming alcohol during pregnancy by Aboriginal status, South Australia, 2023 (excludes unknown)[1].



[1] Alcohol consumption status unknown for n=773 women during first 20 weeks, n=783 women after 20 weeks and n=843 women at any time during pregnancy.

1.9 Immunisations during pregnancy

Data collection regarding immunisations during pregnancy commenced in 2020. Due to the high number of unknown vaccination status, and unknown vaccination dates, the data below should be used with caution.

Of mothers for whom influenza vaccination status was known (n=11,172), 79.0% received a flu vaccination during pregnancy. Of mothers for whom the date of influenza vaccination was known and administered during pregnancy, 32.6% were vaccinated in the first 20 weeks of pregnancy, 62.1% were vaccinated in the last 20 weeks, and 5.3% were confirmed to be vaccinated during pregnancy; however, the date was unknown. In 2023, 12.8% of mothers were known to have declined an influenza vaccination.

Of mothers for whom pertussis (whooping cough) vaccination status was known (n=13,066), 90.7% received a pertussis vaccination during pregnancy. Of mothers for which date of pertussis vaccination was known, 1.4% were vaccinated in the first 20-weeks of pregnancy, 95.1% were vaccinated in the last 20 weeks, and 3.5% were confirmed to be vaccinated during pregnancy, however the date was unknown. In 2023, 6.7% of mothers were known to have declined a pertussis vaccination.

Pregnancy profile

2.1 Parity and previous pregnancy outcomes

In 2023, 44.5% of women who gave birth had no previous births, and 31.2% were pregnant for the first time. Among Aboriginal women, 34.8% who gave birth had no previous births, and 23.3% were pregnant for the first time (Table 10).

The proportion of women with a parity of 4 or greater was higher among Aboriginal women (11.9%) than among non-Aboriginal women (2.6%).

Table 10: Parity by Aboriginal status of women who gave birth, South Australia, 2023.

Parity [1]	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
0-primigravida	200	23.3	5,494	31.6	5,694	31.2
0-multigravida	99	11.5	2,317	13.3	2,416	13.3
1	227	26.4	6,201	35.7	6,428	35.3
2	138	16.1	2,244	12.9	2,382	13.1
3	93	10.8	664	3.8	757	4.2
4	48	5.6	240	1.4	288	1.6
≥5	54	6.3	209	1.2	263	1.4
Total	**859**	**100.0**	**17,369**	**100.0**	**18,228**	**100.0**

[1] Number of previous pregnancies reaching 20 weeks gestational age (including live birth and stillbirth).

Among women with previous pregnancies (multigravidae women), the proportions who had previous specified adverse pregnancy outcomes are shown in

Table 11. In total, 42.6% of the multigravidae women experienced a previous adverse pregnancy outcome. Over a third of the women (40.3%) had a previous miscarriage.

Table 11: Previous adverse pregnancy outcomes, multigravidae women, South Australia, 2023 (n= 12,539).

Previous adverse pregnancy outcome[1]	Number	%
Miscarriage	5,057	40.3
Stillbirth	154	1.2
Neonatal death	80	0.6
Ectopic pregnancy	282	2.2

[1] Women may have reported multiple previous adverse outcomes.

2.2 Antenatal visits

In 2023, of the women for whom the number of antenatal visits was reported, 99.7% attended antenatal care during the pregnancy (Table 12). Of the Aboriginal women for whom the number of antenatal visits was reported, 73.0% attended at least seven antenatal visits (compared with 84.3% for non-Aboriginal women). The number of antenatal visits was unknown for 5.3% of all women.

Table 12: Antenatal visits by Aboriginal status of women who gave birth, South Australia, 2023.

Antenatal visits	Maternal Aboriginal status								
	Aboriginal			Non-Aboriginal			Total		
	Number	%	Adjusted % excluding unknown (n=804)	Number	%	Adjusted % excluding unknown (n=16,454)	Number	%	Adjusted % excluding unknown (n=17,258)
None	14	1.6	1.7	31	0.2	0.2	45	0.2	0.3
1-6	203	23.6	25.2	2,558	14.7	15.5	2,761	15.1	16.0
≥7	587	68.3	73.0	13,865	79.8	84.3	14,452	79.3	83.7
Unknown number of visits	55	6.4	-	915	5.3	-	970	5.3	-
Total	**859**	**100.0**	**100.0**	**17,369**	**100.0**	**100.0**	**18,228**	**100.0**	**100.0**

2.3 Gestation at first antenatal visit

In 2023, of the women for whom the week of gestation at the first antenatal visit was reported, 81.5% attended antenatal care within the first 14 weeks of pregnancy. Of the Aboriginal women for whom the week of gestation at the first antenatal visit was reported, 66.4% attended antenatal care within the first 14 weeks of pregnancy (compared with 84.6% of non-Aboriginal women). Gestation at the first antenatal visit was reported as unknown for 2.7% of all women (Table 13).

Table 13: Gestation at first antenatal visit, women who gave birth by Aboriginal status, South Australia, 2023.

Gestation at first antenatal visit	Aboriginal			Non-Aboriginal			Total		
	Number	%	Adjusted % excluding unknown (n=803)	Number	%	Adjusted % excluding unknown (n=16,929)	Number	%	Adjusted % excluding unknown (n=17,732)
<14 weeks gestation	533	62.0	66.4	14,315	82.4	84.6	14,848	81.5	83.7
14 weeks or greater	270	31.4	33.6	2,614	15.0	15.4	2,884	15.8	16.3
Unknown	56	6.5	-	440	2.5	-	496	2.7	-
Total	**859**	**100.0**	**100.0**	**17,369**	**100.0**	**100.0**	**18,228**	**100.0**	**100.0**

2.4 Type of antenatal care

Table 14 describes the main types of antenatal care used in South Australia. The most common types of antenatal care in 2023 were specialist-led public hospital clinics (54.6%), obstetricians in private practice (23.1%) and GP and public hospital (shared care, 16.6%). There were 46 women (0.3%) who had no antenatal care.

Table 14: Type of antenatal care, women who gave birth, South Australia, 2023.

Type of care[1]	Number	% of antenatal care
Public clinic (specialist led)	9,961	54.6
Obstetrician +/- midwife in private practice	4,210	23.1
Midwifery group practice at birth hospital	3,024	16.6
GP and public hospital (shared care)	2,184	12.0
GP led	1,207	6.6
Birth Unit/Centre	1,019	5.6
Aboriginal Family Birthing Program (includes metropolitan and rural locations)	377	2.1
Eligible midwife in private practice	217	1.2
Other	165	0.9
No care	46	0.3

[1] Individual women may have used more than one type of antenatal care.

2.5 Medical conditions

In 2023, medical conditions were recorded in the current pregnancy for 15,208 women (83.4%). The frequencies of specified medical conditions are provided in Table 15. Multiple conditions can be reported for each pregnancy.

Table 15: Specified medical conditions in current pregnancy, women who gave birth, South Australia, 2023.

Medical condition[1]	Number	% of women (n = 18,228)
No medical condition reported	3,020	16.6
Anaemia (Hb <100 g/L)	1,577	8.7
Urinary tract infection	1,160	6.4
Hypertension (pre-existing)	231	1.3
Diabetes (pre-existing)	234	1.3
Epilepsy	121	0.7
Asthma	2,080	11.4
Other[2]	14,697	80.6

[1] Women may have multiple medical conditions reported.
[2] Other includes vitamin deficiency, iron deficiency, mental health and thyroid conditions.

2.6 Obstetric complications

Obstetric complications were recorded for 11,152 women who gave birth (61.2%) in 2023. The reported frequencies of specified complications that occurred in the current pregnancy are presented in Table 16. Multiple complications can be reported for each pregnancy. The most frequently specified complication was gestational diabetes (19.6%). For births from 2018 onwards, refinements were made to the process in which obstetric complications data were collected, and therefore, the data presented here are not comparable to pre-2018 data. However, the long-term trend in the number of women with obstetric complications has been steadily rising since the 1990s.

Table 16: Obstetric complications specified in current pregnancy, women who gave birth, South Australia, 2023.

Obstetric complication[1]	Number	% of women (n= 18,228)
No complication	7,076	38.8
Threatened miscarriage	716	3.9
Ante-partum haemorrhage (APH) – abruption	53	0.3
APH – placenta praevia	95	0.5
APH – other & unknown causes	557	3.1
Pregnancy hypertension	992	5.4
Intrauterine growth restriction (suspected)	907	5.0
Gestational diabetes	3,564	19.6
Other complications[2]	8,440	46.3

[1] Women may have multiple obstetric conditions reported.

[2] Includes decreased fetal movements, large for gestational age, prolonged rupture of membranes, premature labour, twin pregnancy, preeclampsia.

2.7 Procedures performed in current pregnancy

Procedures performed in the current pregnancy that are collected on the Supplementary Birth Record are presented in Table 17. At least one ultrasound examination was performed for 96.1% of women in 2023. Amniocentesis was performed for 1.7% of pregnancies, and chorion villus sampling for 0.6% of women who gave birth. Multiple procedures may be reported for each pregnancy.

Table 17: Procedures performed in current pregnancy, women who gave birth, South Australia, 2023.

Procedure[1]	Number	% of women (n= 18,228)
Ultrasound morphology scan	15,981	87.7
First trimester anomaly screen (ultrasound & biochemical)	13,822	75.8
Ultrasound dating scan	12,387	68.0
Other ultrasound scan	11,907	65.3
Second trimester anomaly screen (biochemical only)	2,042	11.2
Non invasive prenatal testing	4,860	26.7
Amniocentesis	303	1.7
Chorion villus biopsy	105	0.6
Antenatal fetal blood sampling	21	0.1

[1] Multiple procedures may be reported for each pregnancy.

Labour

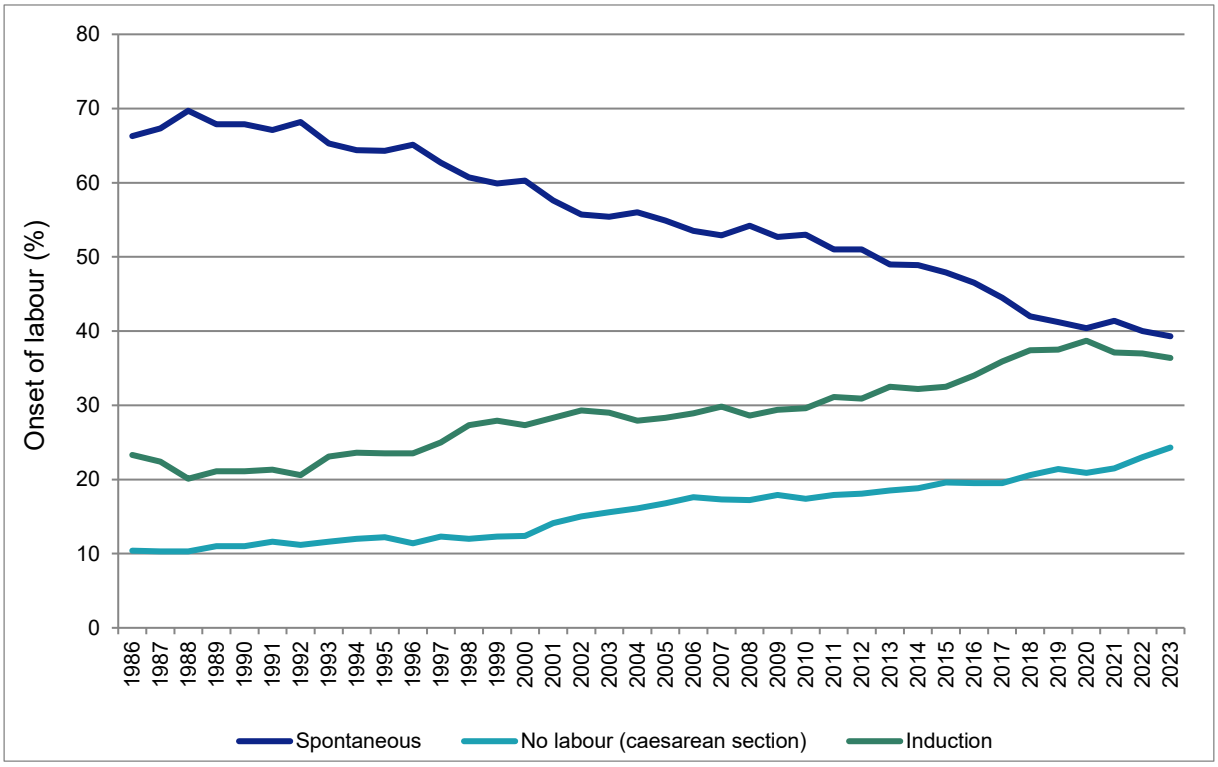
3.1 Onset of labour

Since 1986, the proportion of spontaneous labour in women has decreased whilst simultaneously the proportion of induction of labour has increased (Figure 5). In 2023, labour occurred spontaneously in 39.3% of women who gave birth and induction of labour occurred for 36.4% of women who gave birth (Table 18). The proportion of women with no labour due to caesarean sections has increased from 10.4% to 24.3%, over the same period.

Table 18: Onset of labour, women who gave birth, South Australia, 2023.

Onset of labour	Number	%
Spontaneous	7,165	39.3
Induction	6,641	36.4
No labour – caesarean section	4,422	24.3
Total	**18,228**	**100.0**

Figure 5: Trend for onset of labour for women who gave birth in South Australia, 1986 – 2023.



3.2 Induction of labour

Labour was induced for 36.4% of women who gave birth in 2023. The most common methods of induction used were artificial rupture of membranes in 76.7% of inductions, oxytocics (66.4%), and prostaglandins (41.9%, Table 19). Multiple methods can be reported for each pregnancy, and in many cases more than one method was used.

Table 19: Method of induction of labour, women who gave birth, South Australia, 2023.

Method of induction[1]	Number	% of women (n =18,228)	% of inductions (n =6,624)
Any induction	6,641	36.4	-
Artificial rupture of membranes	5,093	27.9	76.7
Oxytocics	4,411	24.2	66.4
Prostaglandins	2,781	15.3	41.9
Mechanical dilation	1,803	9.9	27.1
Antiprogestogen	63	0.3	0.9

[1] Multiple methods of induction may be reported for each pregnancy.

The most common reasons for induction are presented in Table 20. Multiple reasons can be reported for each pregnancy. In 2023, 19.5% of women were induced for diabetes (including pre-existing and gestational diabetes) and 17.8% by maternal choice.

Table 20: Reasons for induction of labour, South Australia, 2023 (n=6,641).

Reason for induction[1]	Number	% of women (n=6,641)
Diabetes[2]	1,294	19.5
Maternal choice	1183	17.8
Other obstetric or medical condition	764	11.5
Prolonged pregnancy	710	10.7
Fetal distress	652	9.8
Large for dates	648	9.8
Hypertension	644	9.7
Premature or prolonged rupture of membranes	581	8.7
FGR	419	6.3
Fetal death	39	0.6
Other[3]	945	14.2

[1]Multiple reasons for induction may be reported for each pregnancy.

[2]Includes diabetes mellitus and gestational diabetes.

[3]includes Isoimmunisation, Chorioamnionitis, BMI (high), Mental Health, Previous adverse perinatal outcome, Fetal congenital anomaly, Multiple pregnancy, Cholestasis, APH, Maternal age, Administrative or geographical indication, Previous poor obstetric history.

