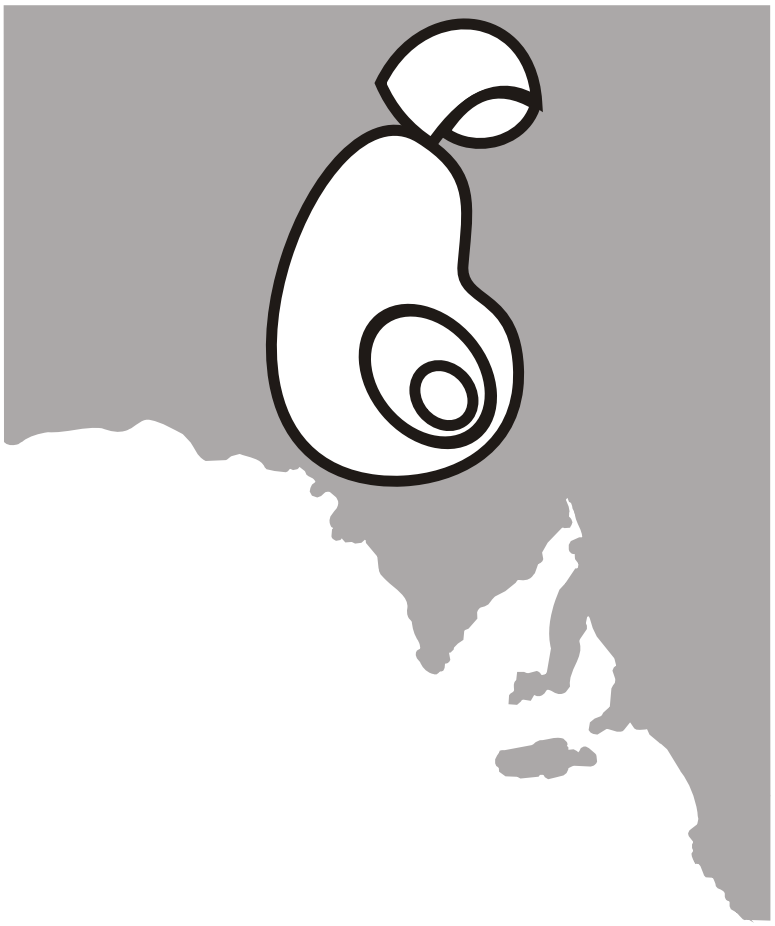
PREGNANCY OUTCOME

IN SOUTH AUSTRALIA 2002



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2002

Annabelle Chan • Joan Scott • Anh-Minh Nguyen • Paula Green

Pregnancy Outcome Unit
Epidemiology Branch
Department of Human Services
Adelaide

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PREGNANCY OUTCOME STATISTICS UNIT
Epidemiology Branch
Department of Human Services
162 Grenfell Street
ADELAIDE 5000
SOUTH AUSTRALIA

Postal Address:
PO Box 6, Rundle Mall
ADELAIDE 5000
SOUTH AUSTRALIA
Telephone: (08) 8226 6382
Fax: (08) 8226 6291

Web Address: www.dhs.sa.gov.au/pehs/pregnancyoutcome.htm

Email Address: Pregnancy.Stats@dhs.sa.gov.au

STAFF

Annabelle Chan	Senior medical consultant
Joan Scott	Senior midwife
Leonie Sage	Midwife (part-time)
Maureen Fisher	Clerical Officer
Judith Thompson	Clerical Officer (part-time)
Paula Green	Midwife (part-time)
Robyn Kennare	Senior midwife, Maternal, Perinatal & Infant Mortality Committee

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SUMMARY

1. The number of births notified in South Australia in 2002 was 17745, which was 41 more than the previous year. The number of women who gave birth was 17421. The crude birth rate remained at 11.6 per 1000 population and was generally higher in country regions than the Central regions. However, Yorke and Lower North had one of the lowest rates, while the Central Northern Region had one of the highest rates.

