

Perinatal Statistics in Western Australia, 2005

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Western Australian Midwives' Notification System

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FURTHER INFORMATION

Enquiries or comments on this publication and/or requests for additional information should be addressed to:

Manager, Maternal and Child Health Unit
Information Collection and Management
Department of Health
189 Royal Street
EAST PERTH WA 6004

Telephone: (08) 9222 4262
Facsimile: (08) 9222 4236
Email: vivien.gee@health.wa.gov.au

Internet: www.health.wa.gov.au/publications

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EXECUTIVE SUMMARY

The Midwives' Notification System compiles information on all births in Western Australia. This report presents an overview of data on births for 2005 in terms of maternal demography, procedures and infant outcomes. It also describes trends over the 15 year period from 1991 to 2005. Information on women resident in this state who gave birth outside Western Australia during 2005 is not included in this report.

Maternal Demographic Information

- In 2005, 26,538 women gave birth in Western Australia.
- Teenage mothers represented 5.6% (n=1,486) and mothers aged 35 years or more represented 19.6% (n=5,195) of women who gave birth. While the proportion of teenage mothers has remained stable, the group of older mothers increased significantly during the last 15 years.
- Aboriginal mothers represented 6.4% (n=1,699) of women who gave birth and Aboriginal women had birth rates on average almost twice as high as non-Aboriginal women.
- Of births to teenage mothers, the proportion to Aboriginal mothers was almost seven times greater than for non-Aboriginal mothers.
- The majority (99.0%) of women gave birth in hospital and 155 (0.6%) women gave birth at home as planned. The remainder (0.4%) were unplanned births outside hospital.

Pregnancy Profile

- First time mothers, who had an average age of 27.7 years, represented 41.9% of women who gave birth in 2005. Trend data shows that there has been no substantial increase in this proportion over the last 15 years.
- Among women aged 35 years or more 27.4% (n=1,423) gave birth for the first time.
- The Age Specific Birth Rate of women aged 15-19 years decreased over the past 15 years from 25.8 births per 1000 women in 1991 to 21.0 births per 1000 women in 2005. The rate for women aged 35-44 years increased from 19.2 births per 1000 women in 1991 to 35.0 births per 1000 women in 2005.
- Complications of pregnancy were recorded for 37.5% of women. The more common complications were threatened abortion in early pregnancy (5.0%), premature rupture of membranes (4.5%), gestational diabetes (4.1%), pre-eclampsia (3.9%) and urinary tract infection (3.5%).
- A significant proportion of women who gave birth in 2005 had pre-existing medical conditions recorded. The most frequent were asthma (10.4%) and a psychological disorder (5.8%).

Labour and Delivery

- Labour was spontaneous in onset for 49.4% of women and was induced for 28.6%. A further 22.0% of mothers did not experience labour, being delivered by elective caesarean section. Trend data indicates that there was a significant increase over the 15 year period in the proportion of women who did not experience labour.
- The caesarean section rate in 2005 was 33.9%. This figure has risen from 18.4% in 1991, and represents one of the most striking features of modern obstetrics. Of the women recorded as having had a previous caesarean section, 88.1% (n=3,655) were again delivered by caesarean section.
- Among women who established labour spontaneously (49.4% of all births), only 22.7% proceeded through labour without augmentation and achieved a spontaneous vaginal birth. Thus, fewer than a quarter of births occurred without intervention to the processes of labour or delivery.

Baby Characteristics

- In 2005, 26,992 babies were born in Western Australia.
- The crude birth rate steadily declined from 15.2 per 1000 total population in 1991 to 12.8 per 1000 total population in 2004 and rose slightly to 13.4 per 1000 total population in 2005.
- Singleton pregnancies occurred in 98.3% of the total 26,538 women who gave birth in 2005. The 442 (1.7%) women with a multiple pregnancy gave birth to 896 twin or triplet babies. There were no quadruplet or quintuplet pregnancies recorded in 2005. There has been minimal difference in these proportions over the previous 15 year period.
- Gestational age and birthweight are important factors affecting the survival of a baby. In 2005, almost two thirds of babies (66.0%) weighed 3,000-3,999g at birth, and the average birthweight was 3,326 grams. The percentage of low birthweight (<2,500grams) babies was 7.1%, and this proportion has remained static over the previous 15 year period.
- In 2005 the percentage of low birthweight babies to mothers identified as Aboriginal (16.5%) was more than twice that of babies born to non-Aboriginal women (6.5%).
- There were 363 (1.3%) babies born as low pre-term (23-31 weeks gestation) in 2005. Of these, the majority were born in public Teaching Hospitals (88.7%), reflecting high referral rates to these institutions.
- Perinatal mortality among the babies born in 2005 indicated that there were 200 fetal deaths and 73 neonatal deaths, providing a perinatal mortality rate of 10.1 perinatal deaths per 1000 total births. The perinatal mortality rate has declined over the previous 15 year period, from 11.0 per 1000 total births in 1991.
- The perinatal mortality rate in 2005 for babies of Aboriginal mothers was 19.2 per 1000 compared with a rate of 9.5 per 1000 for babies of non-Aboriginal women. The perinatal mortality rate for babies of Aboriginal mothers has fluctuated during the 15 year period from 1991.

INTRODUCTION

This is the Twenty-third Annual Report on Perinatal Statistics in Western Australia from the Midwives' Notification System. All routine reports from the collection are in statistical form without identification of individual patients, midwives, doctors or hospitals.

The report contains information on women who gave birth in 2005 and their babies. Pregnancies that resulted in a final product of conception at 20 weeks or more gestation and/or a birthweight equal to or greater than 400 grams have been included. These criteria are in accordance with national reporting methods.

Western Australia's statutory reporting requirements are outlined in the *Health Act 1911*, Section 355. Under the *Health (Notifications by Midwives) Regulations 1994*, midwives are required to provide the Department of Health with notifications of cases attended¹. These notifications are received predominantly by electronic data transmission, with the remainder received in paper format. The Maternal and Child Health personnel check the data for completeness and, if necessary, follow up for additional details. Information received in paper format is transcribed into a coded format, using the World Health Organisation - International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification² (ICD-10-AM, 4th Ed.) to code morbidity.

To ensure the complete ascertainment of perinatal births and deaths within Western Australia, information is collated from the Midwives' Notification System, Hospital Morbidity System and the Registry of Births, Deaths and Marriages. These data are maintained as state-wide data collections.

1. MATERNAL DEMOGRAPHIC INFORMATION

1.1 Age

26,538 women gave birth in Western Australia in 2005. This represented an increase of 5.7% on 2004³.

Maternal age ranged between 12 and 49 years with a mean of 29.4 years, while the average age of first time mothers was 27.7 years.

Table 1. Age and Aboriginality of women who gave birth in Western Australia, 2005

	Aboriginality of Mother				Total No.
	Aboriginal		Non-Aboriginal		
	No.	%	No.	%	
≤19	431	25.4	1054	4.2	1486
20-24	523	30.8	3597	14.5	4120
25-29	386	22.7	6666	26.8	7052
30-34	234	13.8	8451	34.0	8685
35-39	104	6.1	4264	17.2	4368
40-44	20	1.2	783	3.2	803
≥45	-	-	24	0.1	24
Total	1699	100	24839	100	26538

The proportion of births to teenage mothers has remained fairly constant over the past decade being 6.0% or less since 1997.

In the last 15 years, there has been a steady increase in the proportion of women aged 35 years and older who gave birth rising from 9.9% in 1991 to 19.6% in 2005 (see Figure 1).

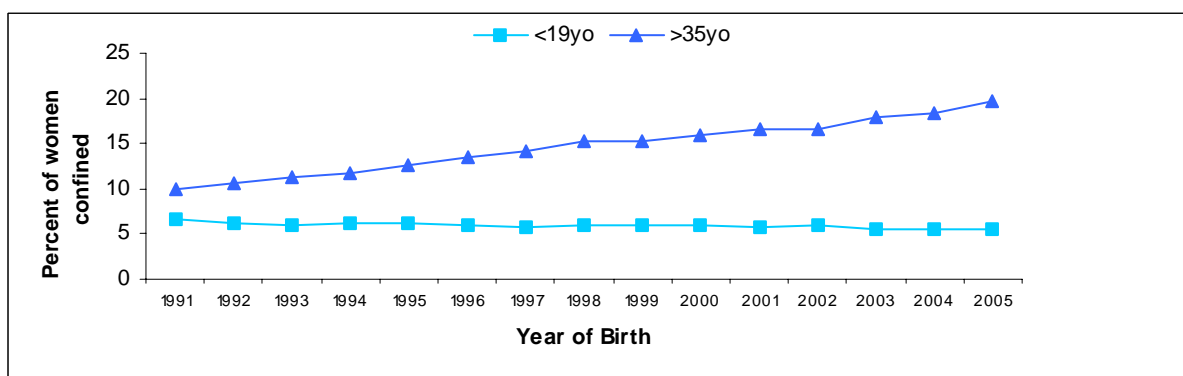


Figure 1. Trends in maternal age in Western Australia, 1991-2005

1.2 Aboriginality

Women identified as being Aboriginal represented 6.4% of all women who gave birth and 9.8% of all Aboriginal woman aged 15-44 in 2005.

Child bearing usually occurs at an earlier age among women who identify as Aboriginal.

Amongst births to teenage mothers, the proportion of Aboriginal mothers was six times greater than for non-Aboriginal mothers.

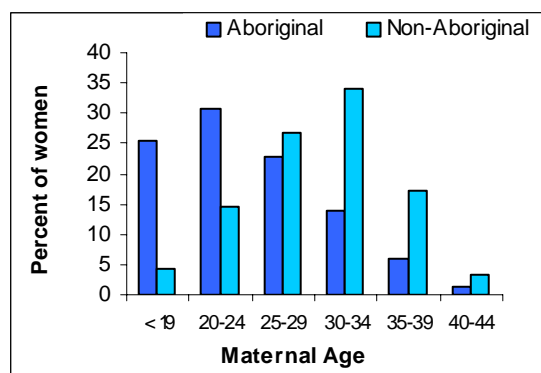


Figure 2. Age distribution by Aboriginality for women giving birth in Western Australia, 2005

Amongst women who were reported as being non-Aboriginal, 54.5% of births occurred in women aged 30 years or more (see Figure 2).

1.3 Country of Birth

The country of birth was recorded for 25,854 (97.4%) women who gave birth in Western Australia. Of these more than one quarter were born overseas.

Table 2. Country of birth of women who gave birth in Western Australia, 2005

Country of Birth	Percentage (n=25,854)
Australia	74.3
United Kingdom & Ireland	7.9
Asia	6.9
Africa	3.9
New Zealand	3.2
Other Europe	2.5
Americas & Pacific Islands	1.2

1.4 Conjugal State

At the time of giving birth 91.1% of women in Western Australia were reported as being in a married or de facto relationship.

Single women represented 7.5% and the remaining women (1.4%) were either separated, divorced or widowed.

1.5 Health Region of Residence

Almost three-quarters (74.7%) of women who gave birth in 2005 provided their usual residential address as being within a metropolitan health region, while 25.2% reported their usual place of residence as within one of the seven non-metropolitan health regions, and 23 (0.1%) women were non-residents of Western Australia.

Among birthing women who identified as Aboriginal, 36.0% were metropolitan residents and 63.9% were resident in a non-metropolitan region.

Conversely 77.3% of non-Aboriginal women were resident in a metropolitan health region, 22.6% were resident in a non-metropolitan health region and 0.1% were not usual residents of Western Australia.

Table 3. Health region of residence and Aboriginality of women who gave birth in Western Australia, 2005

Health Region of Residence	Total	Aboriginality of Mother	
		Aboriginal %	Non-Aboriginal %
Metropolitan			
North Metro	10543	17.1	41.3
South Metro	9267	19.0	36.0
Total Metropolitan	19810	36.0	77.3
Non-Metropolitan			
Kimberley	676	25.3	1.0
Pilbara	875	11.5	2.7
Midwest	766	8.4	2.5
Wheatbelt	960	5.2	3.5
Goldfields	920	7.2	3.2
Great Southern	728	2.9	2.7
South West	1767	3.2	6.9
Total Non-Metropolitan	6692	63.9	22.6
Outside WA	23	0.1	0.1
Overall State	26525	100	100

The majority of women resident in both the North and South Metropolitan Health Regions gave birth in hospitals within their health region or a metropolitan teaching hospital (see Figure 3).

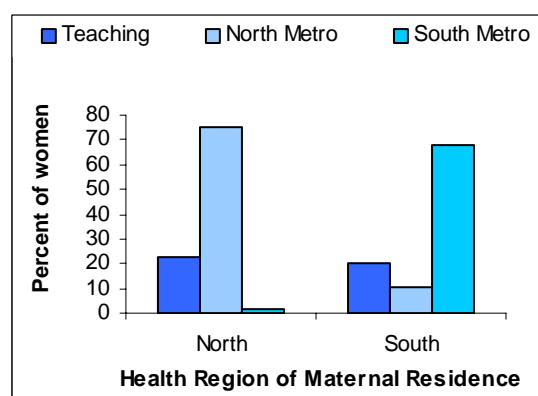


Figure 3. Place of birth for women resident in metropolitan Health Regions in Western Australia, 2005

One fifth, 5,327 (20.0%) of women in Western Australia gave birth at a hospital outside the metropolitan area.

A further 1,352 (5.1%) women with a non-metropolitan residential address gave birth in a metropolitan hospital.

1.6 Place of Birth

Of the 26,538 women who gave birth in Western Australia in 2005, 99.0% gave birth in a hospital.

Non-hospital births included 93 mothers who gave birth before arrival at hospital (BBA) and 155 babies born at home as planned.

Trend data indicates that the proportion of births at private hospitals over the past six years has increased with the introduction of provision of care in private facilities for public patients. The proportion of births at teaching hospitals has remained relatively constant (see Figure 4).

Plurality of pregnancy influenced the place of birth, where metropolitan teaching hospitals being the place of birth for 43.4% of women with multiple pregnancy and 17.7% of those with a singleton pregnancy (see Figures 5 and 6).

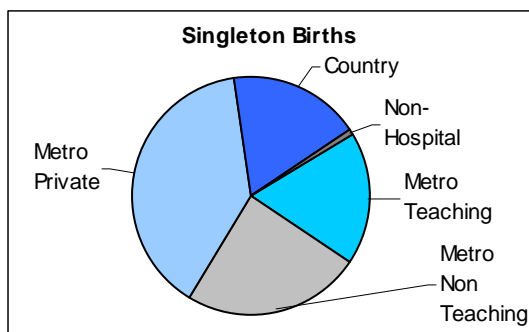


Figure 5. Place of birth for singleton births in Western Australia, 2005

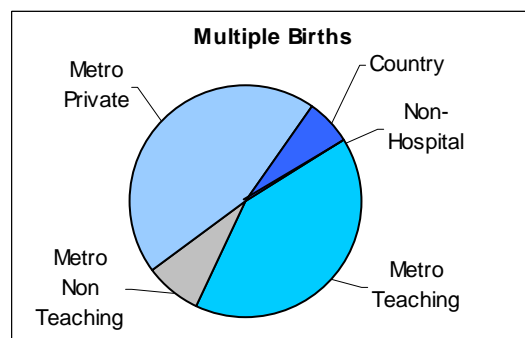


Figure 6. Place of birth for multiple births in Western Australia, 2005

The trend for homebirth has remained relatively constant representing between 0.4% and 0.7% of women who gave birth over the past 15 years.

The Department received notification of a further 24 women in 2005 who had planned a birth at home but because of complications were referred to hospital care, either being transferred during pregnancy (6 women) or labour (18 women). These women and their babies are included in hospital births.

An additional three women who gave birth at home received subsequent medical attention in hospital for management of difficulties with the third stage of labour and/or postpartum haemorrhage and perineal repair.

Further information on Maternal Demographics 2005 is available from Appendix B (Tables 1-10).

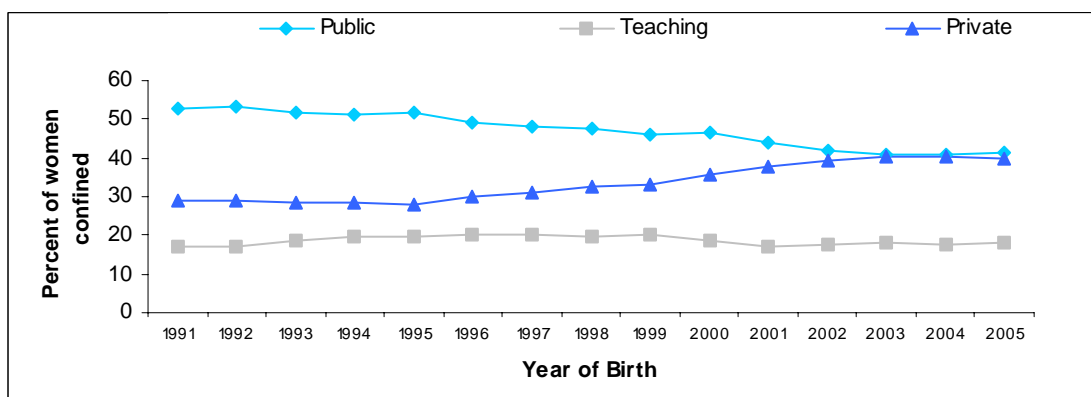


Figure 4. Trend in use of public and private facilities for women giving birth in Western Australia, 1991-2005

2. PREGNANCY PROFILE

2.1 Previous Pregnancies

Almost half of the women who gave birth in Western Australia during 2005 were giving birth for the first time (41.9%).