3.3 Augmentation of labour

In 2023, the proportion of women giving birth who had labour augmented after spontaneous labour onset was 13.0% (Table 21). Of the 7,165 women who went into spontaneous labour, augmentation was used for 2,374 (33.1%). Methods used in augmentation were artificial rupture of membranes (69.6%), oxytocics (52.9%) and prostaglandins (0.2%). In some cases, more than one method was used.

Table 21: Augmentation after spontaneous labour onset, women who gave birth, South Australia, 2023.

Method of augmentation[1]	Number	% of women (n=18,228)	% of augmentations (n=2,374)
Any augmentation	2,374	13.0	
Artificial rupture of membranes	1,652	9.1	69.6
Oxytocics	1,255	6.9	52.9
Prostaglandins	<5	0.0	0.2

[1]Multiple methods of augmentation may be reported for each pregnancy.

3.4 Method of birth and fetal presentation

Of the women who gave birth in 2023, 48.9% had normal spontaneous vaginal births (Table 22). Caesarean section was performed for 40.8% of women, with 19.8% of women having elective section. Ventouse and forceps were used for 5.8% and 4.4% of births, respectively. The method of birth reported for women who had multiple births is that of the first birth.

Table 22: Method of birth, women with live babies, South Australia, 2023.

Method of birth[1]	Number	% of women
Normal spontaneous	8,801	48.9
Caesarean (emergency)	3,775	21.0
Caesarean (elective)	3,567	19.8
Ventouse	1,039	5.8
Forceps (vaginal)	790	4.4
Breech spontaneous	18	0.1
Assisted Breech (no forceps)	<5	0.0
Breech extraction	<5	0.0
Total	**17,996**	**100.0**

[1] Birth method is for the live singleton infant or first live infant of a multiple birth.

Fetal presentation is presented in Table 23, and the method of birth by presentation is provided in Table 24. Caesarean section was the method of birth for 95.2% of breech presentations in 2023 (Table 24).

Table 23: Fetal presentation, live births, South Australia, 2023.

Fetal presentation	Number	% of births
Vertex	17,215	94.2
Breech	829	4.5
Face	19	0.1
Brow	18	0.1
Other[1]	194	1.1
Unknown	<5	0.0
Total	**18,277**	**100.0**

[1] Other includes compound presentation and all other malpresentations (eg. cord, shoulder, hand).

Table 24: Method of birth by fetal presentation, live births, South Australia 2023.

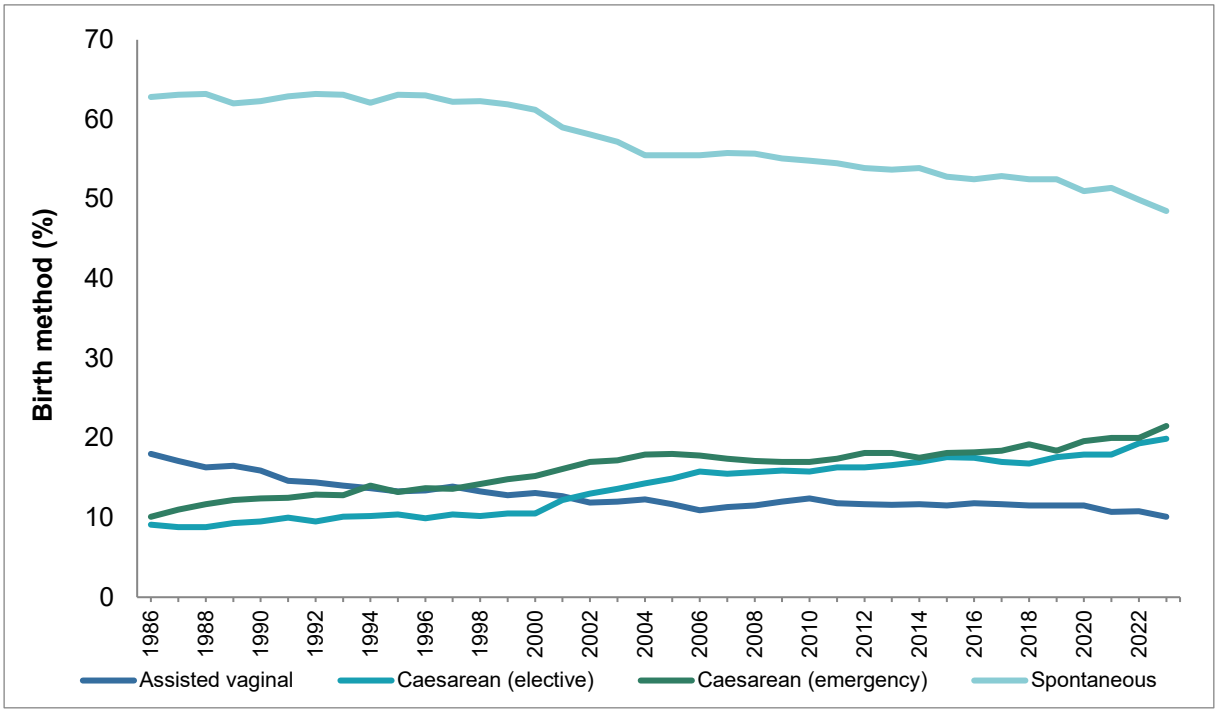
Method of Birth	Fetal presentation									
	Vertex		Breech		Other		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Normal spontaneous	8,755	50.9	0	0.0	75	32.5	<5	50.0	8,831	48.3
Caesarean (emergency)	3,486	20.2	347	41.9	99	42.9	0	0.0	3,932	21.5
Caesarean (elective)	3,167	18.4	442	53.3	26	11.3	<5	50.0	3,636	19.9
Ventouse	1,026	6.0	0	0.0	18	7.8	0	0.0	1,044	5.7
Forceps	781	4.5	0	0.0	12	5.2	0	0.0	793	4.3
Breech spontaneous	0	0.0	25	3.0	<5	0.4	0	0.0	26	0.1
Assisted Breech (no forceps)	0	0.0	8	1.0	0	0.0	0	0.0	8	0.0
Breech extraction	0	0.0	<5	0.4	0	0.0	0	0.0	<5	0.0
Assisted Breech (forceps)	0	0.0	<5	0.5	0	0.0	0	0.0	<5	0.0
Total	**17,215**	**100.0**	**829**	**100.0**	**231**	**100.0**	**<5**	**100.0**	**18,277**	**100.0**

Table 25: Method of birth by plurality, live breech births, South Australia, 2023.

Method of birth	Plurality							
	Singleton		Twins		Triplets		Total	
	Number	%	Number	%	Number	%	Number	%
Caesarean (elective)	389	57.2	53	35.8	0	0.0	442	53.3
Caesarean (emergency)	269	39.6	77	52.0	<5	100.0	347	41.9
Breech spontaneous	16	2.4	9	6.1	0	0.0	25	3.0
Assisted breech (no forceps)	<5	0.4	5	3.4	0	0.0	8	1.0
Breech extraction	0	0.0	<5	2.0	0	0.0	<5	0.4
Assisted breech (forceps)	<5	0.4	<5	0.7	0	0.0	<5	0.5
Total	**680**	**100.0**	**148**	**100.0**	**<5**	**100.0**	**829**	**100.0**

Figure 6 shows the trend in methods of birth in South Australia over time. Since 1986, the proportion of emergency caesarean for women has increased, whilst simultaneously the proportion of spontaneous (including spontaneous breech) births has decreased. In 2023, 21.5% of all births in South Australia were emergency caesareans, whilst 48.5% were spontaneous (including spontaneous breech) births.

Figure 6: Method of birth for all live births in South Australia, 1986 – 2023.



3.5 Analgesia for labour and anaesthesia for birth

Analgesia for labour was used by 79.4% of women who had an induction or spontaneous onset of labour in South Australia in 2023. The most used methods for analgesia were nitrous oxide and oxygen (55.0%), epidural (46.3%) and narcotics (14.5%), (Table 26). Anaesthesia for birth was recorded only for women who had a caesarean section or an instrumental birth (n=9,312). Anaesthesia was used by 96.4% of women who gave birth via caesarean section or instrumental birth in South Australia in 2023. The most common methods were spinal anaesthetic (58.0%), epidurals (31.0%), and general anaesthesia (5.0%,Table 27). Multiple methods for analgesia and anaesthesia can be reported for each birth.

Table 26: Analgesia for labour, women who laboured, South Australia, 2023.

Analgesia[1]	Number	% of women who laboured (n=13,806)
None	2,840	20.6
Nitrous oxide and oxygen	7,587	55.0
Epidural (lumbar/caudal)	6,394	46.3
Narcotic (parenteral)	2,005	14.5
Combined spinal-epidural	34	0.2
Spinal	20	0.1
Other[2]	1,628	11.8

[1]Multiple methods for analgesia may be reported for each birth.
[2]Other includes TENS machine and sterile water injections.

A change in reporting to only present women who gave birth by caesarean or instrumental birth, rather than all births, mean the data presented in Table 27 are not comparable to reports prior to 2020.

Table 27: Anaesthesia for birth, women who gave birth via caesarean section or instrumental birth, South Australia, 2023.

Anaesthesia[1,2]	Number	% of women who gave birth via caesarean section or instrumental birth(n=9,312)
None	332	3.6
Spinal	5,396	58.0
Epidural (lumbar/caudal)	2,885	31.0
General anaesthesia	464	5.0
Local anaesthesia	188	2.0
Combined spinal-epidural	155	1.7
Pudendal	105	1.1
Other	<5	0.0

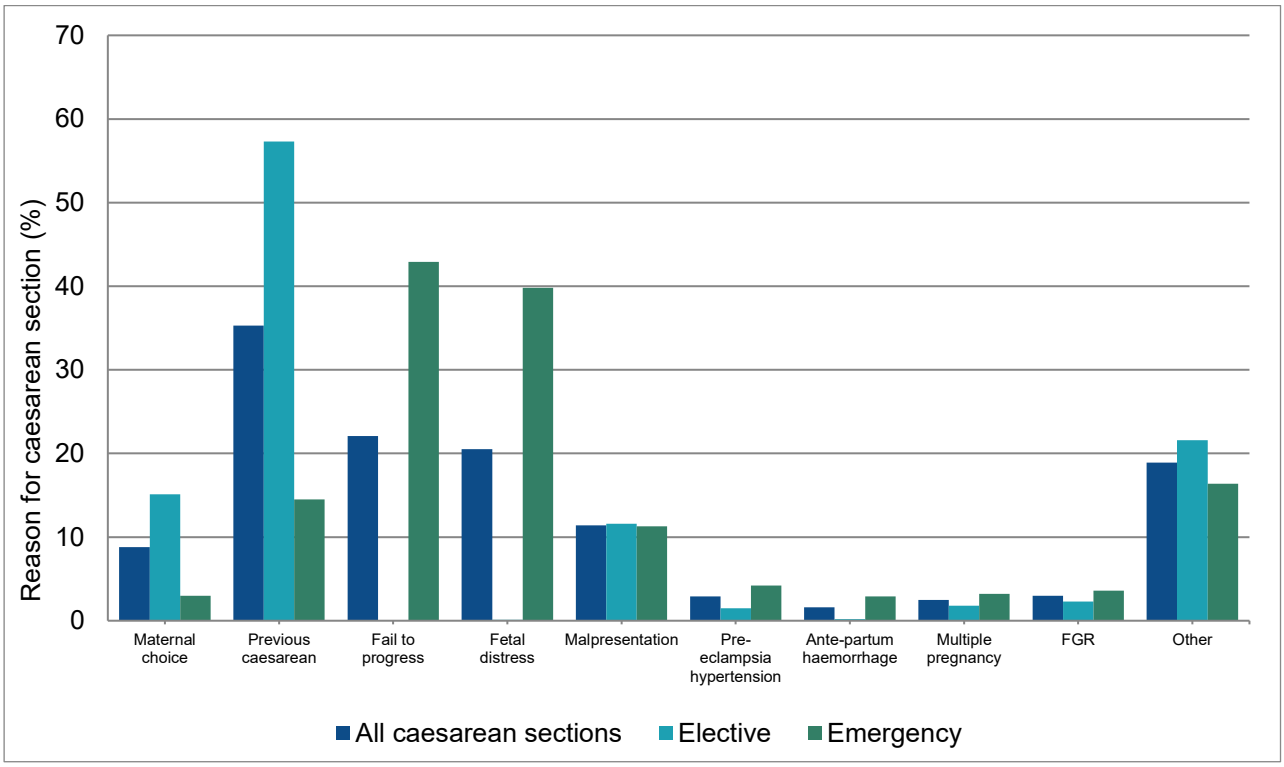
[1] Anaesthesia is only recorded for women who have a caesarean section or instrumental birth.
[2] Multiple methods for anaesthesia may be reported for each birth.

3.6 Reason for caesarean section

Multiple reasons for caesarean section can be recorded on the Supplementary Birth Record. In 2023 the most common reasons for caesarean section were previous caesarean section (35.3%), failure to progress or cephalopelvic disproportion (22.1%), fetal distress (20.5%) and malpresentation (11.4%, Figure 7).

The main reasons for elective caesarean sections were previous caesarean section (57.3%), maternal choice (15.1%) and malpresentation (11.6%). The main reasons given for emergency caesarean sections were failure to progress (42.9%), fetal distress (39.8%) and previous caesarean section (14.5%).

Figure 7: Reason for caesarean section, South Australia, 2023 (n=7,354).



3.7 Caesarean section by maternity service

Two in five women in South Australia gave birth by caesarean section in 2023 (40.9%,Table 28). The proportion of emergency caesarean section births ranged from 18.8% to 21.9% across maternity services in 2023. The metropolitan private hospitals had a much higher proportion of elective caesarean section births (36.8%) compared to the other maternity services, leading to a higher overall proportion of caesarean births at metropolitan private hospitals (55.6%).

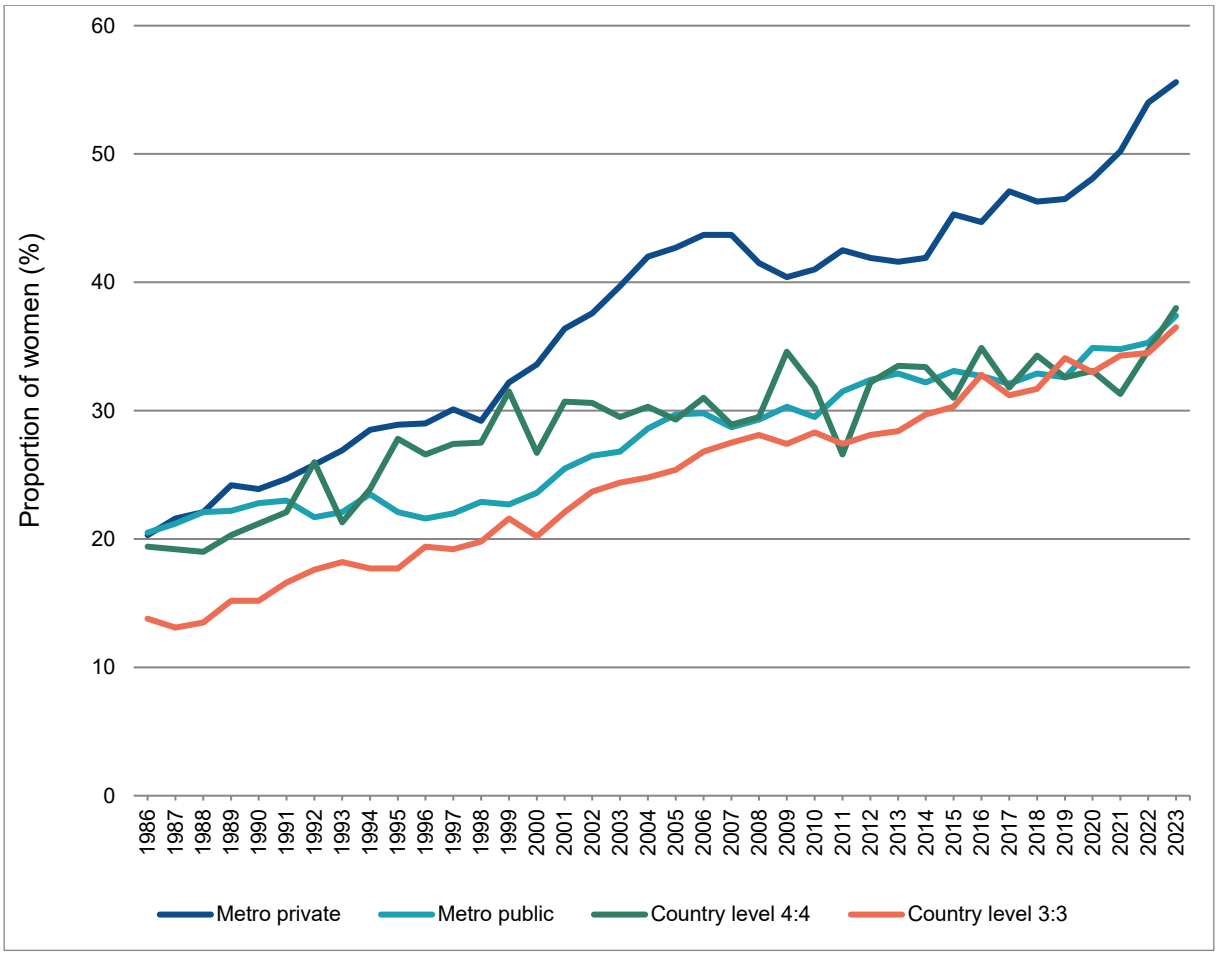
Table 28: Caesarean section by maternity service, South Australia, 2023.

	Total women	Elective caesarean		Emergency caesarean		Elective & emergency caesarean	
Maternity Service	**Number**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Metro teaching hospitals	11,215	1,731	15.4	2,459	21.9	4,190	37.4
Metro private hospitals	3,577	1,316	36.8	673	18.8	1,989	55.6
Country hospitals level 4:4	692	116	16.8	147	21.2	263	38.0
Country hospitals level 3:3	2,500	406	16.2	506	20.2	912	36.5
Total	**17,984**	**3,569**	**19.8**	**3,785**	**21.0**	**7,354**	**40.9**

[1]Excludes home births (n=244).

The proportion of women having a caesarean section has been increasing since the mid-1980s, across all maternity services. The largest increase is within metropolitan private hospitals (20.3% in 1986 to 55.6% of women in 2023, Figure 8). The proportion of women having a caesarean section at metropolitan teaching hospitals and both country hospital service categories has also increased over time but remains lower than the proportion of women at metropolitan private hospitals.

Figure 8: Caesarean section by maternity service, South Australia, 1986 – 2023.



3.8 Complications of labour and birth

Multiple complications can be recorded for women who gave birth, with 58.7% of women experiencing complications in 2023. Selected complications are presented in Table 29, and include primary post-partum haemorrhage (PPH ≥500ml, 29.0%), fetal distress (21.9%) and failure to progress (10.9%).

Table 29: Selected complications of labour and birth, women who gave birth, South Australia, 2023.

Complication[1]	Number of women	% of women (n=18,228)
None	7,537	41.3
Primary post-partum haemorrhage		
500-599ml	1,650	9.1
600-999ml	2,361	13.0
1,000 ml or more	1,265	6.9
Unspecified mls	<5	0.0
Fetal Distress	3,988	21.9
Failure to progress - data 1998 onwards	1,978	10.9
3rd of 4th degree tear - data 1998 onwards	308	1.7
Retained Placenta	290	1.6
Wound infection	205	1.1
Prolonged Labour	133	0.7
Cord Prolapse	23	0.1
Other[2]	7,253	39.8

[1] multiple complications may be recorded for each birth.

[2] Includes meconium-stained liquor, anaemia, pyrexia in labour, should dystocia, chorioamnionitis.

3.9 Primary post-partum haemorrhage (PPH)

Previously, primary PPH was reported if the blood loss within 24 hours of birth was at least 600mls and reported as such on the SBR form. In 2017, the definition of PPH was amended to a blood loss of at least 500mls within 24 hours of birth to better align with national coding guidelines. In 2018, changes to coding practice led to more rigorous investigations into PPH and due to these changes data prior to 2018 are not reported as the trend has been broken. Since 2018, the proportion of women with a PPH of 500ml or more has increased each year from 26.2% to 29.0% in 2023.

3.10 Perineal status after birth

Of the 18,228 women who gave birth to live babies in South Australia in 2023, episiotomy was performed for 2,792 women (15.3% of all women and 26.2% of women who gave birth vaginally, Table 30). Among the 10,654 women who gave birth vaginally 15.5% had an intact perineum after birth, 61.4% had a first- or second-degree tear, and 2.9% of women had a third or a fourth-degree tear. In total, 5,150 women (44.9% of vaginal births and 69.8% of births with a tear) had a repair of a perineal tear.

Table 30: Method of birth[1] and perineal status for women who gave birth vaginally to live babies, South Australia, 2023.

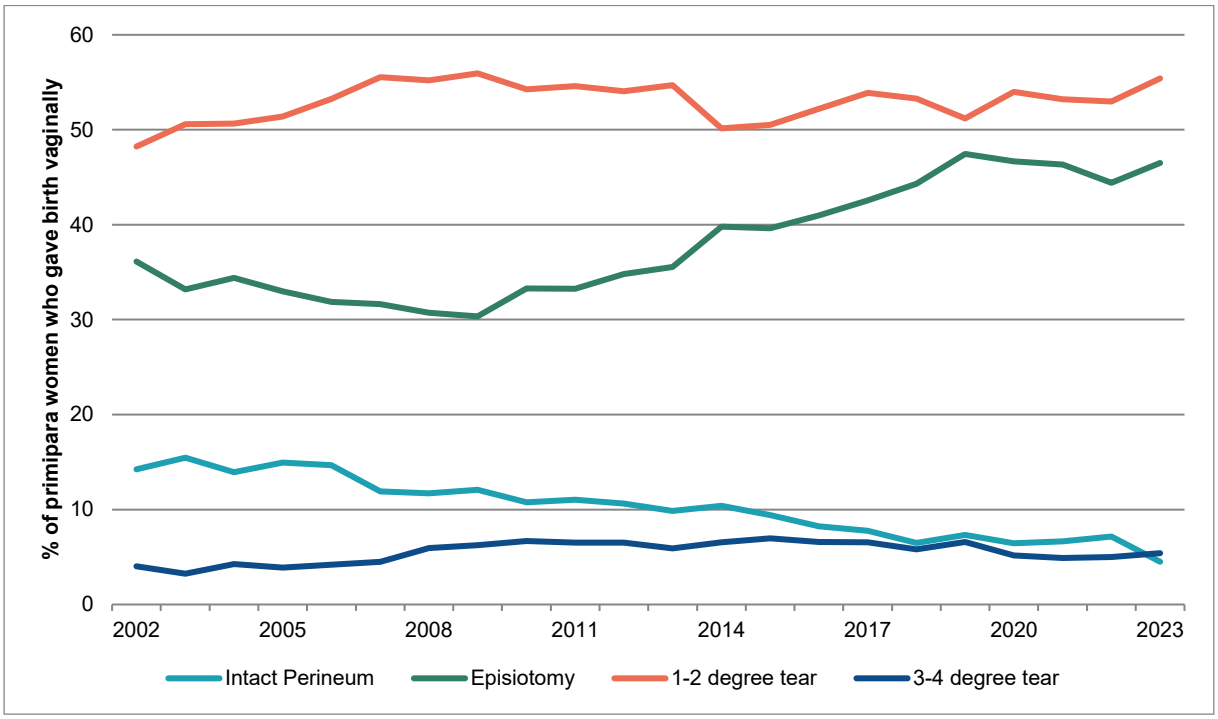
		Perineal status							
		Intact		1-2 degree tear[2]		3-4 degree tear[2]		Episiotomy	
Method of birth*	Total Births	Number	% of method	Number	% of method	Number	% of method	Number	% of method
Spontaneous	8,801	1,587	18.0	5,943	67.5	183	2.1	1,335	15.2
Ventouse	1,039	42	4.0	374	36.0	44	4.2	716	68.9
Forceps	793	8	1.0	218	27.5	79	10.0	739	93.2
Breech	21	10	47.6	8	38.1	<5	4.8	<5	9.5
Total	**10,654**	**1,647**	**15.5**	**6,543**	**61.4**	**307**	**2.9**	**2,792**	**26.2**

[1]Birth method is for the singleton infant or first infant of a multiple birth. Forceps includes cases of assisted breech with forceps for head (n=0).

[2]Including cases with extended tear after episiotomy.

The trend in perineal status among primiparae women who gave birth vaginally to live babies is shown in Figure 9. The proportion of primiparae women who gave birth vaginally and had an episiotomy had been decreasing over time, to a low of 30.3% in 2009. Between 2009 and 2019 this proportion increased to 47.5%, and in 2023 was 46.5%. In 2023, the proportion of primiparae women giving birth vaginally with a 3-4 degree tear (5.4%) was higher than that of women with an intact perineum after birth (4.5%).

Figure 9: Perineal status among primiparae women who gave birth vaginally to live babies, South Australia, 2002 - 2023



3.11 Fetal monitoring during labour

Cardiotocography (CTG) was performed during labour for 81.4% of women who gave birth. The majority of these were external CTGs (58.1%), while a scalp clip was used for 23.2% of women who gave birth (Table 31).

Table 31: Cardiotocography performed during labour, women who gave birth, South Australia, 2023.

CTG during labour	Number of women	% of women (n=13,806)
None	2,572	18.6
External	8,027	58.1
Scalp clip	3,207	23.2
Total	**13,806**	**100.0**

3.12 Length of stay

The distribution of length of stay for women who gave birth in hospitals is presented in Table 32 for public and private patients. The median duration for all women was three days (interquartile range (IQR), 2-4 days). Homebirths have been excluded from length of stay statistics.

Table 32: Length of stay by patient type, women who gave birth in South Australian hospitals[1], 2023.

Length of stay (days)	Public		Private		Total	
	Number	%	Number	%	Number	%
<1	831	6.0	13	0.3	844	4.7
1	3,098	22.5	96	2.3	3194	17.8
2	4,168	30.3	242	5.8	4410	24.6
3	2,747	20.0	561	13.3	3308	18.4
4	1,438	10.5	1,233	29.3	2671	14.9
5	633	4.6	1,497	35.6	2130	11.9
6	305	2.2	381	9.1	686	3.8
7 or more	524	3.8	181	4.3	705	3.9
Total	**13,744**	**100.0**	**4,204**	**100.0**	**17,948**	**100.0**

[1] Excludes homebirths (n=244).

The median length of stay for all hospital births was two days for vaginal births, and four days for caesarean section (Table 33). Among private patients, the median length of stay was two days longer for vaginal births and caesarean births.

Table 33: Length of stay by patient and birth type, women who gave birth in South Australian hospitals[1], 2023.

Length of stay (days)	Public			Private			Total		
	Vaginal	Caesarean	Total	Vaginal	Caesarean	Total	Vaginal	Caesarean	Total
Number of women	8,698	5,063	13,761	1,932	2,291	4,223	10,630	7,354	17,984
Mean	2.1	3.7	2.7	4.0	4.9	4.5	2.4	4.0	3.1
Standard deviation	1.8	3.7	2.7	1.6	2.3	2.0	1.9	3.3	2.7
Median	2.0	3.0	2.0	4.0	5.0	4.0	2.0	4.0	3.0
IQR	1-3	2-4	1-3	3-5	4-5	4-5	1-3	2-5	2-4

[1] Excludes homebirths (n=244).

Babies

4.1 Crude birth rate

In 2023 there were 18,517 births in South Australia, which was lower than in 2022 (19,584 births). Of the births in 2023, 98.7% were live births and 1.3% were stillbirths (Table 34). The crude birth rate has generally been declining since the 1980s to its lowest rate of 10.0 births per 1,000 population in 2023.

Table 34: Crude birth rate for babies born, South Australia, 1986 – 2023.

Year	Live Birth		Stillbirth		Total		Total Population[1]	Crude Birth Rate[2]
	Number	%	Number	%	Number	%		
1986	19,650	99.2	149	0.8	19,799	100.0	1,382,550	14.3
1987	19,272	99.4	123	0.6	19,395	100.0	1,392,764	13.9
1988	19,400	99.3	131	0.7	19,531	100.0	1,404,909	13.9
1989	19,653	99.1	170	0.9	19,823	100.0	1,419,029	14.0
1990	19,855	99.3	133	0.7	19,988	100.0	1,432,056	14.0
1991	19,612	99.4	127	0.6	19,739	100.0	1,446,299	13.6
1992	20,003	99.3	148	0.7	20,151	100.0	1,455,442	13.8
1993	19,841	99.4	123	0.6	19,964	100.0	1,458,632	13.7
1994	19,670	99.4	128	0.6	19,798	100.0	1,463,089	13.5
1995	19,470	99.2	148	0.8	19,618	100.0	1,465,340	13.4
1996	18,979	99.3	132	0.7	19,111	100.0	1,469,079	13.0
1997	18,533	99.3	139	0.7	18,672	100.0	1,475,658	12.7
1998	18,612	99.4	121	0.6	18,733	100.0	1,483,270	12.6
1999	18,403	99.4	115	0.6	18,518	100.0	1,490,934	12.4
2000	17,766	99.4	106	0.6	17,872	100.0	1,497,503	11.9
2001	17,584	99.3	120	0.7	17,704	100.0	1,503,461	11.8
2002	17,623	99.3	122	0.7	17,745	100.0	1,511,567	11.7
2003	17,707	99.2	134	0.8	17,841	100.0	1,520,399	11.7
2004	17,408	99.4	113	0.6	17,521	100.0	1,528,189	11.5
2005	18,067	99.3	129	0.7	18,196	100.0	1,538,804	11.8
2006	18,660	99.3	140	0.7	18,800	100.0	1,552,529	12.1
2007	19,624	99.3	132	0.7	19,756	100.0	1,570,619	12.6
2008	19,819	99.2	151	0.8	19,970	100.0	1,588,665	12.6
2009	19,761	99.3	140	0.7	19,901	100.0	1,608,902	12.4
2010	19,883	99.4	119	0.6	20,002	100.0	1,627,322	12.3
2011	20,194	99.3	150	0.7	20,344	100.0	1,639,614	12.4
2012	20,527	99.3	138	0.7	20,665	100.0	1,656,035	12.5
2013	20,124	99.3	138	0.7	20,262	100.0	1,670,689	12.1
2014	20,604	99.3	145	0.7	20,749	100.0	1,685,550	12.3
2015	20,001	99.2	153	0.8	20,154	100.0	1,698,921	11.9
2016	19,934	99.3	136	0.7	20,070	100.0	1,708,183	11.7
2017	19,347	99.3	132	0.7	19,479	100.0	1,723,671	11.3
2018	19,198	99.3	134	0.7	19,332	100.0	1,736,422	11.1
2019	19,063	99.4	111	0.6	19,174	100.0	1,751,963	10.9
2020	18,619	99.4	119	0.6	18,738	100.0	1,770,375	10.6
2021	20,025	99.3	143	0.7	20,168	100.0	1,803,192	11.2
2022	19,428	99.2	156	0.8	19,584	100.0	1,821,200	10.8
2023	18,277	98.7	240	1.3	18,517	100.0	1,852,284	10.0

[1] Australian Bureau of Statistics. Population estimates by age and sex, Regions of South Australia, 2023. Canberra: ABS, 2024
[2] Crude birth rate per 1,000 population.