The highest number of recorded previous pregnancies was 15 with a mean of 1.52 previous pregnancies per women.

In 2005 the highest number of previous births of 20 weeks or more gestational age was 14 with a mean of 1.00 birth.

The percentage of women identified as non-Aboriginal giving birth for the first time (42.5%) was higher than for Aboriginal first time mothers (32.3%).

Of women giving birth, the percentage having their fifth or more child among Aboriginal women (11.3%) was more than eight times the percentage (1.3%) among non-Aboriginal women (see Figure 7).

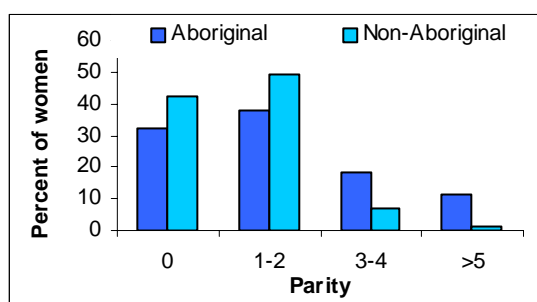


Figure 7. Parity and Aboriginality of women who gave birth in Western Australia, 2005

Of the 11,111 women giving birth for the first time:

- 11.1% were teenage (<20 years)
- 76.1% were aged 20-34 years
- 12.8% were aged 35 years or more.

Among the 5,195 women giving birth who were aged 35 years or more, more than a quarter, 1,423 (27.4%) were having their first baby.

Women with either one or two previous births comprised:

- 2.0% teenage women
- 75.6% women aged 20-34
- 22.4% women aged 35 or more.

Table 4. Parity and age of women who gave birth in Western Australia, 2005

Parity	Total No.	Maternal Age (years)		
		≤ 19 %	20-34 %	≥ 35 %
0	11111	82.8	42.6	27.4
1-2	12851	17.0	48.9	55.5
3-4	2062	0.2	7.1	12.6
≥5	514	-	1.4	4.6
Total	26538	100.0	100.0	100.0

Trend data shows a gradual increase in the proportion of mothers having their first birth experience is consistent with reduced family size.

Trend data has also shown that the average parity (births before current pregnancy) has remained constant during the 15 year period from 1991 to 2005 ranging between 1.00 and 1.06, although the average parity of 1.00 for 2005 is the lowest recorded value.

2.2 Socio-economic Status

Socio-economic status was assessed for all women who gave birth in Western Australia in 2005 according to their Socio-Economic-Index-For-Areas (SEIFA) Disadvantage Index.

Group I has the highest socio-economic status and the highest proportion (29.8%) of births to women aged ≥ 35 years old. Conversely, group VI has the lowest socio-economic status and the highest proportion (10.7%) of births to teenage woman ≤ 19 years old.

Table 5. Socioeconomic status and age of women who gave birth in Western Australia, 2005

SEIFA Index	Total No.	Maternal Age (years)		
		≤ 19 %	20-34 %	≥ 35 %
I	4806	1.5	68.7	29.8
II	7278	3.8	75.9	20.3
III	2850	6.0	75.9	18.1
IV	4227	6.8	76.4	16.8
V	4988	9.0	76.4	14.5
VI	2017	10.7	76.5	12.7
Total	26166	5.6	74.8	19.6

Note: 372 women could not be classified using this index

2.3 Age-Specific Birth Rates

Overall the birth rate of Aboriginal women was 98.9 per 1000 women of child bearing age (15-44 years old) compared with the birth rate for non-Aboriginal women of 61.0 per 1000 women of child bearing age (15-44 years old).

Among the 15-19 year age group the birth rate of Aboriginal women (110.1 per 1000) was almost seven times the rate for non-Aboriginal women (15.8 per 1000).

For women in the 20-24 year age group, the birth rate for Aboriginal women (166.4 per 1000) was three times the rate for non-Aboriginal women (54.4 per 1000) (see Figure 8).

For women in the 30-34 year age group, the birth rate for Aboriginal women (86.6 per 1000) was lower than the rate for non-Aboriginal women (122.6 per 1000).

Trend data indicates that the age specific birth rate for women 15-19 years decreased over the past 15 years from 25.8 births per 1000 in 1991 to 21.0 per 1000 in 2005.

Trend data also indicates that the birth rate for women aged 35-44 increased from 19.2 births per 1000 women in 1991 to 35.0 per 1000 women in 2005.

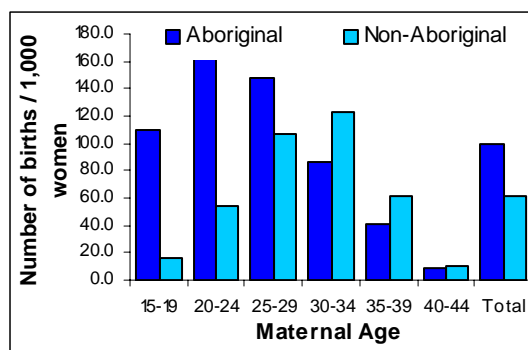


Figure 8. Age specific birth rates by 5 year age groups and Aboriginality in Western Australia, 2005

2.4 Complications of Pregnancy

Over half (62.5%) of the women who gave birth during 2005 were recorded as having had no complications of pregnancy.

Of the women who did experience complications, premature rupture of membranes was reported for 4.5% and threatened abortion before 20 weeks gestation was reported for 5.0% of women.

Table 6. Selected complications of pregnancy of women who gave birth in Western Australia, 2005

Complications of Pregnancy ¹	% of women	
	No.	% of women
Threatened abortion	1335	5.0
Threatened preterm labour	674	2.5
Urinary Tract Infection	934	3.5
Pre-eclampsia	1031	3.9
Antepartum haemorrhage		
-placenta praevia	188	0.7
-placental abruption	123	0.5
-other	734	2.8
Premature rupture of membranes	1200	4.5
Gestational Diabetes	1101	4.1
Other	5005	18.9
No complications of pregnancy	16599	62.5

¹A woman may have more than one complication of pregnancy.

2.5 Medical Conditions

There were 9,597 reported instances of pre-existing medical conditions recorded among the 26,538 women who gave birth during 2005.

No pre-existing medical condition was recorded for 70.6% of women.

Table 7. Selected pre-existing medical conditions for women who gave birth in Western Australia, 2005

Medical Conditions ¹	No.	% of women
Asthma	2767	10.4
Psychological disorders	1528	5.8
Urinary tract disorders	510	1.9
Thyroid disorders	491	1.9
Genital herpes	471	1.8
Cardiac disorders	352	1.3
Vaginal infections	328	1.2
Spinal deformities/disorders	295	1.1
Anaemia and blood dyscrasias	287	1.1
Essential hypertension	275	1.0
Cervical dysplasia	239	0.9
Pre-existing diabetes	172	0.6
Epileptic disorders	148	0.6
Bronchial disorders	83	0.3
Other	1661	6.3
No medical conditions	18725	70.6

¹A woman may have more than one medical condition

2.6 Procedures and Treatments

There were 46,137 procedures and treatments provided to 26,538 women who gave birth in 2005.

The most common procedure was uterine ultrasound, with 96.1% of women having undergone this procedure.

Table 8. Procedures and treatments provided to women who gave birth in Western Australia, 2005

Procedures and Treatments ¹	No.	% of women
Ultrasound	25522	96.1
² CTG intrapartum	10629	40.0
² CTG antepartum	8478	31.9
Amniocentesis	647	2.4
Fertility treatment	672	2.5
³ CVS/placental biopsy	102	0.4
Cervical suture	87	0.3

¹A Woman may have more than one procedure or treatment

²CTG - Cardiotocography.

³CVS - Chorionic Villus Sampling.

Further information on Pregnancy Profiles 2005 is available from Appendix B (Tables 11-18).

3. LABOUR AND DELIVERY

3.1 Onset of Labour

Labour established spontaneously for almost half (49.4%) of the women who gave birth in Western Australia in 2005.

Induction of labour occurred for 28.6% of all women who gave birth and 22.0% did not experience labour, being delivered by caesarean section.

Among those women with a multiple pregnancy:

- 32.4% had a spontaneous onset of labour,
- 20.8% had labour induced and
- 46.8% did not experience labour (see Figure 9).

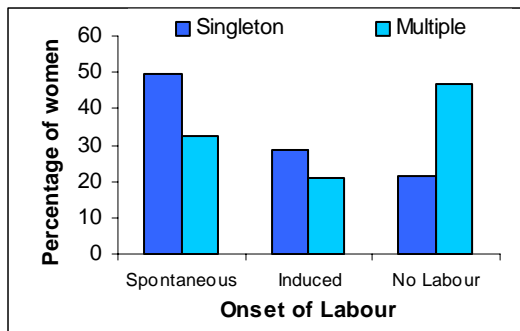


Figure 9. Onset of labour for singleton and multiple births in Western Australia, 2005

Trend data indicates an increase in the proportion of women with a singleton pregnancy for whom labour was induced (24.0% in 1991 to 28.8% in 2005) and those who did not experience labour (11.0% in 1991 to 21.6% in 2005).

There was a corresponding decrease in the proportion of women who established labour spontaneously (65.0% in 1991 to 49.7% in 2005) (see Figure 10).

3.2 Augmentation of Labour

Augmentation of spontaneous labour by surgical and/or medical intervention was administered to 5,351 (49.4%) of women who established labour spontaneously.

Of the women for whom labour was augmented, 3,318 (12.5%) progressed to a spontaneous vaginal birth, 1,262 (4.8%) to a vaginal birth with assistance and 771 (2.9%) required a caesarean section delivery.

Women who established labour and gave birth without obstetric intervention comprised only 22.7% of all women who gave birth in 2005.

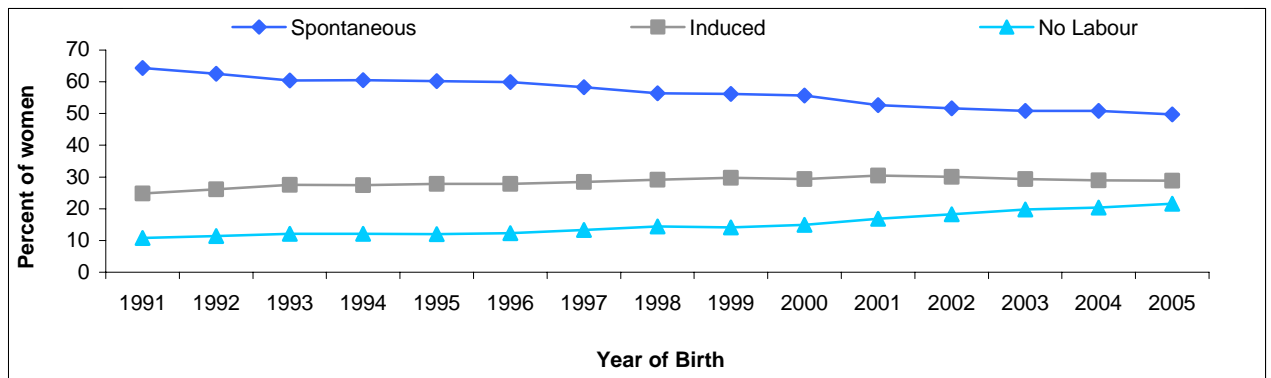


Figure 10. Onset of labour for singleton births in Western Australia, 1991-2005

3.3 Induction of Labour

Labour was induced by medical and/or surgical means for 7,597 (28.6%) women who gave birth.

The methods of induction were usually combined. Artificial rupture of membranes combined with an oxytocin infusion and/or prostagandins were recorded for 64.5%, while artificial rupture of membranes alone (5.7%) and oxytocin infusion alone (7.4%) comprised methods for women whose labour was induced.

3.4 Analgesia

Among the 17,552 women who gave birth vaginally, 20.8% received no pharmacological analgesia.

Of those women who did receive analgesia in labour, a lumbar epidural block was administered to 36.5%, nitrous oxide and oxygen inhalation was provided to 22.2%, narcotic sedation to 18.2%, and spinal analgesic block to 1.4% of women.

Table 9. Analgesia for women who had vaginal births in Western Australia, 2005

Vaginal Births		
Type of Analgesia	No.	% of women
None	3656	20.8
Nitrous oxide & oxygen	3897	22.2
Narcotic sedation	3193	18.2
Epidural	6408	36.5
Spinal	254	1.4
Other	144	0.8
Total	17552	100.0

3.5 Anaesthesia

Among the 17,552 women who gave birth vaginally, 9,983 (56.9%) received no anaesthesia at time of birth.

Epidural and/or spinal anaesthesia was the most frequently administered (34.1%) form of anaesthesia to those women who required pain relief.

Table 10. Anaesthesia for women who had vaginal births in Western Australia, 2005

Vaginal Births		
Type of Anaesthesia	No.	% of women
None	9983	56.9
Local infiltration	1153	6.6
Pudendal block	179	1.0
Epidural &/or spinal	5989	34.1
General/ other	248	1.4
Total	17552	100.0

Among women who were delivered by caesarean section, epidural and/or spinal anaesthesia was the preferred option (94.0%).

Trend data for the last 15 years shows that the use of general anaesthesia/analgesia has decreased in women who were delivered by caesarean section. For example, in 1991 general anaesthesia was used in 21.8% of elective caesareans compared with 3.0% in 2005.

Table 11. Anaesthesia for women who had caesarean births in Western Australia, 2005

Caesarean Births		
Type of Anaesthesia	No.	% of women
Epidural &/or spinal	8445	94.0
General	449	5.0
Combination of epidural, spinal & general	92	1.0
Total	8986	100.0

3.6 Presentation

The majority of singleton pregnancy babies were cephalic presentations (95.0%) of which 69.5% delivered vaginally.

Breech presentations among babies of singleton pregnancies (4.2%) were delivered by caesarean section in 90.5% of cases.

Table 12. Caesarean births in other States and Territories of Australia, 2004

Caesarean Births		
Other States and Territories	Year	% of women
Western Australia	2004	32.4
South Australia	2004	31.5
Queensland	2004	31.4
Victoria	2004	29.4
Northern Territory	2004	28.7
New South Wales	2004	27.2
Australian Capital Territory	2004	27.0
Tasmania	2004	26.6
Australia	2004	29.4

3.7 Type of Birth

Spontaneous vaginal birth occurred for just over half (53.5%) of women who gave birth in 2005. A further 12.7% required an assisted vaginal birth.

For those women who required assistance for a vaginal birth, 9.9% were aided by vacuum extraction and 2.4% by forceps. Among women with breech presentation 104 (9.5%) gave birth vaginally with or without assistance.

Caesarean section was the method of birth for 8,986 (33.9%) women. This comprised 19.1% elective and 14.8% emergency procedures.

Women with multiple birth pregnancies have a higher probability of caesarean section delivery. In 2005, 289 (67.2%) of women with a twin pregnancy and 11 of the 12 women with a triplet pregnancy were delivered by caesarean section.

Women who have had caesarean section births previously are most likely to have repeat procedures. This is shown by 88.1% of women for whom previous caesarean section was recorded having a repeat caesarean in 2005.

Caesarean section to optimise birth outcome is the preferred choice of delivery of preterm births (<37 weeks). In 1991 34.3% of preterm babies were delivered by caesarean section while in 2005 this proportion has risen to 47.6%.

Trend data indicates that the occurrence of caesarean sections has increased significantly over the past 15 years from 18.5% in 1991 to 33.9% in 2005.

The most recent national comparison⁴ (2004) of State and Territory caesarean section births indicates that Western Australia with a recorded proportion of 32.4% had the highest proportion (Table 12). The national proportion of caesarean section in 2004 was 29.4%.

Indications for caesarean section are provided by complications of labour and delivery. More than one complication may be recorded and women delivered by caesarean section had a minimum of one complication recorded.

Table 13. Complications of labour and delivery for women who gave birth by caesarean section in Western Australia, 2005

¹ A woman may have more than one complication of labour and delivery recorded.

Caesarean Births		
Complications of Labour and Delivery ¹	No.	% of caesarean section
Previous caesarean	3752	41.8
Obstructed or delayed labour	1964	21.9
Fetal distress	1492	16.6
Placental disorders and haemorrhage	1580	11.6
Breech or other malpresentation	1018	11.3
Cephalopelvic disproportion	692	7.7
Abnormal forces of labour	674	7.5
Pregnancy induced disorders	597	6.6
Other	980	10.9
Total	13656	

3.8 Hours of Established Labour

For the majority of women who experienced spontaneous labour, the duration was between 1-4 hours for 37.1% of births and between 5-12 hours for 46.6% of births.