4.2 Place of birth

Of the 18,517 births notified in 2023, 244 (1.3%) were planned home births, which was a slight decrease from 2022 (249 births, 1.3%). Home births are attended by Midwifery Group Practice midwives provided by the three metropolitan main teaching hospitals, or by privately practicing midwives. The remaining 18,273 births occurred in hospitals, including 100 births born before arrival at hospitals into which the women had been booked. Born before arrival births have been included in the planned birthing hospital. The distribution of all births by place of birth (home or hospital) and plurality is provided in Table 35.

Table 35: Total births notified by place of birth and plurality, South Australia, 2023.

Condition at birth	Home births		Hospital births			Total births
	Singleton	Twin	Singleton	Twin	Triplet	
Live birth	244	0	17,471	559	<5	18,277
Stillbirth	0	0	225	15	0	240
Total births	**244**	**0**	**17,696**	**574**	**<5**	**18,517**

4.3 Place of birth by Aboriginal status of mother

In 2023, 61.7% of all births occurred in metropolitan teaching hospitals, 19.7% in metropolitan private hospitals and 17.3% in country hospitals (Table 36). Aboriginal women had a higher proportion of births in country hospitals (28.2%) compared to non-Aboriginal women (16.7%).

Table 36: Total births notified by place of birth and Aboriginal status of mother, South Australia, 2023.

Hospital	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
Metropolitan teaching hospital	600	68.3	10828	61.4	11,428	61.7
Metropolitan private hospital	26	3.0	3619	20.5	3,645	19.7
Country hospital	248	28.2	2952	16.7	3,200	17.3
Home	<5	0.5	240	1.4	244	1.3
Total	**878**	**100.0**	**17639**	**100.0**	**18,517**	**100.0**

4.4 Hospital birth by perinatal service

Maternity and neonatal services at SA hospitals are delineated according to six levels of service, as defined in the Standards for Maternal and Neonatal Services in South Australia policy document[3].

The number of births in the six levels of hospital categories (levels 5 & 6 combined) are presented in Table 37, by Aboriginal status of the mother. Among the 18,273 hospital births in South Australia in 2023, 62.5% occurred in metropolitan teaching hospitals, 19.9% in metropolitan private hospitals and 17.5% in country hospitals. Aboriginal women had a higher percentage of births in country hospitals (28.4%), compared to non-Aboriginal women (17.0%).

Of the Country hospital births, 3.8% occurred in the Level 4:4 Country Hospitals, 11.8% occurred in country hospitals with 100 births or more in 2023, and 1.9% in country hospitals with less than 100 births per annum.

Table 37: Hospital births by perinatal service delineation and Aboriginal status of mother, South Australia, 2023.

Hospital	Aboriginal births		Non-Aboriginal births		Total births		Total women	
	Number	%	Number	%	Number	%	Number	%
Metropolitan teaching	600	68.6	10,828	62.2	11,428	62.5	11,215	62.4
Metropolitan private	26	3.0	3,619	20.8	3,645	19.9	3,577	19.9
Total (Country)	248	28.4	2,952	17.0	3,200	17.5	3,192	17.7
Level 4:4 Country	113	12.9	586	3.4	699	3.8	692	3.8
Level 3:3 Country ≥100 births per annum	118	13.5	2,033	11.7	2,151	11.8	2,151	12
Level 3:3 Country<100 births per annum	17	1.9	333	1.9	350	1.9	349	1.9
Total	**874**	**100.0**	**17,399**	**100.0**	**18,273**	**100.0**	**17,984**	**100.0**

4.5 Home birth

Supplementary Birth Records were received from hospital-based Midwifery Group Practice midwives and privately practicing midwives for 321 planned home births in 2023 which resulted in 244 home births.

In addition, 77 women who planned to birth at home were transferred to hospital care before birth. Statistics for all 321 planned home births in 2023 are provided in Table 38 through Table 41. The age profile of women who planned a home birth in 2023 was similar to all births, with most women in the 30-34 year age category. Of the 244 babies that were birthed at home, all (100.0%) were normal spontaneous vaginal deliveries.

Table 38: Age of women in planned home births, South Australia, 2023.

Age	Birthed at home		Birthed in hospital		Total	
	Number of women	%	Number of women	%	Number of women	%
<20	-	-	-	-	-	-
20-24	8	3.3	6	7.8	14	4.4
25-29	61	25.0	22	28.6	83	25.9
30-34	97	39.8	30	39.0	127	39.6
35-39	65	26.6	17	22.1	82	25.5
40+	13	5.3	<5	2.6	15	4.7
Total	**244**	**100.0**	**77**	**100.0**	**321**	**100.0**

Table 39: Method of birth in planned home births, South Australia, 2023.

Method of birth	Birthed at home		Birthed in hospital		Total	
	Number of births	%	Number of births	%	Number of births	%
Normal spontaneous	244	100.0	45	58.4	289	90.0
Caesarean (emergency)	0	0	5	6.5	5	1.6
Forceps (vaginal)	0	0	3	3.9	3	0.9
Caesarean (elective)	0	0	15	19.5	15	4.7
Ventouse	0	0	9	11.7	9	2.8
Total	**244**	**100.0**	**77**	**100.0**	**321**	**100.0**

Table 40: Birthweight of planned home births, South Australia, 2023.

Birthweight (g)	Birthed at home		Birthed in hospital		Total	
	Number of births	%	Number of births	%	Number of births	%
1,500-1,999	0	0.0	<5	2.6	<5	0.6
2,000-2,499	0	0.0	<5	1.3	<5	0.3
2,500-2,999	17	7.0	7	9.1	24	7.5
3,000-3,499	79	32.4	21	27.3	100	31.2
3,500-3,999	94	38.5	28	36.4	122	38.0
4,000-4,499	47	19.3	14	18.2	61	19.0
4,500+	7	2.9	<5	5.2	11	3.4
Total	**244**	**100.0**	**77**	**100.0**	**321**	**100.0**

Table 41: Perinatal outcome in planned home births, South Australia, 2023.

Perinatal outcome	Birthed at home		Birthed in hospital		Total	
	Number of births	%	Number of births	%	Number of births	%
Stillbirth	0	0.0	<5	3.9	<5	0.9
Discharged within 28 days	244	100.0	72	93.5	316	98.4
In hospital at 28 days	0	0.0	<5	2.6	<5	0.6
Neonatal death	0	0.0	0	0.0	0	0.0
Total	244	100.0	77	100.0	321	100.0

4.6 Sex

Of all infants born in 2023, 50.6% were male with a male-female birth ratio of 1.03:1, which is lower than 2022 (1.08). There were 300 more male infants born than female (Table 42). The outcomes of male and female babies were similar as shown in Table 43.

Table 42: Sex of baby, all births, South Australia, 2023.

Sex of baby	Number	%
Male	9,372	50.6
Female	9,072	49.0
Indeterminate	73	0.4
Total	**18,517**	**100.0**

Table 43: Sex of baby by birth status, South Australia, 2023.

Birth Status	Sex of baby							
	Male		Female		Indeterminate		Total	
	Number	%	Number	%	Number	%	Number	%
Live birth	9,281	99.0	8,996	99.2	0	0.0	18,277	98.7
Stillbirth	91	1.0	76	0.8	73	100.0	240	1.3
Total	**9,372**	**100.0**	**9,072**	**100.0**	**73**	**100.0**	**18,517**	**100.0**

4.7 Plurality

In 2023, there were 17,940 singleton babies born in South Australia, 96.9% of the total babies born. The total number of multiple births was 577 (3.1% of total births) with 574 twin babies (3.1%) and less than 5 sets of triplets (<0.1%). The proportion of multiple babies born to Aboriginal women was 4.3%, which was higher than the proportion for non-Aboriginal women (3.0%) and is shown in Table 44.

Among women who gave birth in 2023, there were 287 twin and less than five triplet pregnancies. Thus, there was one twin pregnancy in every 63 pregnancies, and one triplet pregnancy in every 18,228 pregnancies. Multiple pregnancies comprised 1.6% of all women who gave birth.

Table 44: Plurality of birth by maternal Aboriginal status for babies born, South Australia, 2023.

Plurality	Maternal Aboriginal status					
	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
Singleton	840	95.7	17,100	96.9	17,940	96.9
Twin	38	4.3	536	3.0	574	3.1
Triplet	0	0.0	<5	<0.1	<5	<0.1
Total	**878**	**100.0**	**17,639**	**100.0**	**18,517**	**100.0**

4.8 Gestational age

Gestational age is the duration of pregnancy in completed weeks. In 2023, the average gestational age for all babies was 38.3 weeks (SD 2.6 weeks), with most babies (90.6%) born at term (37-41 weeks, Table 45). Preterm birth occurred for 9.1% of all babies born, and this proportion was higher for babies of Aboriginal women (16.6%).

Table 45: Gestation at birth by Aboriginal status of women, South Australia, 2023.

Gestation at birth (weeks)	Maternal Aboriginal status					
	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
Preterm births (20-36)	146	16.6	1,538	8.7	1,684	9.1
Term births (37-41)	731	83.3	16,047	91.0	16,778	90.6
Post-term births (42+)	<5	0.1	54	0.3	55	0.3
Total	**878**	**100.0**	**17,639**	**100.0**	**18,517**	**100.0**

Gestation at birth varied between singleton and multiple births. In 2023, nearly two-thirds of multiple births (62.6%) were preterm, while most singleton births were term births (92.6%,Table 46).

Table 46: Gestation at birth by plurality, South Australia, 2023.

Gestation at birth (weeks)	Singleton births		Multiple births		Total	
	Number	%	Number	%	Number	%
<24	184	1.0	16	2.8	200	1.1
24-27	61	0.3	16	2.8	77	0.4
28-31	111	0.6	14	2.4	125	0.7
32-36	967	5.4	315	54.6	1,282	6.9
37-41	16,562	92.3	216	37.4	16,778	90.6
42+	55	0.3	0	0.0	55	0.3
Total	**17,940**	**100.0**	**577**	**100.0**	**18,517**	**100.0**

Among singleton births in 2023, most stillbirths occurred before 37 weeks of gestation (93.8%), with the highest proportion occurring before 24 weeks of gestation (74.7%, Table 47). Among live births, 6.3% of babies were born preterm.

Table 47: Gestational age at birth for singleton babies by birth status, South Australia, 2023.

Gestation at birth (weeks)	Birth status					
	Live birth		Stillbirth		Total	
	Number	%	Number	%	Number	%
<24	16	0.1	168	74.7	184	1.0
24-27	39	0.2	22	9.8	61	0.3
28-31	103	0.6	8	3.6	111	0.6
32-36	954	5.4	13	5.8	967	5.4
37-41	16,549	93.4	13	5.8	16,562	92.3
42+	54	0.3	<5	0.4	55	0.3
Total	**17,715**	**100.0**	**225**	**100.0**	**17,940**	**100.0**

4.9 Birthweight

The distribution of birthweight for all births in South Australia is presented in Table 48. In 2023, the percentage of low birthweight babies (<2,500g) was 7.2%, and very low birthweight babies (<1,500g) were 1.3%. The mean birthweight was 3,319g (SD 599g), with birthweights ranging from 46g to 5,820g. The proportion of babies born with a healthy birthweight in 2023 was 82.9% among Aboriginal women compared with 91.4% among babies of non-Aboriginal women.

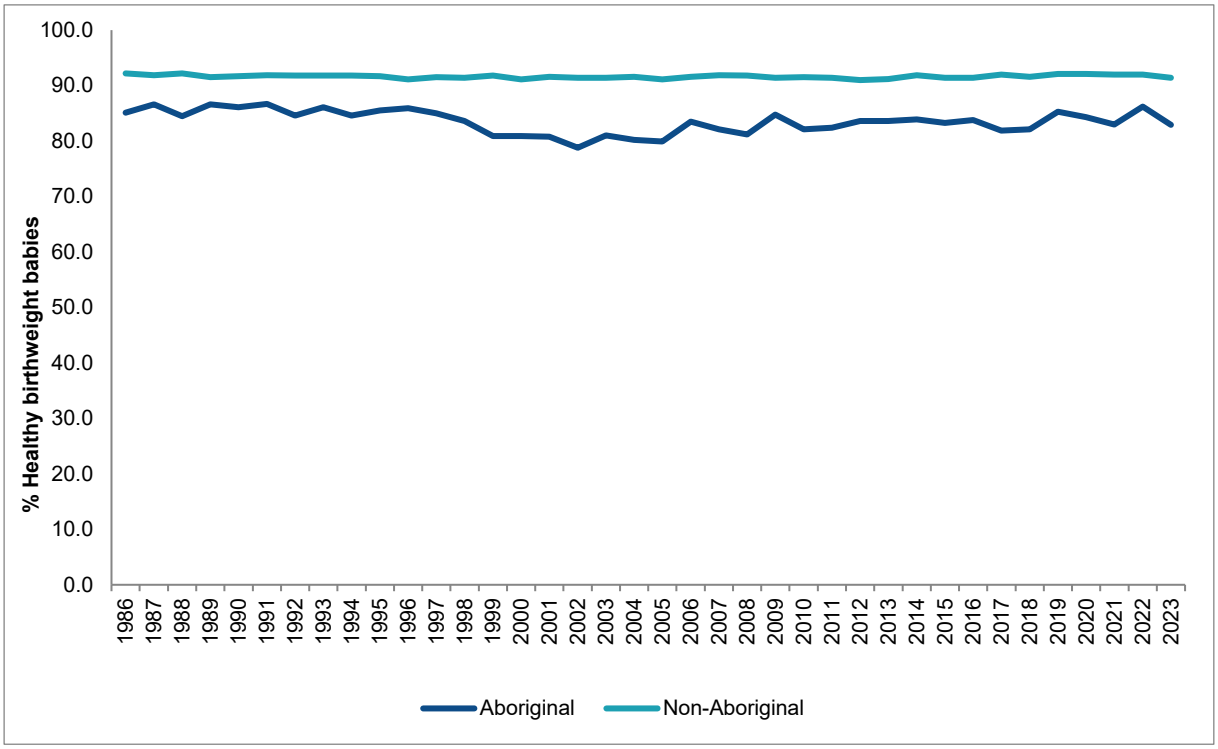
Table 48: Birthweight distribution of all births, South Australia, 2023.

Birthweight (grams)	Maternal Aboriginal status					
	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
<400	<5	0.5	31	0.2	35	0.2
400-499	<5	0.3	25	0.1	28	0.2
500-749	8	0.9	41	0.2	49	0.3
750-999	<5	0.3	36	0.2	39	0.2
1,000-1,499	14	1.6	83	0.5	97	0.5
1,500-1,999	30	3.4	222	1.3	252	1.4
2,000-2,499	63	7.2	762	4.3	825	4.5
2,500-2,999	141	16.1	2,804	15.9	2,945	15.9
3,000-3,499	307	35.0	6,585	37.3	6,892	37.2
3,500-3,999	187	21.3	5,255	29.8	5,442	29.4
4,000-4,499	93	10.6	1,480	8.4	1,573	8.5
4,500+	9	1.0	206	1.2	215	1.2
Unknown	16	1.8	109	0.6	125	0.7
Total	**878**	**100.0**	**17,639**	**100.0**	**18,517**	**100.0**

A healthy birthweight is defined as 2,500-4,499g. The proportion of babies with a healthy birthweight born to non-Aboriginal women has been relatively stable for the past three decades (Figure 10).