Women for whom labour was induced tended to have shorter hours of labour than those with spontaneous onset of labour.

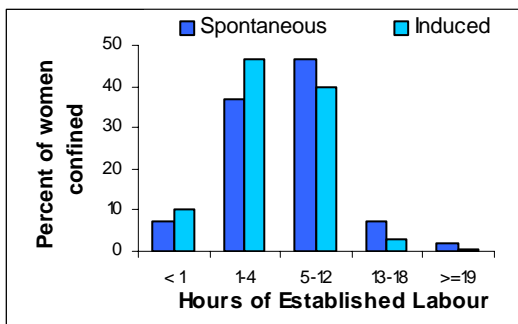


Figure 11. Hours of established labour for spontaneous and induced onsets in Western Australia, 2005

3.9 Complications of Labour and Delivery

There were no complications of labour and delivery recorded for over one-third (37.3%) of women who gave birth in 2005.

Of women who had a multiple pregnancy, only 5.0% of women reported having no complications of labour and delivery.

Table 14. Complications of labour and delivery for women who gave birth in Western Australia, 2005

All Births		
Complications of Labour and Delivery ¹	No.	% of women
Previous caesarean	3900	14.7
Fetal distress	3570	13.5
Post partum haemorrhage	2679	10.1
Precipitate delivery	1287	4.8
Failure to progress >3cms	1247	4.7
Cord tightly around neck	1199	4.5
Failure to progress ≤3cms	897	3.4
Persistent occipito posterior	626	2.4
Cephalopelvic disproportion	560	2.1
Shoulder dystocia	364	1.4
Retained placenta - manual removal	353	1.3
Prolapsed cord	33	0.1
Other	6708	25.3
Total	23423	

¹ A woman may have more than one complication of labour and delivery.

The most common complications experienced by women who gave birth in 2005 were previous caesarean section (14.7%), fetal distress (13.5%), and post partum haemorrhage (10.1%).

Differences in complications of labour and delivery exist between singleton and multiple births. For example, post partum haemorrhage was recorded for 9.8% of singleton pregnancies and 28.7% of multiple pregnancies for an overall figure of 10.1% of all births.

3.10 Accoucheur

A midwife or a midwife supervising a student was the accoucheur for 10,449 women (73.6%) who had a spontaneous vaginal birth.

Obstetricians and other medical officers were reported to be the accoucheur for 39.5% of women who gave birth vaginally.

3.11 Repair of Perineum and/or Vagina

Among women who gave birth per vaginum 6,827 (38.9%) did not require a repair procedure; 17.8% had an episiotomy repaired; and 38.5% had repair of a first or second degree tear (Figure 12).

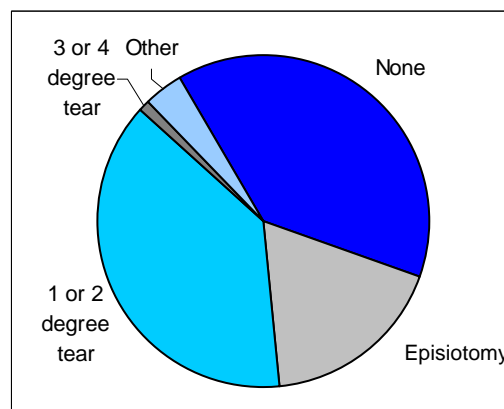


Figure 12. Repair of perineum and/or vagina for vaginal births in Western Australia, 2005

Further information on Labour and Delivery 2005 is available from Appendix B (Tables 19-39).

4. BABY CHARACTERISTICS

4.1 Births

Notification forms (Appendix D) were received for 26,992 births of 20 weeks or more gestation or 400 grams or greater birth weight in 2005, an increase of 5.4% from 2004 births.

4.2 Crude Birth Rate

The crude birth rate in 2005 was 13.4 per 1000 population.

Trend data indicates that the rate gradually declined during the past 15 years from 15.2 per 1000 in 1991 to 12.8 in 2004 with a slight rise to 13.4 in 2005 (see Figure 13).

4.3 Gender

The gender of births was male (51.0%) and female (49.0%) during 2005 (male:female ratio of 1.04).

4.4 Condition at Birth

There were 26,792 (99.3%) livebirths and 200 (0.7%) fetal deaths during 2005 and this proportion has remained consistent during the past 15 year period.

The referral of mothers with a high-risk pregnancy and/or known fetal death in utero is illustrated by the fact that almost two thirds of fetal deaths (63.0%) were delivered in a metropolitan teaching hospital.

4.5 Plurality of Birth

Singleton births represented 96.7% and multiple birth babies 3.3% of total births.

There were 860 twin babies and 36 triplet babies (12 sets) born during 2005.

The proportion of multiple births has generally increased over the past 15 years rising from 2.6% in 1991 to 3.3% of total births in 2005.

4.6 Apgar Score at One Minute and Five Minutes

An Apgar Score at one minute of 8-10 was recorded for 82.7% of livebirths while only 346 (1.3%) of livebirths had an Apgar Score of less than 4 at one minute.

At five minutes 97.5% of livebirths had an Apgar Score of 8-10.

4.7 Time to Spontaneous Respiration

Among all livebirths, 90.8% established spontaneous respiration within the first minute of life. The time taken by babies who were intubated during resuscitation to establish spontaneous respiration is not reported.

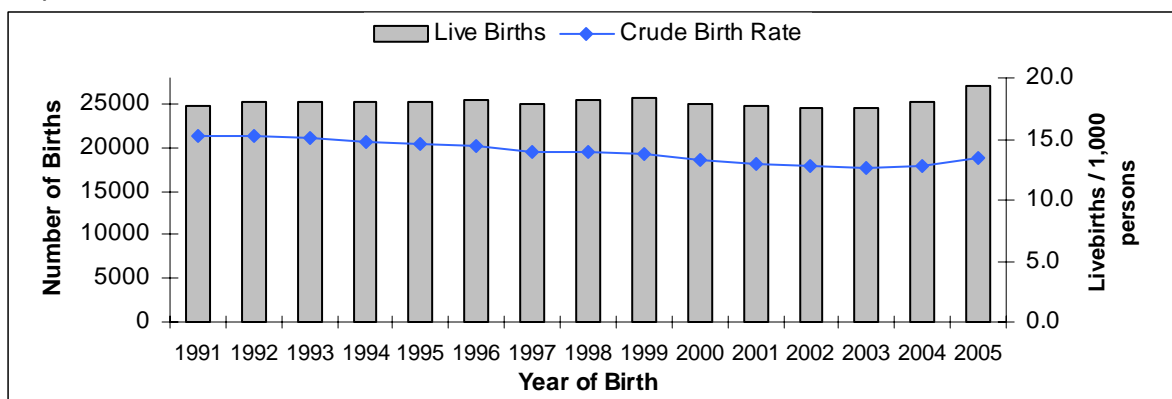


Figure 13. Live births and crude birth rates in Western Australia, 1991-2005

4.8 Resuscitation

Fewer than half (38.8%) of newborns received some form of resuscitation. Suction only was provided to 15.2% and oxygen therapy to 14.4%.

Other babies required more active resuscitation using bag and mask technique (7.2%) and endotracheal intubation either alone or with external cardiac massage (1.2%).

Table 15. Resuscitation methods for liveborn babies in Western Australia, 2005

Resuscitation Method ¹	No.	% of livebirths
None	16388	61.2
Suction Only	4082	15.2
Oxygen Therapy	3855	14.4
Bag & Mask	1917	7.2
Intubation	268	1.0
External Cardiac Massage	46	0.2
Other	217	0.8

¹ Resuscitation methods of livebirths.

4.9 Birthweight

A mean birthweight of 3,326 grams with a standard deviation of 616 grams was recorded.

Two thirds (66.0%) of babies weighed between 3,000 and 3,999 grams at birth. Low birthweight babies (<2,500 grams) represented 7.1% of births.

Among babies of women identified as Aboriginal, the proportion of low birthweight was higher (16.5%) than the proportion among babies of women who did not identify as Aboriginal (6.5%).

Trend data indicates that the proportion of low birthweight among babies of Aboriginal mothers ranged between 11.8% in 1992 and 16.5% in 2005. This represents an increase from 14.9% in 2004. The proportion of low birthweight among babies of non-Aboriginal women has also increased over the same period.

4.10 Gestational Age

Preterm birth (less than 37 weeks gestation) occurred for 8.9% of the total births in 2005.

Plurality affected gestational age outcome with 7.2% of singleton births and 58.9% of multiple births being born preterm.

Among the lower preterm births of 23 to 31 weeks gestation, 88.7% were born in a metropolitan teaching hospital and 4.7% in a private hospital.

Trend data indicates that the proportion of livebirths at 23-31 week age, born at metropolitan teaching hospitals has increased slightly from 72.1% in 1991 to 77.7% in 2005 indicating an increase in referral transfer of women with a high risk pregnancy.

4.11 Birth Trauma

Cephalhaematoma and other soft tissue trauma to the skull were reported in 6.6% of vaginal births. This includes trauma from application of a vacuum cup or forceps blades during assisted vaginal births.

4.12 Birth Defects

Table 16. Birth Defects for babies born in Western Australia, 2005

Birth Defects	No.	Rate/1000 births
Musculo-Skeletal	338	12.6
Cardiovascular	272	10.1
Urinary-Genital	208	7.7
Chromosome	147	5.5
Gastro-Intestinal	132	4.9
Nervous System	104	3.9
Respiratory System	25	0.9

Recording of a birth defect in the Midwives Notification System data provides an initial data source for the Birth Defect Registry. More detailed information is available upon request to the Birth Defects Registry ⁵.

4.13 Special Care

Reporting of special care for newborn babies relates only to those who received care in Level 2 or Level 3 special care nurseries. Babies who stayed for less than one day are not included. The proportion of livebirths who received special care of one day or more was 8.0%.

4.14 Neonatal Transfers

Inter-hospital transfers were made for 898 (3.4%) of livebirths. This was to provide care at tertiary hospitals (41.3%) and for provision of continued care in a hospital or a community facility during the neonatal period prior to discharge home.

4.15 Length of Stay

The majority of liveborn babies (82.8%) stayed in their hospital of birth from 2-7 days and a further 10.0% stayed for less than 24 hours following birth. An additional 5.1% stayed between 8 and 14 days while 0.9% stayed for more than 28 days.

4.16 Perinatal Mortality

There were 273 perinatal deaths of 20 weeks or more gestation recorded during 2005 (200 fetal deaths plus 73 neonatal deaths).

This represented a perinatal mortality rate of 10.1 per 1000 total births, a fetal death rate of 7.4 per 1000 total births and a neonatal mortality rate of 2.7 per 1000 livebirths for 2005.

The perinatal death rate among babies of women identified as Aboriginal (19.2 per 1000) was higher than the rate for babies of non-Aboriginal women (9.5 per 1000).

Trend data indicated that there has been a gradual reduction in the perinatal mortality rate over the past 15 years from 11.0 in 1991 to 10.1 per 1000 total births in 2005. Among babies of Aboriginal mothers the rate reduction from 20.9 to 19.2 per 1000 was similar to the rate reduction among babies of non-Aboriginal women (10.4 to 9.5 per 1000 total births).

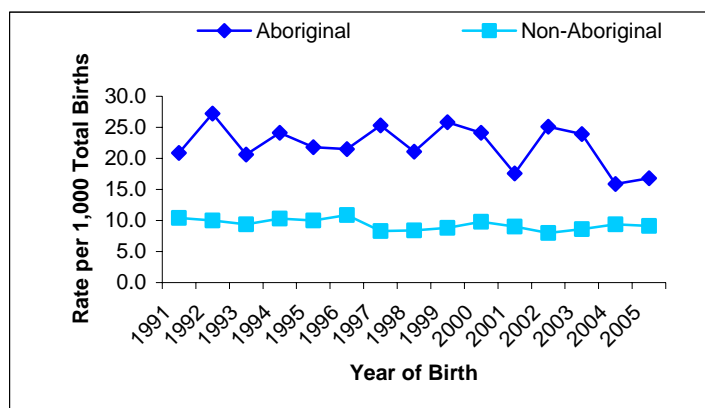


Figure 14. Perinatal mortality by Aboriginality in Western Australia, 1991-2005

Low birthweight and early gestational age influence perinatal mortality rates.

Almost half (40.3%) of the perinatal deaths in 2005 were in babies with a birthweight less than 500 grams and more than three quarters (78.0%) were in the low birthweight category of less than 2,500 grams birthweight.

Multiple birth babies are subject to increased mortality due to complications associated with low birthweight and earlier gestational age. The perinatal mortality rate for multiple births of 32.4 per 1000 was more than three times the rate for singleton births of 9.3 per 1000 in 2005.

A neonatal death (the death of a liveborn baby before the 28th day) is more likely to occur before the end of the first day of life (38.4%).

Autopsy requests were made for 48.4% of perinatal deaths. This comprised 58.0% of fetal deaths and 21.9% of neonatal deaths. There were 69 perinatal deaths for which it was not known if an autopsy had been requested.

The principal causes of both fetal and neonatal deaths were conditions associated with extremely low birthweight (<1000 grams) (33.0% fetal and 35.6% neonatal). Lethal birth defects were the cause of 33.5% of fetal deaths and 30.1% of neonatal deaths.

Further information on Baby Characteristics 2005 is available from Appendix B (Tables 40-75).

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APPENDIX A - GLOSSARY

Age-Specific Birth Rate	The total births (livebirths and stillbirths) per 1000 to women aged between 15-44 years.
Apgar Score	A numerical scoring system applied after birth to evaluate the condition of the baby. It is based on the heart rate, respiration, muscle tone, reflexes and colour. Low scores indicate poor condition.
Born Before Arrival (BBA)	A birth that occurs prior to arrival of the mother at the intended place of birth.
Birth Defects	Any defect present at birth, probably of developmental origin.
Birthweight	<p>The first weight, measured to the nearest five grams, of the newborn, which is usually obtained within the first hour of birth.</p> <p><u>Low Birthweight</u>: A birthweight of less than 2500 grams.</p> <p><u>Very Low Birthweight</u>: A birthweight of less than 1500 grams.</p>
Caesarean Section	<p>A delivery of the fetus through an incision in the abdominal wall.</p> <p><u>Elective Caesarean Section</u> - A planned procedure prior to onset of labour and before spontaneous rupture of membranes or without any induction procedure.</p> <p><u>Emergency Caesarean Section</u> - An unplanned procedure, performed because of a complication. May be performed before the onset of labour or during labour.</p>
Confinement	Pregnancy resulting in at least one birth.
Crude Birth Rate	The number of livebirths per 1000 total population.
Epidural	Injection of analgesic agent outside the dura mater which covers the spinal canal.
Episiotomy	An incision of the perineum and vagina to enlarge the vulval orifice
Gestational Age	The duration of pregnancy in completed weeks from the first day of the last normal menstrual period.
Fetal Death	The complete expulsion or extraction from its mother of a product of conception of at least 20 weeks gestation or 400 grams birthweight, which after separation did not show any sign of life.

Length of Stay	The total number of patient days in hospital at time of discharge. A stay of less than one day (patient admission, birth and discharge on the same day) is counted as one day, in the total days of care. For patients admitted and discharged on different days, the number of days is computed by subtracting the date of admission from the day of separation. For planned homebirths it is routinely coded as 10 days from date of birth.
Livebirth	The complete expulsion or extraction from its mother of a product of conception, irrespective of duration of pregnancy, which after separation shows signs of life.
Mortality Rates	<p><u>Fetal death rate</u> - the number of fetal deaths per 1000 total births in a year.</p> <p><u>Neonatal mortality</u> - the number of neonatal deaths per 1000 livebirths in a year.</p> <p><u>Perinatal mortality</u> - the number of stillbirths and neonatal deaths per 1000 total births in a year.</p>
Neonatal Death	The death of a liveborn infant within 28 days of birth.
Parity	<p>The total number of livebirths and fetal deaths of the mother prior to the parturition under consideration.</p> <p><u>Nulliparous</u>: Never having completed a pregnancy beyond 20 weeks gestation.</p> <p><u>Multiparous</u>: Having completed one or more pregnancies beyond 20 weeks gestation.</p>
Perinatal Death	A fetal death or neonatal death.
Perineal Status	<p><u>1st degree tear</u>: a perineal graze-laceration-tear involving the fourchette, hymen, labia, skin, vagina or vulva.</p> <p><u>2nd degree tear</u>: a perineal laceration or tear involving the pelvic floor or perineal muscles or vagina muscles.</p> <p><u>3rd degree tear</u>: a perineal laceration-tear involving the anal sphincter or rectovaginal septum.</p> <p><u>4th degree tear</u>: a third degree perineal laceration or tear which also involves the anal mucosa or rectal mucosa.</p>
Plurality	The number of fetuses or babies resulting from the pregnancy. On this basis pregnancy may be classified as singleton or multiple.
SEIFA Index	Using 2001 Census data, Statistical Local Areas were allocated to six groups based on the Socio-Economic-Index-For-Areas (SEIFA) Disadvantage Index. SEIFA Group I is classed as having the highest socio-economic status and SEIFA group VI as the group with the lowest socio-economic status.