The proportion of babies with a healthy birthweight born to Aboriginal women has fluctuated over time, with a decreasing trend from 85.1% in 1986 to a low of 78.8% in 2002, before increasing to 85.3% in 2019. In 2023, the proportion of healthy birthweight babies born to Aboriginal women was 82.9%.

Figure 10: Proportion of healthy birthweight babies by maternal Aboriginal status, South Australia, 1986 – 2023.



4.10 Birthweight, plurality and gestational age

A comparison of multiple births with singletons shows that in 2023, 52.5% multiple births were of low birthweight compared with only 5.7% for singleton (Table 49). Among singleton births, only 2.1% of babies with gestational age 37 weeks or over were of low birthweight, but this proportion was 44.9% for babies with gestational age of 32-36 weeks (Table 50).

Table 49: Birthweight by plurality, all births, South Australia, 2023.

Birthweight (grams)	Singleton births		Multiple births	
	Number	%	Number	%
<400	31	0.2	<5	0.7
400-499	20	0.1	8	1.4
500-749	39	0.2	10	1.7
750-999	34	0.2	5	0.9
1,000-1,499	79	0.4	18	3.1
1,500-1,999	180	1.0	72	12.5
2,000-2,499	639	3.6	186	32.2
2,500-2,999	2,743	15.3	202	35.0
3,000-3,499	6,824	38.0	68	11.8
3,500-3,999	5,442	30.3	0	0.0
4,000-4,499	1,573	8.8	0	0.0
4,500+	215	1.2	0	0.0
Unknown	121	0.7	<5	0.7
Total	**17,940**	**100.0**	**577**	**100.0**

Table 50: Birthweight by gestation for singleton babies[1] born in South Australia, 2023.

Birthweight (grams)	Gestation (weeks)									
	20-27		28-31		32-36		37-43		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
<1000	109	87.9	15	13.5	0	0.0	0	0.0	124	0.7
1000-1499	15	12.1	53	47.7	11	1.1	0	0.0	79	0.4
1500-1999	0	0.0	34	30.6	137	14.2	9	0.1	180	1.0
2000-2499	0	0.0	8	7.2	286	29.6	345	2.1	639	3.6
2500-2999	0	0.0	<5	0.9	336	34.7	2,406	14.5	2,743	15.4
3000-3499	0	0.0	0	0.0	148	15.3	6,676	40.2	6,824	38.3
3500-3999	0	0.0	0	0.0	35	3.6	5,407	32.5	5,442	30.5
4000-4499	0	0.0	0	0.0	10	1.0	1,563	9.4	1,573	8.8
≥4500	0	0.0	0	0.0	<5	0.4	211	1.3	215	1.2
Total	**124**	**100.0**	**111**	**100.0**	**967**	**100.0**	**16,617**	**100.0**	**17,819**	**100.0**

[1]Excludes singleton babies with unknown birthweight (n=121).

4.11 Apgar scores

The Apgar score is a method to summarise the health of a newborn baby. It is determined by evaluating the baby's heart rate, respiratory effort, muscle tone, skin colour and reflexes. Each criterion is scored from 0 to 2, and the five values are summed to obtain the Apgar score. In 2023, for all liveborn babies with an Apgar score reported one minute after birth, 90.9% had a score of 7-10 and 2.3% had a score less than 4 (Table 51). For liveborn babies with an Apgar score reported at five minutes, 98.1% had an Apgar score of 7-10 and only 0.3% had an Apgar score less than 4. In 2023, among all liveborn babies with an Apgar score reported one minute after birth, 91.4% established spontaneous respirations within the first minute of life.

Table 51: Apgar scores[1] at one and five minutes after birth for babies born alive, South Australia, 2023.

Apgar Score	1 min after birth		5 min after birth	
	Number	%	Number	%
0-3	417	2.3	49	0.3
4-6	1,241	6.8	303	1.7
7-10	16,593	90.9	17,902	98.1
Total	**18,251**	**100.0**	**18,254**	**100.0**

[1] Excludes babies with missing Apgar score reported one minute (n=26) or five minutes (n=23) after birth

4.12 Baby resuscitation

Multiple methods of baby resuscitation can be reported for each baby on the SBR. Among all liveborn babies in 2023, 16.3% received some form of resuscitation (Table 52). In 2023, 6.5% of liveborn babies received one type of resuscitation, 5.0% received two types, 3.6% received three types and 1.1% received four types or more of resuscitation methods. Other resuscitation methods may include medications such as adrenaline or intravenous therapy.

Table 52: Resuscitation received by babies born alive in South Australia, 2023.

Method of resuscitation[1]	Liveborn babies (n=18,277)	
	Number	%
None	15,306	83.7
IPPV - bag and mask	1,673	9.2
Oxygen therapy	1,623	8.9
CPAP	1,486	8.1
Aspiration	930	5.1
IPPV - intubation	105	0.6
External cardiac massage	25	0.1
Narcotic antagonist	5	0.0
Adrenaline	5	0.0
Other	<5	0.0

[1] Multiple methods of resuscitation may be reported.
IPPV: intermittent positive pressure ventilation. CPAP: continuous positive airway pressure.

4.13 Birth injuries

Birth injuries were reported in 3.3% of liveborn babies in 2023 (n=599). The most common injury reported was injury to scalp (1.8%,Table 53). Injuries to scalp include subgaleal haemorrhage and cephalhaematomas. More than one birth injury can be reported per baby.

Table 53: Birth injuries among liveborn babies, South Australia, 2023.

	Liveborn babies (n=18,277)	
Birth injury[1]	Number	%
None	17,678	96.7
Injury to scalp	330	1.8
Severe birth asphyxia and unspecified birth asphyxia	215	1.2
Subdural and cerebral haemorrhage	39	0.2
Nerve injury	30	0.2
Fracture	12	0.1
Other	21	0.1

[1] multiple birth injuries may be reported per baby.

An increase in birth injuries may include a true increase in the number of birth injuries or known improvements in data quality as a result of access to electronic medical records.

4.14 Congenital anomalies

Among the 18,517 births in 2023, there were 825 births (4.5%) notified with congenital anomalies either at birth or in the neonatal period, a higher proportion than in 2022 (3.1%). In South Australia, births notified on the SBR with a congenital anomaly are coded according to the British Paediatric Association (BPA) Classification of Diseases. This is a 5-digit extension of the 4-digit classification of the International Classification of Diseases (ICD9). Table 54 presents the most common congenital anomalies used for international monitoring (sentinel defects) that were notified to the perinatal statistics collection over the past ten years. For coding ranges, see Methods and Terminology.

Terminations of pregnancy are not included in this table unless they meet the criteria for inclusion in the perinatal data collection of at least 400g birthweight or 20 weeks of gestation. Notifications of congenital anomalies identified after discharge from the hospital of birth, but within the first five years of life are made directly to the South Australian Birth Defects Register at the Women's and Children's Hospital. More complete statistics on congenital anomalies in South Australia are available from the Birth Defect Register Annual Report[1].

Table 54: Selected congenital anomalies, South Australia, 2013 – 2023.

Congenital Anomaly	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of births	**20,262**	**20,749**	**20,154**	**20,070**	**19,479**	**19,332**	**19,174**	**18,738**	**20,168**	**19,584**	**18,517**
Selected Congenital Anomalies											
Anencephalus	<5	<5	<5	0	<5	<5	0	<5	<5	<5	<5
Anomalies of abdominal wall	8	17	12	10	12	8	16	7	14	14	8
Anomalies of diaphragm	8	8	<5	13	11	7	7	10	10	12	6
Atresia and stenosis of large intestine, rectum and anal canal	8	5	<5	10	7	8	12	<5	6	<5	11
Cleft lip and palate	14	16	14	20	17	19	11	13	14	14	20
Cleft palate	12	13	17	10	9	17	11	13	13	12	15
Encephalocele	<5	<5	0	<5	<5	<5	0	<5	0	<5	<5
Hydrocephalus	13	12	10	9	<5	<5	5	8	<5	<5	<5
Hypospadias and epispadias	44	42	32	28	45	56	35	39	38	32	40
Limb reduction defects	17	10	10	17	10	10	6	8	6	14	<5
Renal agenesis and dysgenesis	7	5	12	16	13	12	15	9	8	8	16
Spina bifida	7	6	9	5	7	8	6	8	5	10	6
Tracheo-oesophageal fistula, oesophageal atresia and stenosis	7	8	10	<5	<5	<5	6	6	<5	11	<5
Trisomy 21	17	15	13	18	14	26	13	14	11	12	11
Total All Congenital Anomalies[1]	**568**	**561**	**516**	**523**	**517**	**540**	**562**	**484**	**479**	**608**	**825**
Percentage All Congenital Anomalies	**2.8**	**2.7**	**2.6**	**2.6**	**2.7**	**2.8**	**2.9**	**2.6**	**2.4**	**3.1**	**4.5**

[1] multiple congenital anomalies may be reported per baby.

4.15 Treatment given in neonatal period

The proportions of live births that received specified treatments in the neonatal period are provided in Table 55. In some cases, more than one treatment was given. The most common treatments in the neonatal period in 2023 were intravenous therapies (13.0%) and gavage feeding (7.0%).

Table 55: Neonatal treatment given, all live births, South Australia, 2023.

Neonatal treatment[1]	Number	% of live births (n=18,277)
None	15,064	82.4
Any intravenous therapy	2,377	13.0
Gavage feeding more than once	1,275	7.0
Phototherapy for jaundice	1,097	6.0
Oxygen therapy for more than 4 hours	1,095	6.0

[1] Multiple neonatal treatments may be reported

4.16 Level of neonatal care utilised

Table 56 outlines the neonatal levels of care utilised in 2023, as defined in the Standards for Maternal and Neonatal Services policy document[3]. In 2023, 79.3% of neonates utilised Level 1-3 care only. Level 4-5 care was used by 20.4% of neonates, and Level 6 neonatal intensive care at the Women's and Children's Hospital or Flinders Medical Centre, and paediatric intensive care at the Women's and Children's Hospital by 3.6% of neonates. As would be expected, with decreasing birthweight, an increasing percentage of babies required higher level care.

Table 56: Level of nursery care by birthweight, all live births[1], South Australia, 2023.

Level of care utilised	Birthweight (grams)							
	<1,500		1,500-2,499		2,500+		Total	
	Number (n=161)	% of care	Number (n=1,064)	% of care	Number (n=17,051)	% of care	Number (n=18,277)	% of care
Well baby care (level 1-3)	0	0	244	22.9	14,254	83.6	14,499	79.3
Nursery/special care (level 4-5)	136	84.5	815	76.6	2,774	16.3	3,725	20.4
Neonatal intensive care/Paediatric intensive care unit FMC/WCH (level 6)	140	87.0	168	15.8	342	2.0	650	3.6

[1]A baby can be under more than one type of care after birth. Excludes babies with unknown birthweight (n=1).

4.17 Perinatal outcome

In 2023, the proportion of live births in hospital at 28 days was 15.1% for multiple births compared with 1.5% for singletons (Table 57). The proportion of combined stillbirth and neonatal deaths were 1.4% for singletons, and 4.2% for multiple births. The proportion of live births in hospital at 28 days in 2023 was also higher in babies born to Aboriginal women (4.9%) compared to non-Aboriginal women (1.8%,Table 58). This may be due to the higher proportion of low birthweight babies born to Aboriginal women.

Table 57: Perinatal outcome by plurality, all births, South Australia, 2023.

Perinatal outcome	Singleton births		Multiple births		Total	
	Number	%	Number	%	Number	%
Stillbirth	225	1.3	15	2.6	240	1.3
Discharged within 28 days	17,425	97.1	466	80.8	17,891	96.6
In hospital at 28 days	267	1.5	87	15.1	354	1.9
Neonatal death	23	0.1	9	1.6	32	0.2
Total	**17,940**	**100.0**	**577**	**100.0**	**18,517**	**100.0**

Table 58: Perinatal outcome by Aboriginal status of mother, all births, South Australia, 2023.

Perinatal Outcome	Aboriginal		Non-Aboriginal		Total	
	Number	%	Number	%	Number	%
Stillbirth	25	2.8	215	1.2	240	1.3
Discharged within 28 days	804	91.6	17,087	96.9	17,891	96.6
In hospital at 28 days	43	4.9	311	1.8	354	1.9
Neonatal death	6	0.7	26	0.1	32	0.2
Total	**878**	**100.0**	**17,639**	**100.0**	**18,517**	**100.0**

4.18 Length of stay of live born babies

Table 59 shows the distribution of length of stay of liveborn babies in hospital for preterm (<37 weeks gestation) and term births (≥37 weeks gestation). The mean duration of stay for all liveborn babies was 4.1 days (SD 10.1) and the median duration was 2 days. The mean duration was 2.7 days (SD 5.4) for term births, 20.3 days (SD 25.5) for preterm births, while the median durations were 2 and 12 days respectively.

Table 59: Length of stay of liveborn babies in hospital[1], South Australia, 2023.

Length of stay (days)	Preterm births		Term births		Total	
	Number	%	Number	%	Number	%
<1	18	1.2	1,255	7.6	1,273	7.1
1	45	3.1	4,348	26.4	4,393	24.5
2	80	5.5	4,154	25.2	4,234	23.6
3	79	5.5	2,465	15.0	2,544	14.2
4	87	6.0	2,104	12.8	2,191	12.2
5	119	8.2	1,413	8.6	1,532	8.5
6	78	5.4	253	1.5	331	1.8
7-13	257	17.8	325	2.0	582	3.2
14-20	229	15.8	106	0.6	335	1.9
21-27	140	9.7	32	0.2	172	1.0
28 or more	314	21.7	31	0.2	345	1.9
Total	**1,446**	**100.0**	**16,486**	**100.0**	**17,932**	**100.0**

[1] excludes n=3 unknown gestational age.

Perinatal Mortality

Detailed data on maternal and perinatal mortality rates, demographics, death classifications and key learning points for South Australia are reported by the Maternal and Perinatal Mortality Committee, available at the Pregnancy Outcome Statistics Webpage.

Terminations of Pregnancy

For a more complete picture of pregnancy outcome in South Australia please see the accompanying reports for Termination of Pregnancy and Maternal and Perinatal Mortality, available at the Pregnancy Outcome Statistics Webpage.

Obstetric Profiles by Hospital Category

Obstetric profiles for 2023 for the three major metropolitan public hospitals and an additional three hospital categories are provided in Table 60. Obstetric profiles are also reported to birthing hospitals in South Australia via the Pregnancy and Neonatal Care Bulletins.

The hospital categories, as determined by their perinatal service delineation are:

1. SA Public Metropolitan hospitals (Women's and Children's, Flinders Medical Centre and Lyell McEwin hospitals)
2. Metropolitan private hospitals
3. Two Level 4:4 country hospitals (Mount Gambier & Districts Health Service and Port Augusta Hospital & Regional Health Service)
4. Other country hospitals (perinatal service delineation of 3:3)

A list of maternal and baby characteristics identified either as risk factors for poor perinatal outcome in earlier analyses[4], or of general interest, is provided with mean values for all state hospitals and the six hospital categories outlined above.