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Maternal Demographic Information

Table 1: Age and Aboriginality of women who gave birth in Western Australia, 2005

Maternal Age	Aboriginality of Mother				Total	
	Aboriginal		Non-Aboriginal		No.	%
	No.	%	No.	%		
≤ 14	9	0.5	6	0.0	15	0.1
15	33	1.9	19	0.1	52	0.2
16	62	3.6	83	0.3	145	0.5
17	91	5.4	191	0.8	282	1.1
18	119	7.0	309	1.2	428	1.6
19	118	6.9	446	1.8	564	2.1
≤ 19	432	25.4	1054	4.2	1486	5.6
20-24	523	30.8	3597	14.5	4120	15.5
25-29	386	22.7	6666	26.8	7052	26.6
30-34	234	13.8	8451	34.0	8685	32.7
35-39	104	6.1	4264	17.2	4368	16.5
40-44	20	1.2	783	3.2	803	3.0
≥ 45	-	-	24	0.1	24	0.1
TOTAL	1699	100.0	24839	100.0	26538	100.0

Mean = 29.4 years. Standard deviation = 5.7 years.

Table 2: Age of women who gave birth in Western Australia, 1991-2005

Year of Birth	Maternal Age						Total	
	≤ 19		20-34		≥ 35		No.	%
	No.	%	No.	%	No.	%		
1991	1639	6.6	20602	83.5	2438	9.9	24679	100.0
1992	1574	6.3	20757	83.1	2639	10.6	24970	100.0
1993	1496	6.0	20670	82.8	2807	11.2	24973	100.0
1994	1592	6.3	20515	81.8	2964	11.8	25071	100.0
1995	1522	6.1	20395	81.3	3173	12.6	25090	100.0
1996	1521	6.0	20297	80.6	3374	13.4	25192	100.0
1997	1446	5.8	19899	80.0	3524	14.2	24869	100.0
1998	1519	6.0	19928	78.8	3847	15.2	25294	100.0
1999	1509	5.9	19979	78.7	3890	15.3	25378	100.0
2000	1479	6.0	19367	78.0	3972	16.0	24818	100.0
2001	1422	5.8	19005	77.6	4065	16.6	24492	100.0
2002	1438	5.9	18872	77.4	4084	16.7	24394	100.0
2003	1340	5.5	18566	76.5	4375	18.0	24281	100.0
2004	1389	5.5	19091	76.0	4631	18.4	25111	100.0
2005	1486	5.6	19857	74.8	5195	19.6	26538	100.0

Table 3: Country of birth and age of women who gave birth in Western Australia, 2005

Country of Birth	Maternal Age						Total	
	≤ 19		20-34		≥ 35		No.	%
	No.	%	No.	%	No.	%	No.	%
Australia	1313	48.9	14711	81.2	3181	63.1	19205	74.3
New Zealand	41	1.5	617	3.4	160	3.2	818	3.2
Other Pacific	-	-	54	0.3	17	0.3	71	0.3
United Kingdom and Ireland	1265	47.1	35	0.2	734	14.5	2034	7.9
Other Europe	5	0.2	445	2.5	188	3.7	638	2.5
Vietnam	1	0.0	220	1.2	53	1.1	274	1.1
Malaysia	4	0.1	197	1.1	63	1.2	264	1.0
Other SE Asia	10	0.4	505	2.8	182	3.6	697	2.7
Other Asia	6	0.2	391	2.2	146	2.9	543	2.1
North America	-	-	122	0.7	81	1.6	203	0.8
South and Central America	1	0.0	81	0.4	29	0.6	111	0.4
South Africa and Zimbabwe	4	0.1	284	1.6	86	1.7	374	1.4
Other Africa and Middle East	33	1.2	464	2.6	125	2.5	622	2.4
TOTAL	2683	100.0	18126	100.0	5045	100.0	25854	100.0

Excludes 684 women whose country of birth is unknown.

Table 4: Conjugal state and plurality of women who gave birth in Western Australia, 2005

Conjugal State	Plurality				TOTAL	
	Singleton		Multiple		No.	%
	No.	%	No.	%	No.	%
Single	1947	7.5	32	7.2	1979	7.5
Married/De facto	23779	91.1	404	91.4	24183	91.1
Other ¹	370	1.4	6	1.4	376	1.4
TOTAL	26096	100.0	442	100.0	26538	100.0

¹ Other includes separated, divorced and widowed.

Table 5: Health region of residence and Aboriginality of women who gave birth in Western Australia, 2005

Health Region of Residence	Aboriginality of Mother				TOTAL	
	Aboriginal		Non-Aboriginal		No.	%
	No.	%	No.	%		
Metropolitan						
North	290	17.1	10253	41.3	10543	39.7
South	322	19.0	8945	36.0	9267	34.9
Total Metro	612	36.0	19198	77.3	19810	74.7
Country						
Kimberley	430	25.3	246	1.0	676	2.5
Pilbara	196	11.5	679	2.7	875	3.3
Midwest	142	8.4	624	2.5	766	2.9
Wheatbelt	89	5.2	871	3.5	960	3.6
Goldfields	123	7.2	797	3.2	920	3.5
South West	55	3.2	1712	6.9	1767	6.7
Great Southern	50	2.9	678	2.7	728	2.7
Total Country	1085	63.9	5607	22.6	6692	25.2
Outside WA	1	0.1	22	0.1	23	0.1
TOTAL	1698	100.0	24827	100.0	26525	100.0

Excludes 13 mothers with unknown WA post code.

Table 6: Place of birth for women resident in metropolitan health regions in Western Australia, 2005

Health Region of Residence	Birth Hospital in Health Region					TOTAL
	Teaching	North Metro	South Metro	Country	Non Hospital	
	Number					
North	2350	7885	214	11	83	10543
South	1900	959	6270	18	120	9267
TOTAL	4250	8844	6484	29	203	19810
Percentage						
North	22.3	74.8	2.0	0.1	0.8	100.0
South	20.5	10.3	67.7	0.2	1.3	100.0
TOTAL	21.5	44.6	32.7	0.1	1.0	100.0

Table 7: Place of birth for women resident in country health regions in Western Australia, 2005

Health Region of Residence	Birth Hospital in Health Region					TOTAL
	Internal	Metro		Other Country	Non Hospital	
		Teaching	Other			
Number						
Kimberley	592	54	21	1	5	673
Pilbara Gascoyne	613	80	147	27	8	875
Midwest	604	94	59	5	2	764
Wheatbelt	321	144	442	40	11	958
Goldfields SE Coastal	813	48	47	7	5	920
South West	1615	82	51	8	11	1767
Great Southern	630	46	37	12	3	728
TOTAL	5188	548	804	100	45	6685
Percentage						
Kimberley	88.0	8.0	3.1	0.1	0.7	100.0
Pilbara Gascoyne	70.1	9.1	16.8	3.1	0.9	100.0
Midwest Murchison	79.1	12.3	7.7	0.7	0.3	100.0
Wheatbelt	33.5	15.0	46.1	4.2	1.1	100.0
Goldfields SE Coastal	88.4	5.2	5.1	0.8	0.5	100.0
South West	91.4	4.6	2.9	0.5	0.6	100.0
Great Southern	86.5	6.3	5.1	1.6	0.4	100.0
TOTAL	77.6	8.2	12.0	1.5	0.7	100.0

Table 8: Place of birth and intended place of birth for women who gave birth in Western Australia, 2005

Actual Place of Birth	Intended Place of Birth			TOTAL
	Hospital	Birth Centre	Home	
Number				
Teaching ¹	4300	232	11	4543
Public Hospital	10911	33	14	10958
Private Hospital ²	10492	27	1	10520
Birth Centre	11	234	-	245
Home	6	1	148	155
BBA ³	83	4	3	90
TOTAL	25803	531	177	26511
Percentage				
Teaching	94.7	5.1	0.2	100.0
Public Hospital	99.6	0.3	0.1	100.0
Private Hospital	99.7	0.3	0.0	100.0
Birth Centre	4.5	95.5	-	100.0
Home	3.9	0.6	95.5	100.0
BBA	92.2	4.4	3.3	100.0
TOTAL	97.3	2.0	0.7	100.0

Excludes 27 women for whom intended place of birth was not recorded.

¹ Teaching Hospital - University Medical School (Teaching Hospitals Act 1955).

² Private Hospital - includes some Private Hospitals with both private and public beds.

³ BBA - born before arrival at hospital.

Table 9: Place of birth and plurality of women who gave birth in Western Australia, 2005

Place of Birth	Plurality				TOTAL	
	Singleton		Multiple		No.	%
	No.	%	No.	%		
Metropolitan						
Teaching	4619	17.7	192	43.4	4811	18.1
Department ³	6241	23.9	37	8.4	6278	23.7
Private	9699	37.2	175	39.6	9874	37.2
Country						
Regional ¹	3220	12.3	29	6.6	3249	12.2
Private	640	2.5	6	1.4	646	2.4
Other ²	1429	5.5	3	0.7	1432	5.4
Non Hospital						
Homebirths	155	0.6	-	-	155	0.6
BBA	93	0.4	-	-	93	0.4
TOTAL	26096	100.0	442	100.0	26538	100.0

¹ Country Regional Hospital - public hospital in regional centre.

² Other Country Hospital - other public hospital.

³ Metropolitan Departmental Hospital - public hospital in metropolitan area.

Table 10: Place of birth of women who gave birth in Western Australia, 1991-2005

Year of Birth	Place of Birth									
	Teaching		Public		Private		Home Birth		BBA	
	No.	%	No.	%	No.	%	No.	%	No.	%
1991	4199	17.0	13054	52.9	7204	29.2	145	0.6	77	0.3
1992	4300	17.2	13269	53.1	7216	28.9	107	0.4	78	0.3
1993	4694	18.8	12935	51.8	7161	28.7	102	0.4	81	0.3
1994	4917	19.6	12841	51.2	7111	28.4	109	0.4	93	0.4
1995	4931	19.7	12913	51.5	7055	28.1	96	0.4	95	0.4
1996	5074	20.1	12331	48.9	7583	30.1	120	0.5	84	0.3
1997	5025	20.2	11925	48.0	7742	31.1	113	0.5	64	0.3
1998	4912	19.4	11980	47.4	8201	32.4	102	0.4	99	0.4
1999	5150	20.3	11634	45.8	8398	33.1	126	0.5	70	0.3
2000	4671	18.8	11313	46.5	8633	35.5	122	0.5	79	0.3
2001	4166	17.0	10785	44.0	9317	38.0	144	0.6	80	0.3
2002	4267	17.5	10277	42.1	9645	39.5	121	0.5	84	0.3
2003	4335	17.9	9975	41.1	9727	40.1	163	0.7	81	0.3
2004	4425	17.6	10324	41.1	10130	40.3	150	0.6	82	0.3
2005	4811	18.1	10959	41.3	10520	39.6	155	0.6	93	0.4

Pregnancy Profile

Table 11: Parity and Aboriginality of women who gave birth in Western Australia, 2005

Parity	Aboriginality of Mother				TOTAL	
	Aboriginal		Non-Aboriginal		No.	%
	No.	%	No.	%		
0	548	32.3	10563	42.5	11111	41.9
1-2	649	38.2	12202	49.1	12851	48.4
3-4	310	18.2	1752	7.1	2062	7.8
≥ 5	192	11.3	322	1.3	514	1.9
TOTAL	1699	100.0	24839	100.0	26538	100.0

Table 12: Parity and age of women who gave birth in Western Australia, 2005

Parity	Maternal Age						TOTAL	
	≤ 19		20-34		≥ 35		No.	%
	No.	%	No.	%	No.	%		
0	1231	82.8	8457	42.6	1423	27.4	11111	41.9
1-2	252	17.0	9717	48.9	2882	55.5	12851	48.4
3-4	3	0.2	1407	7.1	652	12.6	2062	7.8
≥ 5	-	-	276	1.4	238	4.6	514	1.9
TOTAL	1486	100.0	19857	100.0	5195	100.0	26538	100.0

Table 13: Parity of women who gave birth in Western Australia, 1991-2005

Year of Birth	Number of Women	Parity				Average Parity
		0 %	1-2 %	3-4 %	≥ 5 %	
1991	24679	39.7	49.8	9.1	1.3	1.05
1992	24970	38.7	50.8	9.0	1.5	1.06
1993	24973	38.7	50.9	8.9	1.6	1.06
1994	25071	40.0	49.7	8.8	1.5	1.04
1995	25090	40.6	49.2	8.6	1.6	1.03
1996	25192	40.0	49.9	8.5	1.5	1.03
1997	24869	40.3	49.6	8.6	1.6	1.03
1998	25294	40.0	49.7	8.7	1.6	1.03
1999	25378	40.4	49.6	8.4	1.6	1.02
2000	24818	41.2	48.5	8.5	1.9	1.03
2001	24492	40.7	49.4	8.2	1.8	1.02
2002	24394	40.6	49.3	8.3	1.8	1.02
2003	24281	41.3	49.0	7.8	1.9	1.01
2004	25111	41.9	48.6	7.8	1.8	1.00
2005	26538	41.9	48.4	7.8	1.9	1.01

Table 14: Socioeconomic status and age of women who gave birth in Western Australia, 2005

Socio-economic Status ¹	Women		Maternal Age					
			≤ 19		20-34		≥ 35	
	No.	%	No.	%	No.	%	No.	%
I	4806	18.4	73	0.3	3300	12.6	1433	5.5
II	7278	27.8	274	1.0	5526	21.1	1478	5.6
III	2850	10.9	172	0.7	2163	8.3	515	2.0
IV	4227	16.2	286	1.1	3231	12.3	710	2.7
V	4988	19.1	451	1.7	3812	14.6	725	2.8
VI	2017	7.7	216	0.8	1544	5.9	257	1.0
TOTAL	26166	100.0	1472	5.6	19576	74.8	5118	19.6

¹ Socioeconomic status is in accord with the Socioeconomic Indices for Areas (SEIFA) disadvantage index, constructed by the Australian Bureau of Statistics using 2001 Census data. SLA's were allocated to six groups based on their disadvantage index. Group I has the highest socioeconomic status and group VI has the lowest. Index ranges used are: I = 1055-1145, II = 1004-1055, III = 984-1004, IV = 961-984, V = 923-961, VI = 406-923. Excludes 372 women who could not be classified using this index.

Table 15: Age-specific birth rates and Aboriginality for women who gave birth in Western Australia, 2005

Age	Aboriginality of Mother						TOTAL		
	Aboriginal			Non-Aboriginal			Births	Population	Birth Rate ¹
	Births	Population	Birth Rate ¹	Births	Population	Birth Rate ¹			
15-19	430	3904	110.1	1057	66777	15.8	1487	70681	21.0
20-24	526	3161	166.4	3631	66797	54.4	4157	69958	59.4
25-29	392	2655	147.6	6777	63223	107.2	7169	65878	108.8
30-34	238	2749	86.6	8601	70167	122.6	8839	72916	121.2
35-39	107	2621	40.8	4379	71442	61.3	4486	74063	60.6
40-44	20	2229	9.0	795	75096	10.6	815	77325	10.5
TOTAL	1713	17319	98.9	25240	413502	61.0	26953	430821	62.6

¹ Age-Specific Birth Rate - The total number of births in one year per 1000 women of the same age group.

SOURCE: Estimated resident population (projected to 2005 based on 1999 to 2003 data) .
Epidemiology Branch, Analysis and Performance Reporting, Department of Health WA 2006.

Table 16: Age-specific birth rates¹ by age and Aboriginality of women who gave birth in Western Australia, 1991-2005

Year of Birth	Aboriginality of Mother						TOTAL		
	Aboriginal			Non-Aboriginal			15-19	20-34	35-44
	15-19	20-34	35-44	15-19	20-34	35-44			
1991	180.1	157.7	21.2	19.6	102.4	19.2	25.8	104.1	19.2
1992	159.9	154.7	19.0	20.0	102.7	20.4	25.4	104.3	20.4
1993	165.7	152.3	21.4	18.5	102.4	21.6	24.2	104.0	21.6
1994	166.0	148.2	18.2	20.1	101.2	22.5	25.7	102.7	22.4
1995	143.6	151.8	22.5	19.7	99.6	23.7	24.6	101.3	23.7
1996	137.7	148.2	21.7	19.6	98.9	24.6	24.1	100.6	24.5
1997	156.2	159.4	22.0	17.4	95.7	25.1	22.7	97.9	25.0
1998	137.9	151.7	26.3	18.2	95.1	27.0	23.2	97.0	27.0
1999	134.4	164.5	28.0	17.9	94.9	26.9	22.8	97.2	27.0
2000	126.8	160.3	28.0	17.0	91.6	27.5	21.7	93.9	27.5
2001	118.1	167.0	24.4	16.2	91.8	27.2	20.8	94.4	27.1
2002	103.5	143.4	25.7	16.0	84.8	27.7	20.3	87.0	27.7
2003	101.7	127.8	21.2	14.3	90.8	29.7	18.7	92.3	29.5
2004	97.5	125.7	23.4	14.7	91.0	30.8	19.1	92.4	30.6
2005	110.1	135.0	26.2	15.8	95.0	35.3	21.0	96.6	35.0

¹ Age-Specific Birth Rate - The total number of births in one year per 1000 women of the same age group.

Table 17: Selected complications of pregnancy and plurality of women who gave birth in Western Australia, 2005

Complications of Pregnancy ¹	Plurality				TOTAL	
	Singleton		Multiple		No.	% ⁴
	No.	% ²	No.	% ³		
Threatened abortion	1298	5.0	37	8.4	1335	5.0
Threatened preterm labour	628	2.4	46	10.4	674	2.5
Urinary tract infection	925	3.5	9	2.0	934	3.5
Pre-eclampsia	983	3.8	48	10.9	1031	3.9
Antepartum haemorrhage						
- placenta praevia	187	0.7	1	0.2	188	0.7
- abruptio	121	0.5	2	0.5	123	0.5
- other	716	2.7	18	4.1	734	2.8
Premature rupture of membranes	1158	4.4	42	9.5	1200	4.5
Gestational diabetes	1072	4.1	29	6.6	1101	4.1
Other	4715	18.1	290	65.6	5005	18.9
No complications of pregnancy	16498	63.2	101	22.9	16599	62.5

¹ A woman may have more than one complication of pregnancy.

² Percentage of women with a singleton pregnancy.

³ Percentage of women with a multiple pregnancy.

⁴ Percentage of women who gave birth.

Table 18: Selected pre-existing medical conditions for women who gave birth in Western Australia, 2005

Medical Conditions ¹	No.	% of women
Asthma	2767	10.4
Cardiac murmurs	352	1.3
Genital herpes	471	1.8
Essential hypertension	275	1.0
Thyroid disorders	491	1.9
Epilepsy	148	0.6
Urinary tract infection	510	1.9
Anaemia	287	1.1
Bronchial disorders	73	0.3
Cervical dysplasia	239	0.9
Vaginal infections	328	1.2
Spinal deformities/disorders	295	1.1
Pre-existing diabetes	172	0.6
Psychological disorders	1528	5.8
Other	1661	6.3
No medical conditions	18725	70.6

¹ A woman may have more than one medical condition.

Labour and Delivery

Table 19: Onset of labour and plurality of women who gave birth in Western Australia, 2005

Onset of Labour	Plurality				TOTAL	
	Singleton		Multiple		No.	%
	No.	%	No.	%		
Spontaneous	12962	49.7	143	32.4	13105	49.4
Induced	7505	28.8	92	20.8	7597	28.6
No Labour	5629	21.6	207	46.8	5836	22.0
TOTAL	26096	100.0	442	100.0	26538	100.0

Table 20: Onset and augmentation of labour and type of delivery for women who gave birth in Western Australia, 2005

Onset and Augmentation of Labour	Type of Delivery								TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Elective Caesarean		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%	No.	%		
Spontaneous onset no augmentation	6022	22.7	675	2.5	-	-	1057	4.0	7754	29.2
Spontaneous onset and augmentation	3318	12.5	1262	4.8	-	-	771	2.9	5351	20.2
Induced onset	4851	18.3	1424	5.4	-	-	1322	5.0	7597	28.6
No Labour	-	-	-	-	5070	19.1	766	2.9	5836	22.0
TOTAL	14191	53.5	3361	12.7	5070	19.1	3916	14.8	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 21: Augmentation of labour and hours of established labour for women with a spontaneous onset who gave birth in Western Australia, 2005

Type of Augmentation	Hours of Established Labour						TOTAL
	< 1	1-4	5-12	13-18	19-24	> 24	
Number							
None	644	3482	3258	288	42	27	7741
Oxytocin	113	360	728	215	42	9	1467
Artificial Rupture of Membranes (ARM)	86	773	1499	246	44	5	2653
Oxytocin and ARM	80	220	575	216	53	12	1156
Prostaglandin	4	9	9	2	1	2	27
Other	8	12	26	2	-	-	48
TOTAL	935	4856	6095	969	182	55	13092
Percentage							
None	68.9	71.7	53.5	29.7	23.1	49.1	59.1
Oxytocin	12.1	7.4	11.9	22.2	23.1	16.4	11.2
Artificial Rupture of Membranes (ARM)	9.2	15.9	24.6	25.4	24.2	9.1	20.3
Oxytocin and ARM	8.6	4.5	9.4	22.3	29.1	21.8	8.8
Prostaglandin	0.4	0.2	0.1	0.2	0.5	3.6	0.2
Other	0.9	0.2	0.4	0.2	-	-	0.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Excludes 13 women for whom hours of established labour were not recorded.

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 22: Type of induction and delivery for women who were induced in Western Australia, 2005

Type of Induction	Type of Delivery						TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%		
Oxytocin	347	61.4	102	18.1	116	20.5	565	100.0
Prostaglandin	522	58.1	164	18.3	212	23.6	898	100.0
Artificial Rupture of Membrane (ARM)	340	78.5	56	12.9	37	8.5	433	100.0
Oxytocin and ARM	2459	70.2	168	4.8	425	12.1	3502	100.0
Prostaglandin and ARM	348	70.4	85	17.2	61	12.3	494	100.0
Prostaglandin and Oxytocin	102	45.9	54	24.3	66	29.7	222	100.0
Prostaglandin, Oxytocin and ARM	593	50.3	285	24.2	302	25.6	1180	100.0
Other	140	46.2	60	19.8	103	34.0	303	100.0
TOTAL	4851	63.9	1424	18.7	1322	17.4	7597	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 23: Onset of labour for singleton births of women who gave birth in Western Australia, 1991-2005

Year of Birth	Onset of Labour						TOTAL	
	Spontaneous		Induced		No Labour		No.	%
	No.	%	No.	%	No.	%		
1991	16512	65.0	6085	24.0	2792	11.0	25389	100.0
1992	15673	64.4	6045	24.8	2637	10.8	24355	100.0
1993	15395	62.5	6436	26.1	2797	11.4	24628	100.0
1994	14868	60.4	6766	27.5	2991	12.1	24625	100.0
1995	14958	60.5	6777	27.4	2993	12.1	24728	100.0
1996	14890	60.2	6879	27.8	2975	12.0	38950	100.0
1997	14856	59.9	6898	27.8	3063	12.3	24817	100.0
1998	14279	58.3	6945	28.4	3263	13.3	24487	100.0
1999	14047	56.4	7288	29.2	3583	14.4	24918	100.0
2000	14043	56.2	7442	29.8	3518	14.1	25003	100.0
2001	13603	55.7	7170	29.4	3646	14.9	24419	100.0
2002	12672	52.7	7341	30.5	4046	16.8	24059	100.0
2002	12391	51.6	7227	30.1	4391	18.3	24009	100.0
2003	12131	50.8	7017	29.4	4739	19.8	23887	100.0
2004	12539	50.8	7129	28.9	5034	20.4	24702	100.0
2005	12962	49.7	7505	28.8	5629	21.6	26096	100.0

Table 24: Analgesia and type of delivery for women who gave birth in Western Australia, 2005

Type of Analgesia	Type of Delivery								TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Elective Caesarean		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%	No.	%		
None	3496	13.2	160	0.6	5070	19.1	1506	5.7	10232	38.6
Nitrous oxide & oxygen inhalation	3591	13.5	306	1.2	-	-	136	0.5	4033	15.2
Intra-muscular narcotics	2806	10.6	387	1.5	-	-	244	0.9	3437	13.0
Epidural	4013	15.1	2395	9.0	-	-	1756	6.6	8164	30.8
Spinal	156	0.6	98	0.4	-	-	260	1.0	514	1.9
Other	129	0.5	15	0.1	-	-	14	0.1	158	0.6
TOTAL	14191	53.5	3361	12.7	5070	19.1	3916	14.8	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 25: Anaesthesia and type of delivery for women who gave birth in Western Australia, 2005

Type of Anaesthesia	Type of Delivery								TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Elective Caesarean		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%	No.	%		
None	9596	36.2	387	1.5	-	-	-	-	9983	37.6
Local anaesthesia to perineum	776	2.9	377	1.4	-	-	-	-	1153	4.3
Pudendal	14	0.1	165	0.6	-	-	-	-	179	0.7
Epidural	3463	13.0	2313	8.7	1839	6.9	2073	7.8	9688	36.5
Spinal	111	0.4	102	0.4	3077	11.6	1456	5.5	4746	17.9
General with Epidural or Spinal	3	0.0	2	0.0	30	0.1	62	0.2	97	0.4
General	16	0.1	4	0.0	124	0.5	325	1.2	469	1.8
Other	212	0.8	11	0.0	-	-	-	-	223	0.8
TOTAL	14191	53.5	3361	12.7	5070	19.1	3916	14.8	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 26: Epidural and general anaesthesia/analgesia for women who gave birth by caesarean section in Western Australia, 1991-2005

Year of Birth	Type of Delivery								Number of Caesareans	
	Elective Caesarean				Emergency Caesarean				Elective	Emerg.
	Epidural		General		Epidural		General			
No.	%	No.	%	No.	%	No.	%	No.	No.	
1991	1846	78.2	516	21.8	1432	65.5	755	34.5	2362	2187
1992	2070	80.9	489	19.1	1486	65.9	768	34.1	2559	2254
1993	2282	82.6	481	17.4	1749	71.1	710	28.9	2763	2459
1994	2347	86.0	382	14.0	1891	75.8	603	24.2	2729	2494
1995	2371	86.5	369	13.5	1807	78.0	511	22.0	2740	2318
1996	2548	88.9	317	11.1	1860	81.5	423	18.5	2865	2283
1997	2761	90.8	281	9.2	2004	83.0	407	16.9	3042	2414
1998	3008	92.0	262	8.0	2257	85.6	379	14.4	3270	2636
1999	3100	93.7	210	6.3	2263	86.4	356	13.6	3310	2619
2000	3289	93.4	231	6.6	2439	88.4	321	11.6	3520	2760
2001	3563	95.2	181	4.8	2703	89.4	319	10.6	3744	3022
2002	3844	96.0	160	4.0	2822	89.3	339	10.7	4004	3161
2003	4160	96.1	167	3.9	2856	89.9	322	10.1	4327	3178
2004	4383	96.6	152	3.4	3249	90.5	341	9.5	4535	3590
2005	4916	97.0	154	3.0	3529	90.1	387	9.9	5070	3916

Excludes one case with anaesthesia/analgesia of 'other'

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Epidural includes spinal anaesthesia/analgesia.

Table 27: Presentation and type of delivery for singleton births in Western Australia, 2005

Type of Delivery	Presentation						TOTAL	
	Vertex		Breech		Other		No.	%
	No.	%	No.	%	No.	%		
Normal	14018	56.5	8	0.7	66	31.3	14092	54.0
Vacuum	2582	10.4	-	-	13	6.2	2595	9.9
Forceps	623	2.5	-	-	3	1.4	626	2.4
Breech Manoeuvre	-	-	96	8.8	1	-	97	0.4
Elective Caesarean	4230	17.1	655	60.0	38	18.0	4923	18.9
Emergency Caesarean	3340	13.5	333	30.5	90	42.7	3763	14.4
TOTAL	24793	100.0	1092	100.0	211	99.5	26096	100.0

Table 28: Type of delivery and plurality of women who gave birth in Western Australia, 2005

Type of Delivery	Plurality						TOTAL	
	Singleton		Twin		Triplet		No.	%
	No.	%	No.	%	No.	%		
Spontaneous Vaginal	14092	54.0	99	23.0	-	-	14191	53.5
Vacuum	2595	9.9	28	6.5	1	8.3	2624	9.9
Forceps	625	2.4	13	3.0	-	-	638	2.4
Breech Manoeuvre	98	0.4	1	0.2	-	-	99	0.4
Elective Caesarean	4923	18.9	142	33.0	5	41.7	5070	19.1
Emergency Caesarean	3763	14.4	147	34.2	6	50.0	3916	14.8
TOTAL	26096	100.0	430	100.0	12	100.0	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 29: Type of delivery and parity of women who gave birth in Western Australia, 2005

Type of Delivery	Parity								TOTAL	
	0		1-2		3-4		≥ 5		No.	%
	No.	%	No.	%	No.	%	No.	%		
Spontaneous Vaginal	4655	41.9	7700	59.9	1458	70.7	378	73.5	14191	53.5
Assisted Vaginal	2527	22.7	751	5.8	68	3.3	15	2.9	3361	12.7
Elective Caesarean	1484	13.4	3185	24.8	340	16.5	61	11.9	5070	19.1
Emergency Caesarean	2445	22.0	1215	9.5	196	9.5	60	11.7	3916	14.8
TOTAL	11111	100.0	12851	100.0	2062	100.0	514	100.0	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 30: Type of delivery and type of previous delivery of women who gave birth in Western Australia, 2005

Previous delivery	Type of Delivery								TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Elective Caesarean		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%	No.	%		
First delivery	4655	41.9	2527	22.7	1484	13.4	2445	22.0	11111	100.0
Previous deliveries no caesareans	9145	81.1	733	6.5	674	6.0	728	6.5	11280	100.0
Previous caesarean, last delivery vaginal	161	60.8	11	4.2	55	20.8	38	14.3	265	100.0
Previous caesarean, last delivery caesarean	230	5.9	90	2.3	2857	73.6	705	18.2	3882	100.0
TOTAL	14191	53.5	3361	12.7	5070	19.1	3916	14.8	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 31: Place of confinement and type of delivery for women who gave birth in Western Australia, 2005

Place of Birth	Type of Delivery								TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Elective Caesarean		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%	No.	%		
Metropolitan										
Teaching	2715	56.4	600	12.5	512	10.6	984	20.5	4811	100.0
Departmental	3911	62.3	614	9.8	967	15.4	786	12.5	6278	100.0
Private	3793	38.4	1570	15.9	2958	30.0	1553	15.7	9874	100.0
Country										
Regional	2190	67.4	315	9.7	361	11.1	383	11.8	3249	100.0
Private	322	49.8	113	17.5	117	18.1	94	14.6	646	100.0
Other	1013	70.7	148	10.3	155	10.8	116	8.1	1432	100.0
Non-hospital	247	99.6	1	0.4	-	-	-	-	248	100.0
TOTAL	14191	53.5	3361	12.7	5070	19.1	3916	14.8	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Non-hospital includes homebirths and births before arrival.

Table 32: Type of delivery for women who gave birth in Western Australia, 1991-2005

Year of Birth	Type of Delivery								TOTAL	
	Spontaneous Vaginal		Assisted Vaginal		Elective Caesarean		Emergency Caesarean		No.	%
	No.	%	No.	%	No.	%	No.	%		
1991	15963	64.7	4167	16.9	2362	9.6	2187	8.9	24679	100.0
1992	16028	64.2	4129	16.5	2559	10.2	2254	9.0	24970	100.0
1993	15873	63.6	3878	15.5	2763	11.1	2459	9.8	24973	100.0
1994	15935	63.6	3913	15.6	2729	10.9	2494	9.9	25071	100.0
1995	16208	64.6	3824	15.2	2740	10.9	2318	9.2	25090	100.0
1996	16119	64.0	3925	15.6	2865	11.4	2283	9.1	25192	100.0
1997	15756	63.4	3657	14.7	3042	12.2	2414	9.7	24869	100.0
1998	15794	62.4	3594	14.2	3270	12.9	2636	10.4	25294	100.0
1999	15772	62.1	3677	14.5	3310	13.0	2619	10.3	25378	100.0
2000	15098	60.8	3440	13.9	3520	14.2	2760	11.1	24818	100.0
2001	14619	59.7	3107	12.7	3744	15.3	3022	12.3	24492	100.0
2002	14139	58.0	3090	12.7	4004	16.4	3161	13.0	24394	100.0
2003	13837	57.0	2939	12.1	4327	17.8	3178	13.1	24281	100.0
2004	13758	54.8	3228	12.9	4535	18.1	3590	14.3	25111	100.0
2005	14191	53.5	3361	12.7	5070	19.1	3916	14.8	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 33: Frequency of complications of labour and delivery for women who gave birth by caesarean section in Western Australia, 2005

Number of complications of labour and delivery	Elective Caesarean		Emergency Caesarean		TOTAL	
	No.	%	No.	%	No.	%
1	4208	83.0	1905	48.6	6113	68.0
2	729	14.4	1140	29.1	1869	20.8
3	111	2.2	430	11.0	541	6.0
4	19	0.4	239	6.1	258	2.9
5	3	0.1	125	3.2	128	1.4
6	-	-	54	1.4	54	0.6
7	-	-	20	0.5	20	0.2
8	-	-	3	0.1	3	0.0
TOTAL	5070	100.0	3916	100.0	8986	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 34: Complications of labour and delivery for women who gave birth by caesarean section in Western Australia, 2005

Complications of labour and delivery ¹	Elective Caesarean		Emergency Caesarean		TOTAL	
	No.	% ²	No.	% ³	No.	% ⁴
Umbilical cord complications	39	0.8	197	5.0	236	2.6
Cephalopelvic disproportion	555	10.9	137	3.5	692	7.7
Breech and other malpresentation	667	13.2	351	9.0	1018	11.3
Previous caesarean section or other uterine surgery	2961	58.4	791	20.2	3752	41.8
Fetal distress	44	0.9	1448	37.0	1492	16.6
Multiple pregnancy	129	2.5	135	3.4	264	2.9
Pregnancy- induced disorders	245	4.8	252	6.4	497	5.5
Obstruction or delayed labour	-	-	1964	50.2	1964	21.9
Abnormal forces of labour		0.0	674	17.2	674	7.5
Placental disorders/haemorrhage	583	11.5	997	25.5	1580	17.6
Medical/Physiological	47	0.9	16	0.4	63	0.7
Infection	30	0.6	118	3.0	148	1.6
Previous poor obstetric and/or reproductive history	167	3.3	29	0.7	196	2.2
Other	626	12.3	354	9.0	980	10.9
TOTAL	6093		7563		13656	

¹ A woman may have more than one complication of labour and delivery.