Where indicated (+) in Table 60 the mean (number of women who gave birth or births) relates to the 21 hospitals or groups of hospitals for which obstetric profiles have been provided. These are as follows:

1. Women's & Children's Hospital
2. Flinders Medical Centre
3. Lyell McEwin Hospital
4. Ashford Hospital
5. Burnside War Memorial Hospital
6. Calvary Adelaide Hospital
7. North Eastern Community Hospital
8. Mount Gambier & Districts Health Service
9. Port Augusta Hospital & Regional Health Service
10. Whyalla Hospital & Health Services
11. Gawler Health Service
12. Mount Barker District Soldiers' Memorial Hospital
13. Murray Bridge Soldiers' Memorial Hospital
14. Naracoorte Health Service
15. Port Lincoln Health Service
16. Port Pirie Regional Health Service
17. Riverland General Hospital (Berri)
18. South Coast District Health Service
19. Wallaroo Hospital and Health Service
20. Loxton Hospital Complex
21. Country hospitals with <100 births per year: Clare Hospital, Crystal Brook and District Hospital, Jamestown Hospital and Health Service, Kapunda Hospital, Kangaroo Island Health Service, Ceduna District Health Services

Table 60: Obstetric profiles by hospital category, South Australia, 2023.

Factors	All state hospitals [1]	Metropolitan hospitals [3]		Country hospitals [3]	
	Mean	SA Public Teaching	Private	Level 4:4	Other
Maternal factors					
Women (n=17,968)	898	11,204	3,577	692	2,495
% Aboriginal women	4.7	5.1	0.7	16.2	5.4
% Antenatal visits <7 [2]	15.5	22.9	0.9	7.7	5.5
% Teenage women	1.5	1.7	0.1	3.2	2.4
% Women ≥ 35 years	26.3	25.4	37.0	15.9	17.4
% 4+ prior live births	2.8	3.5	0.3	4.2	3.2
% 1+ prior perinatal deaths	1.2	1.5	0.5	2.2	0.6
% Obstetric complications	61.3	70.0	44.7	59.8	46.1
% Labour complications	59.2	68.8	29.4	57.8	59.1
% Induction	36.2	38.3	34.1	32.2	30.7
% Emergency caesarean	21.1	21.9	18.8	21.2	20.3
% Elective caesarean	19.9	15.4	36.8	16.8	16.3
% Any caesarean	40.9	37.4	55.6	38.0	36.6
% Ultrasound examination [2]	96.2	98.7	87.7	99.3	96.0
% Amniocentesis [2]	1.7	2.0	1.5	0.9	0.7
% Episiotomy	15.6	18.6	11.8	8.2	9.5
% Repair of perineal tear	26.6	28.4	22.0	26.2	24.9
% Epidural analgesia	44.3	45.2	62.5	26.3	27.0
% Private patients	23.5	4.9	98.9	6.1	3.9
% Primiparous women	44.6	44.5	49.0	38.6	40.4
% Previous caesarean	19.4	18.0	23.8	20.4	18.8
% PPH [4]	29.4	33.8	14.4	28.3	31.7
Baby factors					
Births (n=18,255)	913	11,415	3,645	699	2,496
% Birthweight <2,500g	7.2	9.2	5.7	4.3	1.2
% Gestational age <37 weeks at birth	8.5	10.3	8.4	6.6	1.2
% Prolonged hospitalisation (>27 days)	1.9	2.6	1.3	0.6	0.2
% Neonatal intensive care (Level 6 or W&CH paediatric intensive care)	3.6	4.4	0.9	1.4	1.4
% Birth defect	4.5	5.8	2.1	3.1	2.1

[1] mean values are calculated based on data from all state hospitals.
[2] adjusted for missing values (missing values are included in the "no" group).
[3] excludes births from hospitals that do not provide maternity services.
[4] includes all blood loss 500ml or more.

National Core Maternity Indicators

The National Core Maternity Indicators assist in improving the quality of maternity services in Australia by establishing baseline data for monitoring and evaluating practice change[4]. This annual report presents the indicators with 95% Confidence Intervals (CI) for South Australian births in 2021. Indicator specifications are in accordance with the National Core Maternity Indicators report.

For the purpose of indicators 5, 6 and 8 'selected primiparae' was defined as:

- woman who was 20-34 years of age at the time of giving birth
- giving birth for the first time at ≥20 weeks of gestation
- singleton pregnancy
- cephalic presentation
- 37 to 40 weeks gestation.

Antenatal Period: A1a A1b Smoking in pregnancy

Description: This indicator has two parts: (a) among all women who gave birth, the proportion who reported smoking tobacco at any time within the first 20 weeks of pregnancy; and (b) among women who reported smoking, the proportion who reported smoking after 20 weeks of pregnancy.

Purpose: This indicator is used to monitor public health and assess the effectiveness of smoking cessation advice in the antenatal period.

Indicator A1a:	Smoking in the first 20 weeks of pregnancy for all women giving birth
Numerator:	The number of women who gave birth and reported smoking tobacco in the first 20 weeks of pregnancy (n=1,075)
Denominator:	The total number of women who gave birth (n=17,282)
Indicator A1a	**6.2% (95% CI 5.9% - 6.6%)**

Indicator A1b:	Smoking after the first 20 weeks of pregnancy for all women who gave birth and reported smoking during pregnancy
Numerator:	The number of women who gave birth and reported smoking tobacco in the second 20 weeks of pregnancy (n= 871)
Denominator:	The number of women who gave birth who reported smoking tobacco at any time in the pregnancy (n= 1,075)
Indicator A1b	**81.0% (95% CI 78.6% –83.3%)**

Antenatal Period: A2 Antenatal care in the first trimester

Description: Among all women who gave birth, the proportion who commenced antenatal care in the first trimester (before 14 weeks gestation).

Purpose: This indicator is used to assess the accessibility of antenatal services.

Indicator A2a: Antenatal care in the first trimester for all women giving birth

Numerator:	The number of women who had their first antenatal visit before 14 weeks gestation and went on to give birth (n=14,730)
Denominator:	The number of all women who gave birth (n=17,638)
Indicator A2	**83.5% (95% CI 83.0% - 84.1%)**

Indicator A2b: Antenatal care in the first 9 weeks of pregnancy for all women giving birth

Numerator:	The number of women who had their first antenatal visit before 10 weeks gestation and went on to give birth (n=6,174)
Denominator:	The number of all women who gave birth (n=17,638)
Indicator A2	**3**5.0**% (95% CI 3**4.3**% - 3**5.7**%)**

Labour and Birth: Induction of labour for selected primiparae

Description: The proportion of all selected primiparae, whose labour was induced.

Purpose: This indicator is used to benchmark practice.

Indicator B1: Induction of labour for selected women giving birth for the first time

Numerator:	The number of selected primiparae who had labour induced (n=2,242)
Denominator:	All selected primiparae (n=4,931)
Indicator B1	**45.5% (95% CI 44.1% - 46.9%)**

Labour and Birth: Unassisted vaginal birth for selected primiparae

Description: The proportion of all selected primiparae, who had a normal (non-instrumental) vaginal birth.

Purpose: This indicator is used to benchmark practice.

Indicator B2:	Unassisted (non-instrumental) vaginal birth for selected women giving birth for the first time
Numerator:	The number of selected primiparae who had a normal (non-instrumental) vaginal birth (n=2,094)
Denominator:	All selected primiparae (n=4,931)
Indicator B2	**42.5% (95% CI 41.1% - 43.8%)**

Labour and Birth: Assisted vaginal birth for selected primiparae

Description: The proportion of all selected primiparae, who had a vaginal birth with the assistance of instruments.

Purpose: This indicator is used to benchmark practice.

Indicator B3:	Assisted (instrumental) vaginal birth for selected women giving birth for the first time
Numerator:	The number of selected primiparae who had a vaginal birth with the assistance of instruments (n=1,014)
Denominator:	All selected primiparae (n=4,931)
Indicator B3	**20.6% (95% CI 19.5% - 21.7%)**

Labour and Birth: Episiotomy for women having their first baby and giving birth vaginally

Description: This indicator has two parts among women who had their first baby: (a) the proportion who received an episiotomy while giving birth vaginally without instruments; and (b) the proportion who received an episiotomy during an instrumental vaginal birth.

Purpose: This indicator is used to benchmark practice.

Indicator B4a:	Episiotomy for women having their first baby and giving birth vaginally unassisted (non-instrumental)
Numerator:	The number of women having their first baby who had an episiotomy while giving birth vaginally without instruments (n=878)
Denominator:	The number of women having their first baby who gave birth vaginally without instruments (n=3,056)
Indicator B4a	**28.7% (95% CI 27.1% - 30.4%)**

Indicator B4b:	Episiotomy for women having their first baby and giving birth vaginally assisted (instrumental)
Numerator:	The number of women having their first baby who had an episiotomy during a vaginal birth with instruments (n=1,231)
Denominator:	The number of women having their first baby who gave birth vaginally with instruments (n=1,452)
Indicator B4b	**84.8% (95% CI 82.9% - 86.6%)**

Labour and birth: Caesarean section for selected primiparae

Description: The proportion of all selected primiparae who gave birth by caesarean section.

Purpose: This indicator is used to benchmark practice.

Indicator B5:	Caesarean section for selected women giving birth for the first time
Numerator:	The number of selected primiparae who gave birth by caesarean section (n=1,823)
Denominator:	All selected primiparae (n=4,931)
Indicator B5	**37.0% (95% CI 35.6% - 38.3%)**

Labour and birth: Women having their second birth vaginally whose first birth was by caesarean section

Description: The proportion of women having their second birth vaginally whose first birth was by caesarean section.

Purpose: This indicator is used to benchmark practice for vaginal birth following.

Indicator B6:	Women having their second birth vaginally whose first birth was by caesarean section
Numerator:	The number of women having their second birth vaginally whose first birth was by caesarean section (n=271)
Denominator:	The number of women having their second birth whose first birth was by caesarean section (n=2,179)
Indicator B6	**12.4% (95% CI 11.1% - 13.9%)**

Labour and Birth: General anaesthetic for women giving birth by caesarean section

Description: The proportion of women who gave birth by caesarean section who received a general anaesthetic.

Purpose: This indicator is used to benchmark anaesthetic care in association with caesarean section.

Indicator B7:	General anaesthetic for women giving birth by caesarean section
Numerator:	The number of women who gave birth by caesarean section and had a general anaesthetic (n=341)
Denominator:	The total number of women who gave birth by caesarean section (n=7,354)
Indicator B7	**4.6% (95% CI 4.2% - 5.1%)**

Birth Outcomes: Third and fourth degree tears for vaginal births

Description: The proportion of women who have a third or fourth degree perineal laceration after giving birth vaginally. This indicator has two parts: (a) for all vaginal first births (b) for all vaginal births.

Purpose: Third and fourth degree perineal lacerations cause significant ongoing maternal morbidity. This is an outcome indicator that measures their occurrence.

Indicator C1a:	Third and fourth degree tears for all vaginal first births
Numerator:	The number of women who had a third or fourth degree perineal laceration after giving birth for the first time and had a vaginal birth (n=224)
Denominator:	The number of women who gave birth for the first time and had a vaginal birth (n=4,508)
Indicator C1a	**5.0% (95% CI 4.4% - 5.6%)**

Indicator C1b:	Third and fourth degree tears for all vaginal births
Numerator:	The number of women who had a third or fourth degree perineal laceration after giving birth vaginally (n=306)
Denominator:	The number of women who gave birth vaginally (n=10,614)
Indicator C1b	**2.9% (95% CI 2.6% - 3.2%)**

Birth Outcomes: Apgar score of less than 7 at 5 minutes for births at or after term

Description: The proportion of liveborn term babies with an Apgar score of less than 7 at 5 minutes.

Purpose: This indicator of the condition of the baby after birth provides an outcome measure of intrapartum care and resuscitation of the newborn.

Indicator C2:	Apgar score of less than 7 at 5 minutes for births at or after term
Numerator:	The number of babies born alive at term with an Apgar score less than 7 at 5 minutes (n=243)
Denominator:	The number of live babies born at term (n=16,681)
Indicator C2	**1.5% (95% CI 1.3% - 1.6%)**

Birth Outcomes: Small babies among births at or after 40 weeks gestation

Description: The proportion of babies born at or after 40 weeks gestation who weighed less than 2,750 grams at birth.

Purpose: This indicator aims to identify intrauterine growth restriction for babies born at or after 40 weeks gestation. This indicator is used to benchmark practice.

Indicator C3:	Small babies among births at or after 40 weeks gestation
Numerator:	The number of babies born at or after 40 weeks gestation who weighed less than 2,750 grams at birth (n=52)
Denominator:	The total number of babies born at or after 40 weeks (n=4,671)
Indicator C3	**1.1% (95% CI 0.8% - 1.4%)**

Key Statistics and Trends 2014 - 2023

Perinatal statistics are presented in Table 61 and Table 62 for both socio-demographic and obstetric aspects for each year from 2014-2023, and for 1986, when the perinatal data collection was commenced. The trends noted are as follows:

1. The total fertility rate was 1.48 live births per woman in 2023, lower than the level in 1986. The highest rate was observed in 2014 (1.87 live births per woman).

2. There was a steady increase in the proportion of Aboriginal women reporting giving birth from 1.7% in 1986 to 4.7% in 2023.

3. The proportion of teenage women giving birth decreased from 6.2% in 1986 to 1.6% in 2023. Over the past decade, there has been a general decline in teenage birth.

4. The mean age of women giving birth has increased each year from 26.9 years in 1986 to a peak of 31.1 in 2023. The proportion of women who gave birth who were 35 years or older increased from 6.5% in 1986 to a peak of 26.3% in 2023. Amongst primiparous women, the proportion aged 35 years or older in 1986 was 2.9%, and in 2023 was 17.2%. The mean age among primiparous women increased from 25.0 years in 1986 to 29.6 in 2023.

5. The proportion of multiple births has been relatively stable since 2014 and in 2023 this proportion was 3.1% of all births.

6. The induction of labour rate increased from 32.2% in 2014 to 36.4% in 2023.

7. The proportion of normal spontaneous vaginal births decreased from 54.1% in 2014 to 48.9% in 2023. The proportion of caesarean section births has increased gradually but steadily in the past decade and reached 40.8% in 2023. The proportion of breech and ventouse births were stable in the past decade and were 0.1% and 4.4% respectively in 2023.

8. There have been minor fluctuations in the proportion of low birthweight births (<2,500 grams) over the past decade, and the proportion in 2023 was 7.2%. The proportion of preterm births was 9.1% in 2023.

9. The proportion of births with congenital anomalies identified before discharge from hospital after birth has been relatively stable in the last decade however in 2023 this proportion was 4.5%.

10. In the past decade, the proportion of babies utilising Nursery or special care (level 4-5) increased from 15.8% in 2014 to 20.4% in 2023. There have been minor fluctuations over the past decade in the proportion of births using neonatal or paediatric intensive care (level 6) and in 2023 it was 3.6%. The proportion of babies in hospital at 28 days after birth has been relatively stable over the past decade.

Table 61: Socio-demographic aspects of perinatal statistics, South Australia, 1986 and 2014 – 2023.

Characteristic	Year										
	1986	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total births	19,799	20,749	20,154	20,070	19,479	19,332	19,174	18,738	20,168	19,584	18,517
Live births	19,650	20,604	20,001	19,934	19,347	19,198	19,063	18,619	20,025	19,428	18,277
Women who gave birth	19,562	20,448	19,818	19,766	19,190	19,043	18,880	18,461	19,896	19,300	18,228
Total fertility rate per woman	1.75	1.87	1.79	1.77	1.71	1.68	1.65	1.59	1.69	1.62	1.48
Place of birth (%)											
Teaching hospital	45.4	58	59.7	60.4	61.4	61.8	62.8	62.0	62.8	61.7	61.7
Private hospital	15.1	22.5	21.5	20.7	19.9	19.2	19.1	19.2	19.0	20.1	19.7
Country hospital	39.1	19.1	18.3	18.4	18.3	18.5	17.6	18.2	17.4	17.7	17.3
Domiciliary	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.6	0.8	0.5	1.3
Aboriginal status											
Aboriginal, %	1.7	3.5	3.6	3.8	3.8	3.9	4.0	4.1	4.2	4.4	4.7
N of women who gave birth	334	711	718	752	721	746	756	766	844	843	859
N of births to Aboriginal women	335	719	732	761	733	759	773	777	860	854	878
N of babies identified as Aboriginal		950	1,001	1,032	936	1,026	1,077	1,120	1,180	1,203	1,275
Age											
Mean age (yrs)	26.9	30.0	30.1	30.3	30.4	30.4	30.6	30.8	30.9	31.0	31.1
Teenage (%)	6.2	3.1	2.8	2.4	2.1	1.9	1.6	1.8	1.4	1.5	1.6
≥35 years (%)	6.5	20.6	20.3	21.3	21.8	22.5	23.1	23.8	24.2	25.7	26.3
Primiparae											
Mean age (yrs)	25.0	28.4	28.5	28.7	28.8	28.9	29.1	29.3	29.3	29.6	29.6
Teenage (%)	12.6	6.3	5.6	4.6	4.2	3.9	3.3	3.8	3.0	3.0	3.1
≥35 years (%)	2.9	12.9	12.5	12.5	13.6	14.3	14.9	15.4	15.0	17.0	17.2

Table 62: Obstetric aspects of perinatal statistics, South Australia, 1986 and 2014 – 2023.

Characteristic	Year										
	1986	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Plurality											
Multiple births, %	2.4	2.9	3.3	3.0	3.0	3.0	3.1	2.9	2.7	2.9	3.1
Twins, number	450	574	648	592	568	574	580	538	536	556	574
Triplets, number	18	21	18	12	9	<5	6	12	6	9	<5
Quadruplets, number											
Induction of labour (%)	23.3	32.2	32.5	34.0	35.9	37.4	37.5	38.7	37.1	37.0	36.4
Method of birth, %											
Normal spontaneous	63.3	54.1	53.1	52.7	53.2	53.1	52.9	51.5	51.8	50.4	48.9
Elective caesarean	9.0	16.6	17.2	17.3	16.8	16.7	17.6	17.8	17.9	19.3	19.8
Emergency caesarean	9.9	17.3	17.8	17.8	18.1	18.5	17.7	19.0	19.3	19.4	21.0
Forceps	14.9	5.3	5.6	5.7	5.9	5.6	5.6	5.9	5.5	5.9	5.8
Breech	0.1	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.1	0.1
Ventouse	1.9	6.3	5.9	6.1	5.7	5.7	5.8	5.5	5.1	4.9	4.4
Total caesarean	19.0	33.9	35.1	35.1	34.8	35.2	35.3	36.8	37.3	38.7	40.8
Birthweight <2,500 g, %	6.5	7.1	7.6	7.7	7.3	7.7	7.2	7.2	7.2	7.1	7.2
Singletons	5.4	5.7	5.9	6.0	5.7	6.1	5.6	5.7	5.7	5.6	5.7
Multiples	52.1	57.3	59.8	63.1	58.9	58.2	57.8	56.5	60.3	56.8	52.5
Gestational age <37 wks, %	6.4	9.2	9.6	9.5	9.6	9.7	9.0	9.0	9.0	9.0	9.1
Singletons	5.5	7.5	7.6	7.5	7.6	7.7	6.9	7.0	7.0	7.2	7.4
Multiples	44.4	69.1	69.4	74.5	75.0	76.4	76.8	73.5	73.5	70.3	62.6
Congenital abnormalities, %	2.8	2.7	2.6	2.6	2.7	2.8	2.9	2.6	2.4	3.1	4.5
Level of perinatal care utilised, %											
Nursery/special care (L4-5)	9.5	15.8	16.8	17.2	17.6	17.9	19.7	18.9	20.3	18.3	20.4
Neonatal intensive care/ Paediatric intensive care unit FMCH/WCH (L6)	3.1	2.7	3.0	3.3	3.3	3.0	3.5	2.9	3.4	3.0	3.6
Hospitalisation for 28 days or more, %	1.8	2.1	2.1	2.1	2.0	2.0	2.2	2.1	2.2	1.9	1.9
Adjusted Neonatal deaths, number	85	39	35	39	47	43	27	25	40	44	32
Adjusted Stillbirths, number	149	145	153	136	129	134	111	119	143	156	119
Adjusted Perinatal deaths, number	234	184	188	175	176	177	138	144	183	200	151
Adjusted Perinatal mortality rate per 1,000 births											
≥400g / 20 wks	11.8	8.9	9.3	8.7	9.0	9.2	7.2	7.7	9.1	10.2	14.7
≥500g / 22 wks	11.4	6.0	6.4	6.2	5.9	7.4	5.3	4.8	6.3	8.2	12.8
≥1000g / 28 wks	7.4	2.8	3.4	3.3	2.9	3.9	2.9	2.7	3.4	5.0	9.8

Summary Statistics for 2023

These statistics refer to all live births as well as stillbirths of at least 400g birthweight or 20 weeks gestation. Sixty-one babies of less than 400g birthweight have been included.

1. Number of births
Notified births with Supplementary Birth Records: 18,517
Notified women who gave birth on SBRs: 18,228
Crude birth rate: 9.9 live births per 1,000 population
Total fertility rate: 1.48 live births per woman

2. Place of birth
Home births: 244 home births in all (1.3%), of which 244 were planned home births
Metropolitan teaching hospitals: 11,428 (61.7%)
Metropolitan private hospitals: 3,645 (19.7%)
Country hospitals: 3,200 (17.3%)

3. Sex of babies
Males 9,372 (50.6%)
Females 9,072 (49.0%)
Male: Female sex ratio 1.03:1

4. Plurality
Singleton 17,940 (96.9%)
Twin 574 (3.1%)
Triplet <5 (0.0%)

5. Aboriginal status of women
Non-Aboriginal 17,369 (95.3%)
Aboriginal 859 (4.7%)

6. Obstetric interventions
Induction of labour: 6,641 (36.4% of women)
Augmentation of labour: 2,374 (13.0% of women)
Forceps: 790 (4.4%)
Ventouse: 1,039 (5.8%)
Episiotomy: 2,792 (26.2% of women who gave birth vaginally)
Caesarean section: 7,342 (40.8%)
Elective caesarean section: 3,567 (19.8%)
Emergency caesarean section: 3,775 (21.0%)

7. Low birthweight (<2,500 g)
Number of all births of low birthweight =1,325 (7.2% of all births)
Number of singleton births of low birthweight =1,022 (5.7% of singleton births)
Number of multiple births of low birthweight =303 (52.5% of multiple births)

8. Congenital anomalies
Births notified with congenital anomalies: 825 (4.5%)

9. Adjusted perinatal mortality rates
The adjusted perinatal mortality rate for all births (live births of any gestation and stillbirths of at least 400g birthweight or 20 weeks gestation excluding those resulting from a termination of pregnancy performed for psychosocial or unknown reasons) in 2023 was 8.2 per 1,000 births.

Methods and Terminology

Adjusted perinatal mortality rate

The number of stillbirths and neonatal deaths in a defined time period (excluding those resulting from a termination of pregnancy performed for psychosocial or unknown reasons, divided by the total number of stillbirths and live births in the same time period, multiplied by 1,000.

Age specific fertility rate

The number of live births to women in an age group in a year, divided by the estimated resident population of women of that age group in the same year, expressed per 1,000 population.

Apgar score

The Apgar score is a method used to summarise the health of a newborn baby. It is determined by evaluating the baby's heart rate, respiratory effort, muscle tone, reflexes and skin colour. Each criterion is scored from 0 to 2, then summing the five values to obtain the Apgar score.

Indicator	Score		
	0	1	2
Heart rate	Absent	Slow (below 100)	Over 100
Respiratory effort	Absent	Slow, irregular	Good, crying
Muscle tone	Flaccid	Some flexion of extremities	Active motion
Reflex irritability	No response	Grimace	Vigorous cry
Colour	Blue, pale	Body pink, extremities blue	Completely pink

Birthweight

The first weight, in grams, of a live born or still born baby after birth. For live births, this is preferably measured within the first hour of life before significant post-natal weight loss has occurred. Low birthweight is defined as a birthweight of less than 2,500 grams. Very low birthweight is defined as a birthweight of less than 1,500 grams.

Body mass index

A person's weight in kilograms divided by their height in meters squared. A person's BMI can then be used as a guide to determine whether they are underweight, normal weight or overweight for their height, according to the following categories.

BMI range	Category
<18.5	Underweight
18.5 to 24.9	Normal
25.0 to 29.9	Overweight
30.0 to 34.9	Obese
35.0 to 39.9	Severely obese
>40	Morbidly obese

Caesarean section

Birth of a child by an abdominal operation. Elective caesarean section is defined as a caesarean section that takes place after 37 weeks gestation as a planned procedure before the spontaneous onset of labour. Emergency caesarean section is defined as a caesarean section that is undertaken for a complication before the onset of labour, or during labour (whether that labour is of spontaneous onset or following induction).

Congenital Anomalies

Congenital anomalies are coded according to the British Paediatric Association (BPA) Classification of Diseases. Anomalies presented in Table 54 are from the following code ranges:

BPA Code	Category
74000-74029	Anencephalus
74100-74199	Spina bifida
74200-74209	Encephalocele
74230-74239	Hydrocephalus
74900-74909	Cleft palate
74910-74929	Cleft lip and palate
75030-75038	Tracheo-oesophageal fistula, oesophageal atresia and stenosis
75120-75124	Atresia and stenosis of large intestine, rectum and anal canal
75260-75261	Hypospadias and epispadias
75300-75301	Renal agenesis and dysgenesis
75520-75549	Limb reduction defects
75660-75669	Anomalies of diaphragm
75670-75679	Anomalies of abdominal wall
75800-75809	Trisomy 21

Crude birth rate

The number of live births occurring among the ABS Estimated Resident Populations (ERP) for South Australia, per 1,000 population during the same year.

Fetal death

Death prior to the complete expulsion or extraction from a woman of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

General fertility rate

The total number of live births in a year, divided by the estimated resident population of women aged 15 to 44 years in the same year, expressed per 1,000 population.

Gestational age

The duration of pregnancy in completed weeks determined by the best obstetric estimate, using ultrasonography and the first day of the last normal menstrual period.

Induction of labour

An intervention undertaken to stimulate the onset of labour by pharmacological or other means.

Live birth

The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of 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.

This report does not include live births less than 20 weeks gestation and less than 400g birthweight.

Multigravida

A woman who has been pregnant more than once.

Neonatal death

Death of a live born baby within 28 days of birth.

Parity

The total number of previous pregnancies resulting in live births or stillbirths.

Perinatal deaths

Stillbirths and neonatal deaths combined.

Perinatal mortality rate

The number of stillbirths and neonatal deaths in a defined time period, divided by the total number of stillbirths and live births in the same time period, multiplied by 1,000.

For South Australian statistics, the rate refers to live births and stillbirths of at least 400g birthweight or 20 weeks gestation.

For national statistics, the rate refers to all births of at least 20 weeks gestation or 400g birthweight, and neonatal deaths occurring within 28 days of birth.

For international comparison, the rate refers to all births of at least 1,000g birthweight or, when birthweight is unavailable, of at least 28 weeks gestation and neonatal deaths occurring within seven days of birth (as recommended by WHO).

Preterm

Less than 37^{+0} completed weeks gestation.

Primigravida

A woman pregnant for the first time.

Primipara

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

Stillbirth

Birth of a fetus at or after 20 weeks gestation or with a birthweight of 400g or more, with no signs of life at birth.

Stillbirth rate

The number of stillbirths in a defined time period, divided by the total number of stillbirths and live births in the same time period, multiplied by 1,000.

Termination of pregnancy

The intentional expulsion of a product of conception from the uterus either by medication or instrumentation, with the intention being the death of the embryo or fetus.

Total fertility rate

The sum of age-specific fertility rates at a given time. It represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

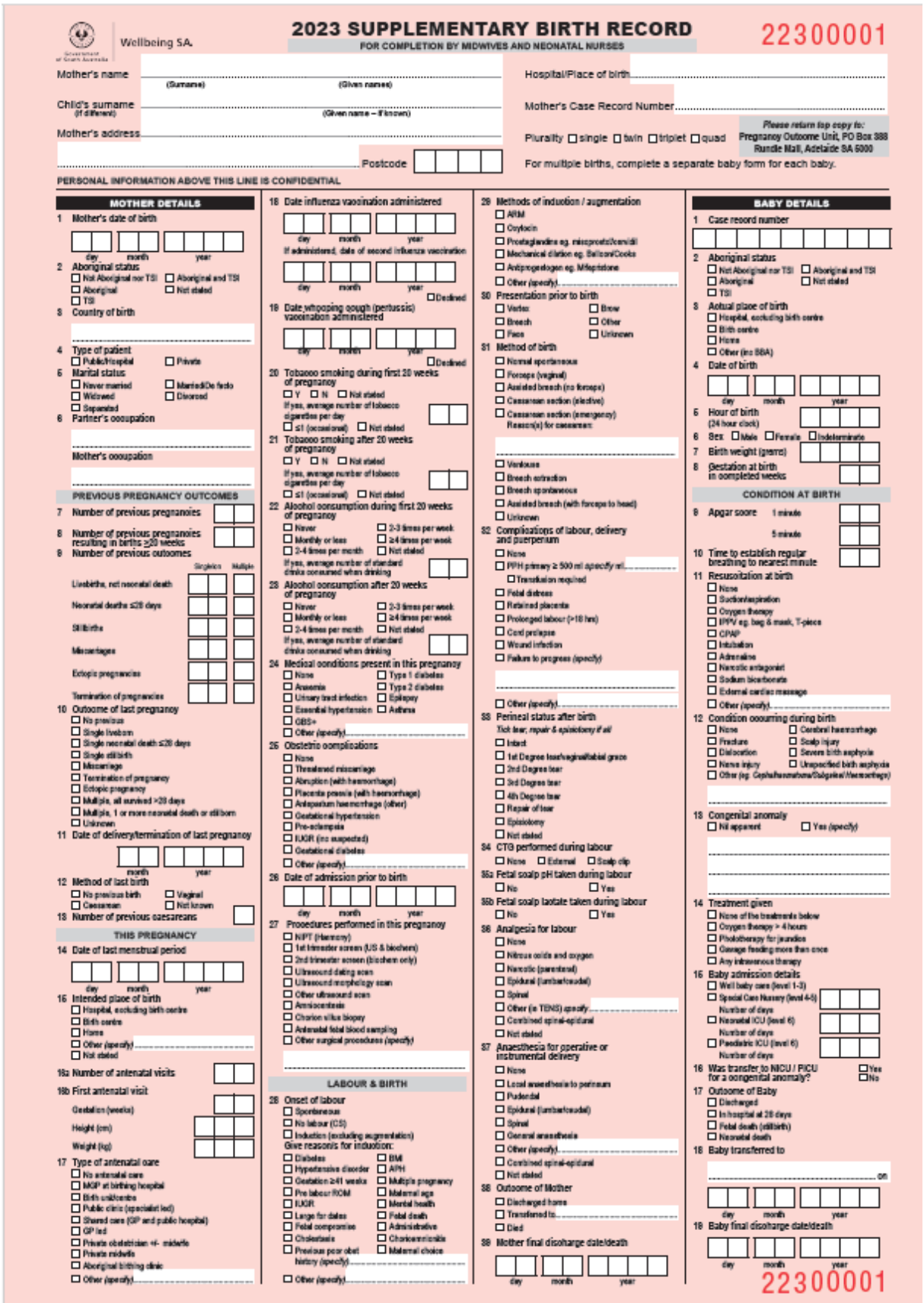
Women who gave birth

Women who gave birth after a pregnancy ending with the birth of one or more live births or stillbirths.