² Percentage of women who had elective caesarean

³ Percentage of women who had emergency caesarean

⁴ Percentage of women who had a caesarean section

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 35: Hours of established labour and onset of labour for women who gave birth in Western Australia, 2005

Hours of Labour	Onset of Labour			
	Spontaneous		Induction	
	No.	%	No.	%
< 1	935	7.1	767	10.1
1-4	4856	37.1	3546	46.7
5-12	6095	46.6	3017	39.7
13-18	969	7.4	233	3.1
19-24	182	1.4	30	0.4
> 24	55	0.4	4	0.1
TOTAL	13092	100.0	7597	100.0

Excludes 5,836 women who did not experience labour and 13 women for whom hours of established labour were not recorded.

Table 36: Type of delivery and hours of established labour for women who gave birth in Western Australia, 2005

Type of Delivery	Hours of Established Labour							TOTAL
	No Labour	< 1	1-4	5-12	13-18	19-24	> 24	
Number								
Normal	-	249	7246	6043	524	92	26	14180
Vacuum	-	2	605	1645	315	44	13	2624
Forceps	-	2	88	410	109	23	6	638
Breech Manoeuvre	-	3	65	26	4	-	1	99
Elective Caesarean	5070	-	-	-	-	-	-	5070
Emergency Caesarean	766	1446	398	988	250	53	13	3914
TOTAL	5836	1702	8402	9112	1202	212	59	26525
Percentage								
Normal	-	14.6	86.2	66.3	43.6	43.4	44.1	53.5
Vacuum	-	0.1	7.2	18.1	26.2	20.8	22.0	9.9
Forceps	-	0.1	1.0	4.5	9.1	10.8	10.2	2.4
Breech Manoeuvre	-	0.2	0.8	0.3	0.3	-	1.7	0.4
Elective Caesarean	86.9	-	-	-	-	-	-	19.1
Emergency Caesarean	13.1	85.0	4.7	10.8	20.8	25.0	22.0	14.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Excludes 13 women for whom hours of established labour were not recorded.

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 37: Selected complications of labour and delivery and plurality for women who gave birth in Western Australia, 2005

Complications of Labour and Delivery ¹	Plurality				TOTAL	
	Singleton		Multiple		No.	%
	No.	%	No.	%		
Precipitate delivery	1277	4.9	10	2.3	1287	4.8
Fetal distress	3523	13.5	47	10.6	3570	13.5
Prolapsed cord	30	0.1	3	0.7	33	0.1
Cord tightly around neck	1192	4.6	7	1.6	1199	4.5
Cephalopelvic disproportion	559	2.1	1	0.2	560	2.1
Post partum haemorrhage	2552	9.8	127	28.7	2679	10.1
Retained placenta - manual removal	343	1.3	10	2.3	353	1.3
Persistent occipito posterior	623	2.4	3	0.7	626	2.4
Shoulder dystocia	363	1.4	1	0.2	364	1.4
Failure to progress <= 3cms	885	3.4	12	2.7	897	3.4
Failure to progress > 3cms	1233	4.7	14	3.2	1247	4.7
Previous caesarean section	3835	14.7	65	14.7	3900	14.7
Other	6322	24.2	386	87.3	6708	25.3
No complications of labour and delivery	9877	37.8	22	5.0	9899	37.3

¹ A woman may have more than one complication of labour and delivery.

Table 38: Type of delivery and accoucheur of women who gave birth in Western Australia, 2005

Accoucheur	Type of Delivery								TOTAL	
	Vaginal		Assisted Vaginal		Elective		Emergency		No.	%
	No.	%	No.	%	No.	%	No.	%		
Obstetrician	2015	14.2	1973	58.7	4337	85.5	2583	66.0	10908	41.1
Other Medical Officer	1609	11.3	1340	39.9	733	14.5	1333	34.0	5015	18.9
Midwife	9656	68.0	46	1.4	-	-	-	-	9702	36.6
Student	793	5.6	-	-	-	-	-	-	793	3.0
Self/no attendant	46	0.3	2	0.1	-	-	-	-	48	0.2
Other	72	0.5	-	-	-	-	-	-	72	0.3
TOTAL	14191	100.0	3361	100.0	5070	100.0	3916	100.0	26538	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Table 39: Type of delivery and repair of perineum and/or vagina for women who gave birth in Western Australia, 2005

Type of Delivery	Repair of perineum and/or Vagina					TOTAL
	None	Episiotomy	1 or 2 degree tear	3 or 4 degree tear	Other	
Number						
Normal	6377	1315	5783	130	586	14191
Vacuum	340	1291	881	57	55	2624
Forceps	27	504	79	20	8	638
Breech Manoeuvre	83	9	7	-	-	99
Elective Caesarean	5070	-	-	-	-	5070
Emergency Caesarean	3885	7	10	-	14	3916
TOTAL	15782	3126	6760	207	663	26538
Percentage						
Normal	40.4	42.1	85.5	62.8	88.4	53.5
Vacuum	2.2	41.3	13.0	27.5	8.3	9.9
Forceps	0.2	16.1	1.2	9.7	1.2	2.4
Breech Manoeuvre	0.5	0.3	0.1	-	-	0.4
Elective Caesarean	32.1	-	-	-	-	19.1
Emergency Caesarean	24.6	0.2	0.1	-	2.1	14.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Women with multiple pregnancies are classified according to the features of the first multiple delivered.

Baby Characteristics

Table 40: Condition at birth and crude birth rate in Western Australia, 1991-2005

Year of Birth	Condition at Birth				TOTAL	
	Livebirth		Fetal death		No.	Crude Birth Rate ¹
No.	%	No.	%	No.		
1991	24815	99.2	194	0.8	25009	15.2
1992	25159	99.3	165	0.7	25324	15.2
1993	25159	99.3	176	0.7	25335	15.0
1994	25237	99.3	188	0.7	25425	14.8
1995	25254	99.2	191	0.8	25445	14.6
1996	25385	99.2	199	0.8	25584	14.4
1997	25096	99.3	171	0.7	25267	14.0
1998	25516	99.4	164	0.6	25680	13.9
1999	25592	99.3	179	0.7	25771	13.8
2000	25022	99.2	206	0.8	25228	13.3
2001	24773	99.3	166	0.7	24939	13.0
2002	24607	99.3	175	0.7	24782	12.8
2003	24499	99.3	184	0.7	24683	12.6
2004	25340	99.3	188	0.7	25528	12.8
2005	26792	99.3	200	0.7	26992	13.4

¹ Crude birth rate is the number of livebirths per 1,000 total population.

Table 41: Condition at birth and gender of births in Western Australia, 2005

Gender	Condition at Birth				TOTAL	
	Livebirth		Fetal death		No.	%
	No.	%	No.	%		
Male	13658	51.0	113	56.5	13771	51.0
Female	13134	49.0	87	43.5	13221	49.0
TOTAL	26792	100.0	200	100.0	26992	100.0

Table 42: Condition at birth and Aboriginality of mother for births in Western Australia, 2005

Aboriginality of Mother	Condition at Birth				TOTAL		Fetal death rate
	Livebirth		Fetal death		No.	%	
	No.	%	No.	%			
Aboriginal	1698	6.3	24	12.0	1722	6.4	13.9
Non-Aboriginal	25094	93.7	176	88.0	25270	93.6	7.0
TOTAL	26792	100.0	200	100.0	26992	100.0	7.4

Table 43: Condition at birth and place of birth for births in Western Australia, 2005

Place of Birth	Condition at Birth				TOTAL		Fetal death rate
	Livebirth		Fetal death		No.	%	
	No.	%	No.	%			
Metropolitan							
Teaching	4885	18.2	126	63.0	5011	18.6	25.1
Department ³	6298	23.5	17	8.5	6315	23.4	2.7
Private	10026	37.4	27	13.5	10053	37.2	2.7
Country							
Regional ¹	3260	12.2	18	9.0	3278	12.1	5.5
Private	648	2.4	4	2.0	652	2.4	6.1
Other ²	1430	5.3	5	2.5	1435	5.3	3.5
Non-Hospital							
Homebirths	154	0.6	1	0.5	155	0.6	6.5
BBA	91	0.3	2	1.0	93	0.3	21.5
TOTAL	26792	100.0	200	100.0	26992	100.0	7.4

¹ Country Regional Hospital - public hospital in regional centre.

² Other Country Hospital - other public hospital.

³ Departmental hospital - public hospital in metropolitan area.

Table 44: Plurality of all births in Western Australia, 1991-2005

Year of Birth	Plurality							
	Singleton		Twins		Triplets		Other Multiple	
	No.	%	No.	%	No.	%	No.	%
1991	24355	97.4	636	2.5	18	0.1	-	-
1992	24628	97.3	660	2.6	36	0.1	-	-
1993	24625	97.2	668	2.6	42	0.2	-	-
1994	24728	97.3	666	2.6	27	0.1	4	0.0
1995	24744	97.2	674	2.6	27	0.1	-	-
1996	24817	97.0	720	2.8	39	0.2	8	0.0
1997	24487	96.9	738	2.9	30	0.1	12	0.0
1998	24918	97.0	732	2.9	30	0.1	-	-
1999	25003	97.0	720	2.8	39	0.2	9	0.0
2000	24419	96.8	774	3.1	36	0.1	-	-
2001	24059	96.5	842	3.4	36	0.1	-	-
2002	24009	96.9	764	3.1	9	0.0	-	-
2003	23887	96.8	774	3.1	18	0.1	4	0.0
2004	24702	96.8	802	3.1	24	0.1	-	-
2005	26096	96.7	860	3.2	36	0.1	-	-

Table 45: Apgar score at one minute and time to spontaneous respiration of livebirths in Western Australia, 2005

Time to Spontaneous Respiration	Apgar Score at 1 Minute								TOTAL	
	0		1-3		4-7		8-10		No.	%
	No.	%	No.	%	No.	%	No.	%		
≤ 1	3	18.8	24	7.3	2606	60.7	21676	98.0	24309	90.8
2-3	1	6.3	75	22.7	1270	29.6	361	1.6	1707	6.4
4-6	-	-	110	33.3	226	5.3	48	0.2	384	1.4
7-10	-	-	23	7.0	29	0.7	2	0.0	54	0.2
> 10	3	18.8	2	0.6	8	0.2	-	-	13	0.0
Intubation ¹	9	56.3	96	29.1	151	3.5	36	0.2	292	1.1
TOTAL	16	100.0	330	100.0	4290	100.0	22123	100.0	26759	100.0

Excludes 33 livebirths for whom an Apgar Score at 1 minute and/or time to establish spontaneous respiration was unknown.

¹ These babies were intubated at birth and time to establish spontaneous respiration was not recorded.

Table 46: Apgar score at five minutes and time to spontaneous respiration of livebirths in Western Australia, 2005

Time to Spontaneous Respiration	Apgar Score at 5 Minutes								TOTAL	
	0		1-3		4-7		8-10		No.	%
	No.	%	No.	%	No.	%	No.	%		
≤ 1	6	85.7	6	13.3	146	24.1	24154	92.5	24312	90.8
2-3	-	-	-	-	139	22.9	1568	6.0	1707	6.4
4-6	-	-	-	-	149	24.5	236	0.9	385	1.4
7-10	-	-	7	15.6	41	6.8	6	0.0	54	0.2
> 10	-	-	5	11.1	9	1.5	1	0.0	15	0.1
Intubation ¹	1	14.3	27	60.0	123	20.3	141	0.5	292	1.1
TOTAL	7	100.0	45	100.0	607	100.0	26106	100.0	26765	100.0

Excludes 27 livebirths for whom an Apgar Score at 5 minutes and/or time to establish spontaneous respiration was unknown.

¹ These babies were intubated at birth and time to establish spontaneous respiration was not recorded.

Table 47: Apgar score at five minutes and resuscitation methods of livebirths in Western Australia, 2005

Resuscitation	Apgar Score at 5 Minutes								TOTAL	
	0		1-3		4-7		8-10		No.	%
	No.	%	No.	%	No.	%	No.	%		
None	5	83.3	13	26.0	18	3.0	16352	62.6	16388	61.2
Suction Only	-	-	1	2.0	16	2.6	4065	15.6	4082	15.2
Oxygen Therapy	-	-	2	4.0	122	20.0	3731	14.3	3855	14.4
Bag & Mask	-	-	6	12.0	280	45.9	1631	6.2	1917	7.2
Intubation	-	-	7	14.0	121	19.8	140	0.5	268	1.0
Ext Card Mass	1	16.7	12	24.0	23	3.8	10	0.0	46	0.2
Other	-	-	9	18.0	30	4.9	178	0.7	217	0.8
TOTAL	6	100.0	50	100.0	610	100.0	26107	100.0	26773	100.0

Excludes 19 livebirths for whom an Apgar Score at 5 minutes was unknown.

Table 48: Birthweight and resuscitation methods of livebirths in Western Australia, 2005

Resuscitation	Birthweight (grams)					TOTAL
	< 500	500-1499	1500-1999	2000-2499	≥ 2500	
Number						
None	11	17	72	551	15752	16403
Suction Only	-	6	30	140	3906	4082
Oxygen Therapy	1	46	113	253	3444	3857
Bag & Mask	1	63	101	148	1605	1918
Intubation	4	106	24	12	122	268
Ext Card Mass	1	10	5	5	25	46
Other	1	13	7	11	186	218
TOTAL	19	261	352	1120	25040	26792
Percentage						
None	57.9	6.5	20.5	49.2	62.9	61.2
Suction Only	-	2.3	8.5	12.5	15.6	15.2
Oxygen Therapy	5.3	17.6	32.1	22.6	13.8	14.4
Bag & Mask	5.3	24.1	28.7	13.2	6.4	7.2
Intubation	21.1	40.6	6.8	1.1	0.5	1.0
Ext Card Mass	5.3	3.8	1.4	0.4	0.1	0.2
Other	5.3	5.0	2.0	1.0	0.7	0.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Table 49: Birthweight distribution and Aboriginality of mother for births in Western Australia, 2005

Birthweight (grams)	Aboriginality of Mother				TOTAL	
	Aboriginal		Non-Aboriginal		No.	%
	No.	%	No.	%	No.	%
< 500	11	0.6	103	0.4	114	0.4
500-999	22	1.3	110	0.4	132	0.5
1000-1499	31	1.8	144	0.6	175	0.6
1500-1999	50	2.9	312	1.2	362	1.3
2000-2499	170	9.9	962	3.8	1132	4.2
< 2500	284	16.5	1631	6.5	1915	7.1
2500-2999	424	24.6	3987	15.8	4411	16.3
3000-3499	563	32.7	9223	36.5	9786	36.3
3500-3999	325	18.9	7694	30.4	8019	29.7
4000-4499	110	6.4	2367	9.4	2477	9.2
≥ 4500	16	0.9	368	1.5	384	1.4
TOTAL	1722	100.0	25270	100.0	26992	100.0

Mean = 3326 grams. Standard deviation = 616 grams.

Table 50: Low birthweight and very low birthweight by Aboriginality of mother for births in Western Australia, 1991-2005

Year of Birth	Aboriginality of Mother							
	Aboriginal				Non-Aboriginal			
	Low birthweight ¹		Very low birthweight ²		Low birthweight ¹		Very low birthweight ²	
	No.	%	No.	%	No.	%	No.	%
1991	220	14.8	48	3.2	1405	6.0	311	1.3
1992	169	11.8	33	2.3	1481	6.2	309	1.3
1993	191	13.1	62	4.3	1456	6.1	281	1.2
1994	206	14.2	47	3.2	1441	6.0	348	1.5
1995	177	12.1	41	2.8	1496	6.2	322	1.3
1996	198	13.7	39	2.7	1542	6.4	349	1.4
1997	217	13.7	45	2.8	1467	6.2	328	1.4
1998	192	12.6	44	2.9	1538	6.4	320	1.3
1999	231	14.2	62	3.8	1488	6.2	314	1.3
2000	232	14.4	62	3.8	1521	6.4	337	1.4
2001	258	15.7	59	3.6	1495	6.4	322	1.4
2002	238	14.2	55	3.3	1432	6.2	298	1.3
2003	234	15.1	57	3.7	1477	6.4	286	1.2
2004	234	14.9	53	3.4	1586	6.6	358	1.5
2005	284	16.5	64	3.7	1631	6.5	357	1.4

¹ Low birthweight - less than 2500 grams.

² Very low birthweight - less than 1500 grams.

Table 51: Birthweight distribution and condition at birth for total births in Western Australia, 2005

Birthweight (grams)	Condition at Birth				TOTAL	
	Livebirth		Fetal Death		No.	%
	No.	%	No.	%		
< 500	19	0.1	95	47.5	114	0.4
500-999	105	0.4	27	13.5	132	0.5
1000-1499	156	0.6	19	9.5	175	0.6
1500-1999	352	1.3	10	5.0	362	1.3
2000-2499	1120	4.2	12	6.0	1132	4.2
< 2500	1752	6.5	163	81.5	1915	7.1
2500-2999	4392	16.4	19	9.5	4411	16.3
3000-3499	9776	36.5	10	5.0	9786	36.3
3500-3999	8014	29.9	5	2.5	8019	29.7
4000-4499	2474	9.2	3	1.5	2477	9.2
≥ 4500	384	1.4	-	-	384	1.4
TOTAL	26792	100.0	200	100.0	26992	100.0

Table 52: Birthweight distribution and condition at birth for singleton births in Western Australia, 2005

Birthweight (grams)	Condition at Birth				TOTAL	
	Livebirth		Fetal death		No.	%
	No.	%	No.	%		
< 500	14	0.1	89	47.8	103	0.4
500-999	75	0.3	25	13.4	100	0.4
1000-1499	116	0.4	16	8.6	132	0.5
1500-1999	226	0.9	8	4.3	234	0.9
2000-2499	859	3.3	11	5.9	870	3.3
< 2500	1290	5.0	149	80.1	1439	5.5
2500-2999	4075	15.7	19	10.2	4094	15.7
3000-3499	9685	37.4	10	5.4	9695	37.2
3500-3999	8002	30.9	5	2.7	8007	30.7
4000-4499	2474	9.5	3	1.6	2477	9.5
≥ 4500	384	1.5	-	-	384	1.5
TOTAL	25910	100.0	186	100.0	26096	100.0

Table 53: Birthweight distribution and condition at birth for multiple births in Western Australia, 2005

Birthweight (grams)	Condition at Birth				TOTAL	
	Livebirth		Fetal death		No.	%
	No.	%	No.	%		
< 500	5	0.6	6	42.9	11	1.2
500-999	30	3.4	2	14.3	32	3.6
1000-1499	40	4.5	3	21.4	43	4.8
1500-1999	126	14.3	2	14.3	128	14.3
2000-2499	261	29.6	1	7.1	262	29.2
< 2500	462	52.4	14	100.0	476	53.1
2500-2999	317	35.9	-	-	317	35.4
3000-3499	91	10.3	-	-	91	10.2
3500-3999	12	1.4	-	-	12	1.3
4000-4499	-	-	-	-	-	-
≥ 4500	-	-	-	-	-	-
TOTAL	882	100.0	14	100.0	896	100.0

Table 54: Birthweight distribution and gestation for total births in Western Australia, 2005

Birthweight (grams)	Gestation (weeks)								TOTAL	
	20-27		28-32		33-36		37-43		No.	%
	No.	%	No.	%	No.	%	No.	%		
< 500	114	46.2	-	-	-	-	-	-	114	0.4
500-999	104	42.1	28	8.2	-	-	-	-	132	0.5
1000-1499	27	10.9	122	35.7	24	1.3	2	0.0	175	0.6
1500-1999	1	0.4	152	44.4	183	10.1	26	0.1	362	1.3
2000-2499	-	-	33	9.6	612	33.9	487	2.0	1132	4.2
< 2500	246	99.6	335	98.0	819	45.4	515	2.1	1915	7.1
2500-2999	-	-	3	0.9	682	37.8	3726	15.1	4411	16.3
3000-3499	1	0.4	2	0.6	238	13.2	9545	38.8	9786	36.3
3500-3999	-	-	-	-	49	2.7	7970	32.4	8019	29.7
4000-4499	-	-	2	0.6	13	0.7	2462	10.0	2477	9.2
≥ 4500	-	-	-	-	4	0.2	380	1.5	384	1.4
TOTAL	247	100.0	342	100.0	1805	100.0	24598	100.0	26992	100.0

Table 55: Birthweight distribution and gestation for singleton births in Western Australia, 2005

Birthweight (grams)	Gestation (weeks)								TOTAL	
	20-27		28-32		33-36		37-43		No.	%
	No.	%	No.	%	No.	%	No.	%		
< 500	103	50.7	-	-	-	-	-	-	103	0.4
500-999	80	39.4	20	8.3	-	-	-	-	100	0.4
1000-1499	18	8.9	93	38.6	19	1.3	2	0.0	132	0.5
1500-1999	1	0.5	96	39.8	113	7.9	24	0.1	234	0.9
2000-2499	-	-	26	10.8	436	30.7	408	1.7	870	3.3
< 2500	202	99.5	235	97.5	568	39.9	434	1.8	1439	5.5
2500-2999	-	-	2	0.8	566	39.8	3526	14.6	4094	15.7
3000-3499	1	0.5	2	0.8	223	15.7	9469	39.1	9695	37.2
3500-3999	-	-	-	-	48	3.4	7959	32.8	8007	30.7
4000-4499	-	-	2	0.8	13	0.9	2462	10.2	2477	9.5
≥ 4500	-	-	-	-	4	0.3	380	1.6	384	1.5
TOTAL	203	100.0	241	100.0	1422	100.0	24230	100.0	26096	100.0

Table 56: Birthweight distribution and gestation for multiple births in Western Australia, 2005

Birthweight (grams)	Gestation (weeks)								TOTAL	
	20-27		28-32		33-36		37-42		No.	%
	No.	%	No.	%	No.	%	No.	%		
< 500	11	25.0	-	-	-	-	-	-	11	1.2
500-999	24	54.5	8	7.9	-	-	-	-	32	3.6
1000-1499	9	20.5	29	28.7	5	1.3	-	-	43	4.8
1500-1999	-	-	56	55.4	70	18.3	2	0.5	128	14.3
2000-2499	-	-	7	6.9	176	46.0	79	21.5	262	29.2
< 2500	44	100.0	100	99.0	251	65.5	81	22.0	476	53.1
2500-2999	-	-	1	1.0	116	30.3	200	54.3	317	35.4
3000-3499	-	-	-	-	15	3.9	76	20.7	91	10.2
3500-3999	-	-	-	-	1	0.3	11	3.0	12	1.3
4000-4499	-	-	-	-	-	-	-	-	0	0.0
≥ 4500	-	-	-	-	-	-	-	-	0	0.0
TOTAL	44	100.0	101	100.0	383	100.0	368	100.0	896	100.0

Table 57: Condition at birth and place of birth for births for pre-term births (23-31 weeks gestation) in Western Australia, 2005

Place of Birth	Livebirths						Stillbirths		All	
	23-25 weeks		26-28 weeks		29-31 weeks		23-31 weeks		23-31 weeks	
	No.	%	No.	%	No.	%	No.	%	No.	%
Public										
Teaching	52	96.3	82	93.2	152	89.4	36	70.6	322	88.7
Department	1	1.9	2	2.3	6	3.5	5	7.8	14	3.9
Country	-	-	2	2.3	4	2.4	4	9.8	10	2.8
Private	1	1.9	2	2.3	8	4.7	6	11.8	17	4.7
TOTAL	54	100.0	88	100.0	170	100.0	51	100.0	363	100.0

Excludes 4 livebirths and 1 stillborn baby born before arrival at hospital

Table 58: Condition at birth and place of birth for births for pre-term births (23-31 weeks gestation) in Western Australia, 1991-2005

Year of Birth	Teaching				Other				Total			
	Livebirths		Stillbirths		Livebirths		Stillbirths		Livebirths		Stillbirths	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1991	220	72.1	34	11.1	23	7.5	28	9.2	243	79.7	62	20.3
1992	231	77.5	32	10.7	21	7.0	14	4.7	252	84.6	46	15.4
1993	200	69.9	40	14.0	22	7.7	24	8.4	222	77.6	64	22.4
1994	244	74.4	32	9.8	22	6.7	30	9.1	266	81.1	62	18.9
1995	225	75.0	37	12.3	20	6.7	18	6.0	245	81.7	55	18.3
1996	226	71.7	45	14.3	22	7.0	22	7.0	248	78.7	67	21.3
1997	265	78.4	35	10.4	22	6.5	16	4.7	287	84.9	51	15.1
1998	264	78.1	37	10.9	16	4.7	21	6.2	280	82.8	58	17.2
1999	246	79.4	34	11.0	18	5.8	12	3.9	264	85.2	46	14.8
2000	268	76.6	44	12.6	27	7.7	11	3.1	295	84.3	55	15.7
2001	261	77.2	35	10.4	24	7.1	18	5.3	285	84.3	53	15.7
2002	219	73.7	40	13.5	25	8.4	13	4.4	244	82.2	53	17.8
2003	230	76.4	30	10.0	23	7.6	18	6.0	253	84.1	48	15.9
2004	283	78.8	36	10.0	23	6.4	17	4.7	306	85.2	53	14.8
2005	286	77.7	36	9.8	30	8.2	16	4.3	316	85.9	52	14.1

Includes babies born before arrival at hospital and homebirths

Table 59: Births identified with birth defects in Western Australia, 2001-2005

Diagnostic Category (and British Paediatric Association Code)	Year of Birth									
	2001		2002		2003		2004		2005	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Nervous System Defects (74000-74299)	119	4.8	114	4.6	82	3.3	87	3.4	104	3.9
Cardiovascular Defects (74500-74799)	323	13.0	322	13.0	279	11.3	288	11.3	272	10.1
Respiratory System Defects (74800-74899)	38	1.5	32	1.3	29	1.2	28	1.1	25	0.9
Gastro-Intestinal Defects (74900-75199)	148	5.9	145	5.9	165	6.7	151	5.9	132	4.9
Uro-Genital Defects (75200-75399)	462	18.5	377	15.2	349	14.1	319	12.5	208	7.7
Musculo-Skeletal Defects (75400-75699)	402	16.1	383	15.5	331	13.4	323	12.7	338	12.6
Chromosome Defects (75800-75899)	120	4.8	116	4.7	119	4.8	145	5.7	147	5.5

¹ Rate per 1000 births

SOURCE: Western Australian Birth Defects Registry.

Table 60: Length of stay in special care and plurality for livebirths in Western Australia, 2005

Length of Stay ¹ (days)	Plurality				Total	
	Singleton		Multiple		No.	%
	No.	%	No.	%		
1	383	21.8	34	8.5	417	19.4
2	263	15.0	18	4.5	281	13.1
3	173	9.9	22	5.5	195	9.1
4	142	8.1	18	4.5	160	7.4
5	96	5.5	12	3.0	108	5.0
6	48	2.7	13	3.3	61	2.8
7	46	2.6	14	3.5	60	2.8
8-14	241	13.7	94	23.6	335	15.6
15-20	108	6.2	39	9.8	147	6.8
21-28	72	4.1	49	12.3	121	5.6
29-60	116	6.6	56	14.1	172	8.0
61-90	45	2.6	16	4.0	61	2.8
91-180	21	1.2	13	3.3	34	1.6
> 180	-	-	-	-	-	-
TOTAL	1754	100.0	398	100.0	2152	100.0

¹ Excludes births with less than 24 hours stay in Special Care Nurseries.

Table 61: Length of stay in hospital of birth and birthweight distribution of livebirths in Western Australia, 2005

Birthweight (grams)	Length of Stay (days)						TOTAL
	≤ 1	2-7	8-14	15-20	21-28	> 28	
Number							
< 500	11	4	1	-	-	3	19
500-999	13	8	5	3	1	75	105
1000-1499	17	7	10	10	19	93	156
1500-1999	22	56	84	58	62	70	352
2000-2499	75	615	295	81	40	14	1120
< 2500	138	690	395	152	122	255	1752
2500-2999	439	3493	391	51	9	9	4392
3000-3499	1072	8315	361	12	3	13	9776
3500-3999	966	6802	226	6	8	6	8014
4000-4499	300	2090	74	5	1	4	2474
≥ 4500	48	319	14	1	1	1	384
TOTAL	2963	21709	1461	227	144	288	26792
Percentage							
< 500	0.4	0.0	0.1	-	-	1.0	0.1
500-999	0.4	0.0	0.3	1.3	0.7	26.0	0.4
1000-1499	0.6	0.0	0.7	4.4	13.2	32.3	0.6
1500-1999	0.7	0.3	5.7	25.6	43.1	24.3	1.3
2000-2499	2.5	2.8	20.2	35.7	27.8	4.9	4.2
< 2500	4.7	3.2	27.0	67.0	84.7	88.5	6.5
2500-2999	14.8	16.1	26.8	22.5	6.3	3.1	16.4
3000-3499	36.2	38.3	24.7	5.3	2.1	4.5	36.5
3500-3999	32.6	31.3	15.5	2.6	5.6	2.1	29.9
4000-4499	10.1	9.6	5.1	2.2	0.7	1.4	9.2
≥ 4500	1.6	1.5	1.0	0.4	0.7	0.3	1.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Includes homebirths in midwife's care.

Table 62: Length of stay in hospital of birth and birthweight distribution of surviving livebirths in Western Australia, 2005

Birthweight (grams)	Length of Stay (days)						TOTAL
	≤ 1	2-7	8-14	15-20	21-28	> 28	
Number							
< 500	-	-	-	-	-	1	1
500-999	-	2	-	-	-	47	49
1000-1499	2	3	6	1	6	73	91
1500-1999	4	28	39	43	50	59	223
2000-2499	35	550	241	77	37	12	952
< 2500	41	583	286	121	93	192	1316
2500-2999	374	3430	373	50	9	9	4245
3000-3499	975	8246	358	11	2	13	9605
3500-3999	884	6755	225	6	8	5	7883
4000-4499	266	2065	73	5	1	3	2413
≥ 4500	42	314	13	1	1	1	372
TOTAL	2582	21393	1328	194	114	223	25834
Percentage							
< 500	-	-	-	-	-	0.4	0.0
500-999	-	0.0	-	-	-	21.1	0.2
1000-1499	0.1	0.0	0.5	0.5	5.3	32.7	0.4
1500-1999	0.2	0.1	2.9	22.2	43.9	26.5	0.9
2000-2499	1.4	2.6	18.1	39.7	32.5	5.4	3.7
< 2500	1.6	2.7	21.5	62.4	81.6	86.1	5.1
2500-2999	14.5	16.0	28.1	25.8	7.9	4.0	16.4
3000-3499	37.8	38.5	27.0	5.7	1.8	5.8	37.2
3500-3999	34.2	31.6	16.9	3.1	7.0	2.2	30.5
4000-4499	10.3	9.7	5.5	2.6	0.9	1.3	9.3
≥ 4500	1.6	1.5	1.0	0.5	0.9	0.4	1.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Includes homebirths in midwife's care.

Table 63: Length of stay in hospital of birth and gestational age of livebirths in Western Australia, 2005

Gestation (weeks)	Length of Stay (days)						TOTAL
	≤ 1	2-7	8-14	15-20	21-28	> 28	
Number							
20-27	27	12	9	3	1	74	126
28-32	20	23	23	30	56	162	314
33-36	108	892	531	159	71	25	1786
37-42	2808	20782	898	35	16	27	24566
TOTAL	2963	21709	1461	227	144	288	26792
Percentage							
20-27	0.9	0.1	0.6	1.3	0.7	25.7	0.5
28-32	0.7	0.1	1.6	13.2	38.9	56.3	1.2
33-36	3.6	4.1	36.3	70.0	49.3	8.7	6.7
37-42	94.8	95.7	61.5	15.4	11.1	9.4	91.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Includes homebirths in midwife's care.

Table 64: Length of stay in hospital of birth and gestational age of surviving livebirths in Western Australia, 2005

Gestation (weeks)	Length of Stay (days)						TOTAL
	≤ 1	2-7	8-14	15-20	21-28	> 28	
Number							
20-27	-	3	2	-	-	46	51
28-32	3	11	-	15	33	130	192
33-36	41	777	435	144	65	22	1484
37-42	2538	20602	891	35	16	25	24107
TOTAL	2582	21393	1328	194	114	223	25834
Percentage							
20-27	-	0.0	0.2	-	-	20.6	0.2
28-32	0.1	0.1	-	7.7	28.9	58.3	0.7
33-36	1.6	3.6	32.8	74.2	57.0	9.9	5.7
37-42	98.3	96.3	67.1	18.0	14.0	11.2	93.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Includes homebirths in midwife's care.