References

1. South Australian Birth Defect Register. *Annual Report*. Available from: **http://www.wch.sa.gov.au/services/az/other/phru/birthdefect.html**
2. United Nations, Population Division. *Total fertility rate*. Available from: **http://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets/demographics/total_fertility_rate.pdf**.
3. Statewide Service Strategy Division, *Standards for Maternal and Neonatal Services in South Australia 2015*. 2015, Department of Health and Wellbeing: Adelaide.
4. AIHW National Perinatal Epidemiology and Statistics Unit, *National Core Maternity Indicators*. 2017, AIHW: Canberra.

Appendix 1



Wellbeing SA

2023 SUPPLEMENTARY BIRTH RECORD

FOR COMPLETION BY MIDWIVES AND NEONATAL NURSES

22300001

Mother's name (Surname) (Given names)

Child's surname (If different) (Given name – if known)

Mother's address

Postcode

Hospital/Place of birth

Mother's Case Record Number

Plurality ☐ single ☐ twin ☐ triplet ☐ quad

Please return top copy to: Pregnancy Outcome Unit, PO Box 388 Rundle Mall, Adelaide SA 5000

For multiple births, complete a separate baby form for each baby.

PERSONAL INFORMATION ABOVE THIS LINE IS CONFIDENTIAL

MOTHER DETAILS

1 Mother's date of birth (day / month / year)

2 Aboriginal status
☐ Not Aboriginal nor TSI ☐ Aboriginal and TSI ☐ Aboriginal ☐ Not stated ☐ TSI

3 Country of birth

4 Type of patient ☐ Public Hospital ☐ Private

5 Marital status ☐ Never married ☐ Married/De facto ☐ Widowed ☐ Divorced ☐ Separated

6 Partner's occupation

Mother's occupation

PREVIOUS PREGNANCY OUTCOMES

7 Number of previous pregnancies

8 Number of previous pregnancies resulting in births ≥20 weeks

9 Number of previous outcomes

	Singleton	Multiple
Livebirths, not neonatal death		
Neonatal deaths ≤28 days		
Stillbirths		
Miscarriages		
Ectopic pregnancies		
Termination of pregnancies		

10 Outcome of last pregnancy
☐ No previous ☐ Single liveborn ☐ Single neonatal death ≤28 days ☐ Single stillbirth ☐ Miscarriage ☐ Termination of pregnancy ☐ Ectopic pregnancy ☐ Multiple, all survived >28 days ☐ Multiple, 1 or more neonatal death or stillborn ☐ Unknown

11 Date of delivery/termination of last pregnancy (month / year)

12 Method of last birth ☐ No previous birth ☐ Vaginal ☐ Caesarean ☐ Not known

13 Number of previous caesareans

THIS PREGNANCY

14 Date of last menstrual period (day / month / year)

15 Intended place of birth
☐ Hospital, excluding birth centre ☐ Birth centre ☐ Home ☐ Other (specify) ☐ Not stated

16a Number of antenatal visits

16b First antenatal visit
Gestation (weeks)
Height (cm)
Weight (kg)

17 Type of antenatal care
☐ No antenatal care ☐ MGP at birthing hospital ☐ Birth unit/centre ☐ Public clinic (specialist led) ☐ Shared care (GP and public hospital) ☐ GP led ☐ Private obstetrician +/- midwife ☐ Private midwife ☐ Aboriginal birthing clinic ☐ Other (specify)

18 Date influenza vaccination administered (day / month / year)
If administered, date of second influenza vaccination (day / month / year) ☐ Declined

19 Date whooping cough (pertussis) vaccination administered (day / month / year) ☐ Declined

20 Tobacco smoking during first 20 weeks of pregnancy ☐ Y ☐ N ☐ Not stated
If yes, average number of tobacco cigarettes per day ☐ ≤1 (occasional) ☐ Not stated

21 Tobacco smoking after 20 weeks of pregnancy ☐ Y ☐ N ☐ Not stated
If yes, average number of tobacco cigarettes per day ☐ ≤1 (occasional) ☐ Not stated

22 Alcohol consumption during first 20 weeks of pregnancy
☐ Never ☐ 2-3 times per week ☐ Monthly or less ☐ ≥4 times per week ☐ 2-4 times per month ☐ Not stated
If yes, average number of standard drinks consumed when drinking

23 Alcohol consumption after 20 weeks of pregnancy
☐ Never ☐ 2-3 times per week ☐ Monthly or less ☐ ≥4 times per week ☐ 2-4 times per month ☐ Not stated
If yes, average number of standard drinks consumed when drinking

24 Medical conditions present in this pregnancy
☐ None ☐ Type 1 diabetes ☐ Anaemia ☐ Type 2 diabetes ☐ Urinary tract infection ☐ Epilepsy ☐ Essential hypertension ☐ Asthma ☐ GBS+ ☐ Other (specify)

25 Obstetric complications
☐ None ☐ Threatened miscarriage ☐ Abruption (with haemorrhage) ☐ Placenta praevia (with haemorrhage) ☐ Antepartum haemorrhage (other) ☐ Gestational hypertension ☐ Pre-eclampsia ☐ IUGR (inc suspected) ☐ Gestational diabetes ☐ Other (specify)

26 Date of admission prior to birth (day / month / year)

27 Procedures performed in this pregnancy
☐ NIPT (Harmony) ☐ 1st trimester screen (US & biochem) ☐ 2nd trimester screen (biochem only) ☐ Ultrasound dating scan ☐ Ultrasound morphology scan ☐ Other ultrasound scan ☐ Amniocentesis ☐ Chorion villus biopsy ☐ Antenatal fetal blood sampling ☐ Other surgical procedures (specify)

LABOUR & BIRTH

28 Onset of labour
☐ Spontaneous ☐ No labour (CS) ☐ Induction (excluding augmentation)
Give reason/s for induction:
☐ Diabetes ☐ BMI ☐ Hypertensive disorder ☐ APH ☐ Gestation ≥41 weeks ☐ Multiple pregnancy ☐ Pre labour ROM ☐ Maternal age ☐ IUGR ☐ Mental health ☐ Large for dates ☐ Fetal death ☐ Fetal compromise ☐ Administrative ☐ Cholestasis ☐ Chorioamnionitis ☐ Previous poor obst history (specify) ☐ Maternal choice ☐ Other (specify)

29 Methods of induction / augmentation
☐ ARM ☐ Oxytocin ☐ Prostaglandins eg. misoprostol/cervidil ☐ Mechanical dilation eg. Foley/Cook ☐ Antiprogestogen eg. Mifepristone ☐ Other (specify)

30 Presentation prior to birth
☐ Vertex ☐ Brow ☐ Breech ☐ Other ☐ Face ☐ Unknown

31 Method of birth
☐ Normal spontaneous ☐ Forceps (vaginal) ☐ Assisted breech (no forceps) ☐ Caesarean section (elective) ☐ Caesarean section (emergency) Reason(s) for caesarean
☐ Ventouse ☐ Breech extraction ☐ Breech spontaneous ☐ Assisted breech (with forceps to head) ☐ Unknown

32 Complications of labour, delivery and puerperium
☐ None ☐ PPH primary ≥ 500 ml specify ml ☐ Transfusion required ☐ Fetal distress ☐ Retained placenta ☐ Prolonged labour (>18 hrs) ☐ Cord prolapse ☐ Wound infection ☐ Failure to progress (specify) ☐ Other (specify)

33 Perineal status after birth
Tick tear, repair & episiotomy if all
☐ Intact ☐ 1st Degree tear/vaginal/labial graze ☐ 2nd Degree tear ☐ 3rd Degree tear ☐ 4th Degree tear ☐ Repair of tear ☐ Episiotomy ☐ Not stated

34 CTG performed during labour ☐ None ☐ External ☐ Scalp clip

35a Fetal scalp pH taken during labour ☐ No ☐ Yes

35b Fetal scalp lactate taken during labour ☐ No ☐ Yes

36 Analgesia for labour
☐ None ☐ Nitrous oxide and oxygen ☐ Narcotic (parenteral) ☐ Epidural (lumbar/caudal) ☐ Spinal ☐ Other (ie TENS) specify ☐ Combined spinal-epidural ☐ Not stated

37 Anaesthesia for operative or instrumental delivery
☐ None ☐ Local anaesthesia to perineum ☐ Pudendal ☐ Epidural (lumbar/caudal) ☐ Spinal ☐ General anaesthesia ☐ Other (specify) ☐ Combined spinal-epidural ☐ Not stated

38 Outcome of Mother
☐ Discharged home ☐ Transferred to ☐ Died

38 Mother final discharge date/death (day / month / year)

BABY DETAILS

1 Case record number

2 Aboriginal status
☐ Not Aboriginal nor TSI ☐ Aboriginal and TSI ☐ Aboriginal ☐ Not stated ☐ TSI

3 Actual place of birth
☐ Hospital, excluding birth centre ☐ Birth centre ☐ Home ☐ Other (inc BBA)

4 Date of birth (day / month / year)

5 Hour of birth (24 hour clock)

6 Sex ☐ Male ☐ Female ☐ Indeterminate

7 Birth weight (grams)

8 Gestation at birth in completed weeks

CONDITION AT BIRTH

9 Apgar score 1 minute / 5 minute

10 Time to establish regular breathing to nearest minute

11 Resuscitation at birth
☐ None ☐ Suction/aspiration ☐ Oxygen therapy ☐ IPPV eg. bag & mask, T-piece ☐ CPAP ☐ Intubation ☐ Adrenaline ☐ Narcotic antagonist ☐ Sodium bicarbonate ☐ External cardiac massage ☐ Other (specify)

12 Condition occurring during birth
☐ None ☐ Cerebral haemorrhage ☐ Fracture ☐ Scalp injury ☐ Dislocation ☐ Severe birth asphyxia ☐ Nerve injury ☐ Unspecified birth asphyxia ☐ Other (eg. Cephalohaematoma/Subgaleal/Haemorrhage)

13 Congenital anomaly ☐ Nil apparent ☐ Yes (specify)

14 Treatment given
☐ None of the treatments below ☐ Oxygen therapy > 4 hours ☐ Phototherapy for jaundice ☐ Gavage feeding more than once ☐ Any intravenous therapy

15 Baby admission details
☐ Well baby care (level 1-3) ☐ Special Care Nursery (level 4-5) Number of days ☐ Neonatal ICU (level 6) Number of days ☐ Paediatric ICU (level 6) Number of days

16 Was transfer to NICU / PICU for a congenital anomaly? ☐ Yes ☐ No

17 Outcome of Baby
☐ Discharged ☐ In hospital at 28 days ☐ Fetal death (stillbirth) ☐ Neonatal death

18 Baby transferred to on (day / month / year)

19 Baby final discharge date/death (day / month / year)

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Appendix 2

Government of South Australia
Department of Health

S.A. PREGNANCY OUTCOME STATISTICS UNIT,
PO Box 6, Rundle Mall, Adelaide SA 5000

CONGENITAL ABNORMALITY FORM

SBR No.

ACC NO. 2 1

BABY'S SURNAME.....

BABY'S FIRST NAME.....

SEX .....IF MULTIPLE BIRTH, BIRTH ORDER.....

DATE OF BIRTH...../...../..... UR NO. .....

HOSPITAL.....

ADDRESS OF MOTHER.....

.....

FAMILY HISTORY OF CONGENITAL ABNORMALITY *Yes No Not known*

1. Parents *(specify)*..... ☐ ☐ ☐
2. Siblings of this baby (including known stillbirths and 2nd trimester terminations of pregnancy) ☐ ☐ ☐

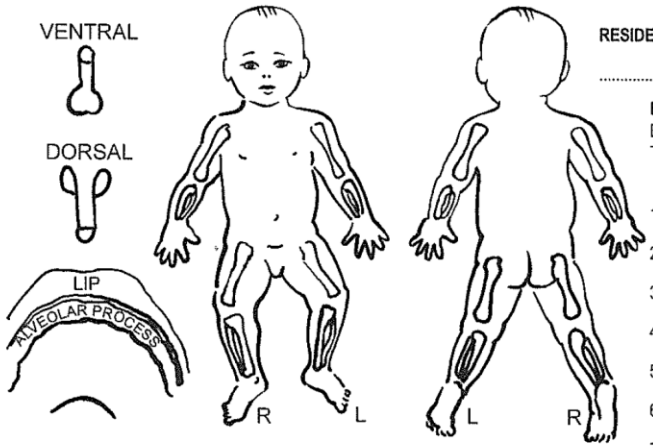
(specify).....

3. Other relatives (specify)..... ☐ ☐ ☐

.....

RESIDENCE OF MOTHER DURING THE FIRST 16 WEEKS OF PREGNANCY

.....



GEST =

CONGENITAL ABNORMALITIES / BIRTH DEFECTS PRESENT
(Please list all defects & specify where relevant right/left, anterior/posterior)

Office use only

1..... ☐☐☐☐☐
2..... ☐☐☐☐☐
3..... ☐☐☐☐☐
4..... ☐☐☐☐☐
5..... ☐☐☐☐☐
6..... ☐☐☐☐☐
7..... ☐☐☐☐☐
8..... ☐☐☐☐☐
9..... ☐☐☐☐☐
10..... ☐☐☐☐☐

SPECIFIC SYNDROME/S (if known)..... ☐☐☐☐☐

..... ☐☐☐☐☐

EXPOSURE TO TERATOGENS
DURING THE FIRST 16 WEEKS OF PREGNANCY
This information can be provided by the doctor undertaking antenatal care

Yes If yes, details

1. Infection (including viral) ☐.....
2. Xrays ☐.....
3. Environmental chemicals ☐.....
4. Prescribed drugs ☐.....
5. Over-the-counter drugs ☐.....
6. Alcohol ☐.....
7. Other addictive substances ☐.....
8. Any other substances ☐.....

Comments.....

.....

HAS THE FATHER OF THIS CHILD A HISTORY OF EXPOSURE TO ANY POTENTIAL TERATOGENS? ☐ Yes ☐ No ☐ Not known

(specify).....

ADDITIONAL INFORMATION (eg drinking water supply/local epidemics)

.....

PRENATAL DIAGNOSIS

Please tick all tests performed during this pregnancy	Please tick if abnormal result
1. ☐ MSAFP (NTD etc)	☐
2. ☐ Triple/Quadruple screen (Down's, etc)	☐
3. ☐ Ultrasound (morphology)	☐
4. ☐ Chorion villus sampling	☐
5. ☐ Amniocentesis	☐
6. ☐ Cordocentesis	☐
7. ☐ Other *(specify)*.....	☐
8. ☐ Not known	

Comments.....

.....

NAME OF NOTIFYING DOCTOR..... Signed..... Date.....

NAME & ADDRESS OF OBSTETRICIAN / MIDWIFE (if not the same).....

For more information
Pregnancy Outcome Unit
PO Box 287, Rundle Mall SA 5000
Call (08) 71179210 or Email
PreventiveHealthSAPregnancyStats@sa.gov.au
Website: https://www.preventivehealth.sa.gov.au/