Excludes 898 inter-hospital transfers and 60 deaths in hospital of birth.

Perinatal Mortality

Table 65: Perinatal mortality in Western Australia using birthweight criteria, 2005

Birthweight	Fetal death rate	Neonatal death rate	Perinatal death rate
≥ 400 grams	5.0	2.5	7.5
≥ 500 grams	3.9	2.2	6.1

Fetal death rate: the number of fetal deaths per 1000 total births.

Neonatal death rate: the number of neonatal deaths per 1000 livebirths.

Perinatal death rate: the number of fetal and neonatal deaths per 1000 total births.

Table 66: Perinatal mortality in Western Australia using gestational age criteria, 2005

Gestation	Fetal death rate	Neonatal death rate	Perinatal death rate
≥ 20 weeks	7.4	2.7	10.1
≥ 22 weeks	4.8	2.5	7.3

Fetal death rate: the number of fetal deaths per 1000 total births.

Neonatal death rate: the number of neonatal deaths per 1000 livebirths.

Perinatal death rate: the number of fetal and neonatal deaths per 1000 total births.

Table 67: Fetal, neonatal and perinatal mortality rates by Aboriginality of mother in Western Australia, 2005

Type of Death	Aboriginality of Mother		TOTAL
	Aboriginal	Non-Aboriginal	
Fetal death rate	13.9	7.0	7.4
Neonatal death rate	5.3	2.6	2.7
Perinatal death rate	19.2	9.5	10.1

Fetal death rate: the number of fetal deaths per 1000 total births.

Neonatal death rate: the number of neonatal deaths per 1000 livebirths.

Perinatal death rate: the number of fetal and neonatal deaths per 1000 total births.

Table 68: Fetal mortality by Aboriginality of mother in Western Australia, 1991-2005

Year of Birth	Aboriginality of Mother		Total Rate
	Aboriginal	Non-Aboriginal	
	Rate	Rate	
1991	14.8	7.3	7.7
1992	15.3	6.0	6.6
1993	13.7	6.5	6.9
1994	16.5	6.8	7.5
1995	13.0	7.4	7.7
1996	14.5	7.4	7.8
1997	20.9	5.8	6.7
1998	9.9	6.2	6.4
1999	13.5	6.5	6.9
2000	16.7	7.6	8.2
2001	10.9	6.4	6.7
2002	16.1	6.4	7.1
2003	16.2	6.9	7.5
2004	10.8	7.1	7.4
2005	13.9	7.0	7.4

Fetal death rate: the number of fetal deaths per 1000 total births.

Table 69: Neonatal mortality by Aboriginality of mother in Western Australia, 1991-2005

Year of Birth	Aboriginality of Mother		Total Rate
	Aboriginal	Non-Aboriginal	
	Rate	Rate	
1991	6.1	3.1	3.3
1992	12.0	4.0	4.5
1993	7.0	2.9	3.1
1994	7.7	3.5	3.8
1995	9.0	2.6	3.0
1996	7.0	3.6	3.8
1997	4.5	2.5	2.6
1998	11.3	2.2	2.7
1999	12.5	2.3	2.9
2000	7.6	2.3	2.6
2001	6.8	2.7	2.9
2002	9.1	1.7	2.2
2003	7.9	1.8	2.2
2004	5.1	2.2	2.4
2005	5.3	2.6	2.7

Neonatal death rate: the number of neonatal deaths per 1000 livebirths.

Table 70: Perinatal mortality by Aboriginality of mother in Western Australia, 1991-2005

Year of Birth	Aboriginality of Mother		Total Rate
	Aboriginal Rate	Non-Aboriginal Rate	
1991	20.9	10.4	11.0
1992	27.2	10.0	11.0
1993	20.6	9.4	10.0
1994	24.1	10.3	11.1
1995	21.8	10.0	10.7
1996	21.5	10.9	11.5
1997	25.3	8.3	9.3
1998	21.1	8.4	9.1
1999	25.8	8.8	9.9
2000	24.1	9.8	10.7
2001	17.6	9.0	9.6
2002	25.1	8.0	9.2
2003	23.9	8.6	9.6
2004	15.9	9.4	9.8
2005	19.2	9.5	10.1

Perinatal death rate: the number of fetal and neonatal deaths per 1000 total births.

Table 71: Birthweight distribution of fetal, neonatal and perinatal deaths in Western Australia, 2005

Birthweight	Fetal deaths		Neonatal deaths		Perinatal deaths	
	No.	%	No.	%	No.	%
< 500	95	47.5	15	20.5	110	40.3
500-999	27	13.5	19	26.0	46	16.8
1000-1499	19	9.5	6	8.2	25	9.2
1500-1999	10	5.0	5	6.8	15	5.5
2000-2499	12	6.0	5	6.8	17	6.2
< 2500	163	81.5	50	68.5	213	78.0
2500-2999	19	9.5	9	12.3	28	10.3
3000-3499	10	5.0	10	13.7	20	7.3
3500-3999	5	2.5	2	2.7	7	2.6
4000-4499	3	1.5	1	1.4	4	1.5
≥ 4500	-	-	1	1.4	1	0.4
TOTAL	200	100.0	73	100.0	273	100.0

Table 72: Plurality of fetal, neonatal and perinatal deaths in Western Australia, 2005

Plurality	Fetal deaths		Neonatal deaths		Perinatal deaths	
	No.	Rate	No.	Rate	No.	Rate
Singleton	186	7.1	58	2.2	244	9.3
Multiple	14	15.6	15	17.0	29	32.4
TOTAL	200	7.4	73	2.7	273	10.1

Fetal death rate, singletons: the number of singleton fetal deaths per 1000 singleton births.

Neonatal death rate, singletons: the number of singleton neonatal deaths per 1000 singleton livebirths.

Perinatal death rate, singletons: the number of singleton fetal and neonatal deaths per 1000 singleton births.

Fetal death rate, multiples: the number of multiple fetal deaths per 1000 multiple births.

Neonatal death rate, multiples: the number of multiple neonatal deaths per 1000 multiple livebirths.

Perinatal death rate, multiples: the number of multiple fetal and neonatal deaths per 1000 multiple births.

Table 73: Age at death for neonatal deaths in Western Australia, 2005

Age at Neonatal death	% of neonatal deaths	
	No.	
< Day 1	28	38.4
Day 1	4	5.5
Day 2	4	5.5
Day 3	8	11.0
Day 4	2	2.7
Day 5	3	4.1
Day 6	1	1.4
Day 7	-	-
Day 8-14	12	16.4
Day 15-21	7	9.6
Day 22-28	4	5.5
TOTAL	73	100.0

Table 74: Causes of fetal and neonatal deaths in Western Australia, 2005

Causes of Death	Fetal deaths		Neonatal deaths	
	No.	%	No.	%
Lethal birth defects	67	33.5	22	30.1
Extremely low birthweight (< 1000 grams) ¹	66	33.0	26	35.6
Low birthweight (1000-2499 grams) ²	4	2.0	6	8.2
Asphyxia	-	-	4	5.5
Maternal - Obstetric	1	0.5	-	-
- Medical	1	0.5	-	-
- Hypertension	1	0.5	-	-
Placenta and cord	10	5.0	-	-
Hydrops fetalis	-	-	-	-
Infection	-	-	2	2.7
Sudden Infant Death Syndrome	-	-	-	-
Other	3	1.5	1	1.4
Unknown	47	23.5	12	16.4
TOTAL	200	100.0	73	100.0

¹ Any non-malformed perinatal death of birthweight less than 1000 grams was included in the extremely low birthweight category.

² Any non-malformed perinatal death of birthweight greater than or equal to 1000 grams and less than 2500 grams was included in the low birthweight category.

Table 75: Autopsy requests for fetal, neonatal and perinatal deaths in Western Australia, 2005

Autopsy Request	Fetal deaths		Neonatal deaths		Perinatal deaths	
	No.	%	No.	%	No.	%
Yes	116	58.0	16	21.9	132	48.4
No	47	23.5	25	34.2	72	26.4
Unknown	37	18.5	32	43.8	69	25.3
TOTAL	200	100.0	73	100.0	273	100.0

APPENDIX C - ASSOCIATED RECENT REPORTS

Available on <http://www.health.wa.gov.au/publications/>

1. *Induced Abortion in Western Australia 1990-2004: Report of The WA Abortion Notification System.* (July 2005).
2. *Perinatal, Infant and Maternal Mortality in WA - A Triennial Cohort of 1999-2001 births.* (December 2005).
3. *Perinatal Statistics in Western Australia, 2003. Twenty-first Annual Report of the Western Australian Midwives' Notification System.* (September 2004).
4. *The 11th Report of the Perinatal and Infant Mortality Committee of Western Australia 2000-01.* (July 2005).

APPENDIX D - NOTIFICATION OF CASE ATTENDED FORM

Health Act (Notification by Midwife) Regulations Form 2. **NOTIFICATION OF CASE ATTENDED**

MR 15

<p>Surname _____</p> <p>Forenames _____</p> <p>Address of usual residence Number and Street _____ _____</p> <p>Town or City _____</p> <p>Maiden name _____</p>	<p>Unit Record No _____</p> <p>Birth Date (Mother) _____</p> <p>State _____ Post Code _____</p> <p>Height (cms) _____</p> <p>Tel. No. _____</p>	<p>Hospital _____</p> <p>Ward _____</p> <p>Marital Status 1=never married 2=widowed 3=divorced <input type="checkbox"/> 4=separated 5=married (incl. defacto) <input type="checkbox"/> 6=unknown <input type="checkbox"/></p> <p>Ethnic Origin 1=Caucasian 2= Aboriginal / TSI <input type="checkbox"/> Other _____</p>
<p>Pregnancy Details</p> <p>Previous Pregnancies : - total number (excluding this pregnancy) <input type="text"/></p> <p>Previous pregnancy outcomes: - children now living: <input type="text"/></p> <p>- born alive, now dead: <input type="text"/></p> <p>- stillborn: <input type="text"/></p> <p>Previous caesarean section: 1=yes 2=no <input type="checkbox"/></p> <p>Caesarean last delivery: 1=yes 2=no <input type="checkbox"/></p> <p>Previous multiple birth: 1=yes 2=no <input type="checkbox"/></p> <p>This Pregnancy:</p> <p>Date of LMP: _____</p> <p>This date certain 1=yes 2=no <input type="checkbox"/></p> <p>Expected due date: _____</p> <p>based on 1=clinical signs/dates <input type="checkbox"/> 2=ultrasound < 20 weeks <input type="checkbox"/></p> <p>Smoking during Pregnancy: 1=yes 2=no <input type="checkbox"/></p> <p>Complications of Pregnancy:</p> <p>1 <input type="checkbox"/> threatened abortion (<20wks) 2 <input type="checkbox"/> threatened preterm labour (<37 wks) 3 <input type="checkbox"/> urinary tract infection 4 <input type="checkbox"/> pre-eclampsia 5 <input type="checkbox"/> APH - placenta praevia 6 <input type="checkbox"/> abruptio 7 <input type="checkbox"/> other 8 <input type="checkbox"/> pre-labour rupture of membranes 9 <input type="checkbox"/> gestational diabetes 10 <input type="checkbox"/> other (specify).....</p> <p>_____ _____</p> <p>Medical Conditions:</p> <p>1 <input type="checkbox"/> essential hypertension 2 <input type="checkbox"/> pre-existing diabetes mellitus 3 <input type="checkbox"/> asthma 4 <input type="checkbox"/> genital herpes 8 <input type="checkbox"/> other (specify).....</p> <p>_____ _____</p> <p>Procedures/treatments:</p> <p>1 <input type="checkbox"/> fertility treatments (include drugs) 2 <input type="checkbox"/> cervical suture 3 <input type="checkbox"/> CVS/placental biopsy 4 <input type="checkbox"/> amniocentesis 5 <input type="checkbox"/> ultrasound 6 <input type="checkbox"/> CTG antepartum 7 <input type="checkbox"/> CTG intrapartum</p> <p>Intended place of birth at onset of labour: 1=hospital 2=birth centre attach. hospital <input type="checkbox"/> 3=birth centre free standing 4=home 8=other <input type="checkbox"/></p> <p>MIDWIFE:</p> <p>Name..... Signature..... date...../...../..... Reg.No. _____ Coder ID _____</p>	<p>Labour Details</p> <p>Onset of Labour: 1=spontaneous 2=induced 3=no labour <input type="checkbox"/></p> <p>Augmentation: 1 <input type="checkbox"/> none 2 <input type="checkbox"/> oxytocin 3 <input type="checkbox"/> prostaglandins 4 <input type="checkbox"/> artificial rupture of membranes 8 <input type="checkbox"/> other</p> <p>Induction: 1 <input type="checkbox"/> none 2 <input type="checkbox"/> oxytocin 3 <input type="checkbox"/> prostaglandins 4 <input type="checkbox"/> artificial rupture of membranes 8 <input type="checkbox"/> other</p> <p>Analgesia (during labour): 1 <input type="checkbox"/> none 2 <input type="checkbox"/> nitrous oxide 3 <input type="checkbox"/> intra-muscular narcotics 4 <input type="checkbox"/> epidural / caudal 5 <input type="checkbox"/> spinal 8 <input type="checkbox"/> other</p> <p>Duration of Labour: hrs mins</p> <p>1st stage (hours & mins): _____</p> <p>2nd stage: _____</p> <p>Delivery Details</p> <p>Anaesthesia (during delivery): 1 <input type="checkbox"/> none 2 <input type="checkbox"/> local anaesthesia to perineum 3 <input type="checkbox"/> pudendal 4 <input type="checkbox"/> epidural / caudal 5 <input type="checkbox"/> spinal 6 <input type="checkbox"/> general 8 <input type="checkbox"/> other</p> <p>Complications of Labour and Delivery: (include reason stated for operative delivery)</p> <p>1 <input type="checkbox"/> precipitate delivery 2 <input type="checkbox"/> fetal distress 3 <input type="checkbox"/> prolapsed cord 4 <input type="checkbox"/> cord tight around neck 5 <input type="checkbox"/> cephalopelvic disproportion 6 <input type="checkbox"/> PPH (=>500mls) 7 <input type="checkbox"/> retained placenta - manual removal 8 <input type="checkbox"/> persistent occipito posterior 9 <input type="checkbox"/> shoulder dystocia 10 <input type="checkbox"/> failure to progress <=3cms 11 <input type="checkbox"/> failure to progress > 3cms 12 <input type="checkbox"/> previous caesarean section 13 <input type="checkbox"/> other (specify).....</p> <p>_____ _____</p> <p>Perineal Status: 1=intact 2=1st degree tear <input type="checkbox"/> 3=2nd degree tear 4=3rd degree tear <input type="checkbox"/> 5=episiotomy 6=episiotomy plus tear 8=other</p>	<p>Baby Details</p> <p>(NB. separate form for each baby)</p> <p>Adoption: 1=yes 2=no <input type="checkbox"/></p> <p>Born Before Arrival: 1=yes 2=no <input type="checkbox"/></p> <p>Birth Date _____</p> <p>Birth Time (24 hr clock) _____</p> <p>Plurality: number of babies this birth <input type="text"/></p> <p>if multiple specify this baby number <input type="text"/></p> <p>Presentation: 1=vertex 2=breech <input type="checkbox"/> 3=face 4=brow 8=other <input type="checkbox"/></p> <p>Method of Birth: 1 <input type="checkbox"/> spontaneous 2 <input type="checkbox"/> vacuum successful 3 <input type="checkbox"/> unsuccessful 4 <input type="checkbox"/> forceps successful 5 <input type="checkbox"/> unsuccessful 6 <input type="checkbox"/> breech (vaginal) 7 <input type="checkbox"/> elective caesarean 8 <input type="checkbox"/> emergency caesarean</p> <p>Accoucheur(s): 1 <input type="checkbox"/> obstetrician 2 <input type="checkbox"/> other medical officer 3 <input type="checkbox"/> midwife 4 <input type="checkbox"/> student 5 <input type="checkbox"/> self / no attendant 8 <input type="checkbox"/> other</p> <p>Gender: 1=male 2=female <input type="checkbox"/></p> <p>Status of Baby at Birth: 1=liveborn 2=stillborn <input type="checkbox"/></p> <p>Infant Weight (grams): _____</p> <p>Length (cms): _____</p> <p>Head Circumference (cms): _____</p> <p>Time to establish unassisted regular breathing (mins): _____</p> <p>Resuscitation : 1=none 2=suction only 3=oxygen therapy 4=bag & mask 5=endotracheal intubation <input type="checkbox"/> 6=ext. cardiac massage & vent. 8=other</p> <p>Apgar Score: 1 minute _____ 5 minutes _____</p> <p>Estimated Gestation (weeks): _____</p> <p>Birth Defects (specify):</p> <p>Birth Trauma (specify):</p> <p>Baby Separation Details:</p> <p>Sep. Date _____</p> <p>Mode of separation: 1=transferred 8=died 9=disch. home <input type="checkbox"/></p> <p>transferred to: _____</p> <p>Special care (wholedays only): _____</p>