2. Compared with 2001, the proportion of births decreased in metropolitan teaching hospitals (from 52% to 50% of births in the State) and also in country hospitals (23% to 22%) but increased in metropolitan private hospitals (from 25% to 28%). Five percent of women (1000) gave birth in birthing units in teaching hospitals and another 5% (865) who intended to give birth in birthing units required transfer to labour wards before delivery. Forty-seven planned homebirths were notified, a slight increase in the number compared with the previous three years, but our ascertainment of planned homebirths is incomplete – about 83% in 2002.

3. 5417 terminations of pregnancy were notified, slightly less than in 2001. The abortion rate was 17.2 per 1000 women aged 15-44 years and has been relatively stable for the last seven years.

4. Teenage women accounted for 5% of confinements and 23% of terminations. The teenage pregnancy rate declined in the 1970s and 1980s, but increased in the early 1990s, with an increase in the teenage abortion rate. However, since 1996 it has declined mainly due to the decline in the teenage birth rate. Teenage abortions have exceeded teenage births each year since 1995, and in 2002 56% of known teenage pregnancies were terminated compared with 23% of known pregnancies for all ages.

5. Older women aged 35 years or more have been contributing an increasing proportion to confinements, from 5% in 1981 to 17% in 2002. Thirty-five percent of women giving birth in their first pregnancy were aged 30 years or more, compared with 9% in 1981. Their mean age was 27.0 years. There were more women giving birth in the five-year age group 30-34 years than in the 25-29 years age group, as was seen in 2001. The mean age of all women giving birth was 29.1 years.

6. Asian women contributed 4.8% of confinements, an increasing proportion from 2% in 1981. They were generally older (23% being aged 35 years or more) and gave birth mainly in teaching hospitals.

7. *Aboriginal women contributed 2.5% of confinements in the State. Twenty-two percent of Aboriginal women (compared with 5% of non-Aboriginal women) were teenagers and 41% (compared with 6% of non-Aboriginal women) had less than seven antenatal visits during pregnancy. Smoking in pregnancy was more prevalent among Aboriginal mothers, with 57% smoking during pregnancy compared with 21% of non-Aboriginal women. Aboriginal women also had approximately three times their proportion of low birthweight (<2500g) and preterm births (<37 weeks gestation). The perinatal mortality rate of babies of Aboriginal women was two and a half times that of non-Aboriginal women in 2002 (24.4 compared with 9.5 per 1000 births).*

8. Although many women had more than one type of antenatal care, the most common types used were hospital clinics (41%), obstetricians in private practice (34%) and general practitioners (28%). Thirty-three percent of women were private patients, a higher proportion than the previous year (30%). The median length of stay of mothers after a birth was 3 days for vaginal deliveries and 5 days for caesarean section. It was 2 days longer among private patients.

9. At least ninety-six percent of women who gave birth had an ultrasound examination; 29% had labour induced while another 20% had spontaneous labour augmented; epidurals were used for pain relief during labour for 32% of women, and 15% (a declining proportion) had an episiotomy. The main reasons for induction of labour were prolonged pregnancy (25%), hypertension (17%), premature rupture of membranes (8%), intrauterine growth restriction (5%) and diabetes or gestational diabetes (5%). However, the proportion of inductions performed which were not for the defined indications has increased from 35% in 1998 to 43% in 2002.

10. For the second year, the proportion of spontaneous normal vaginal deliveries (59%) has fallen below 60% and the proportions of women delivered by ventouse and forceps were both 6% (compared with 1% and 15% respectively in 1981). In 2002 the proportion of women delivered by caesarean section has risen to 29%, with 13% of women having elective caesareans. Fourteen percent of women who gave birth had had a previous caesarean section and only 21% of women had a vaginal delivery following a previous first caesarean without intervening births, compared with 23% the previous year. The main reasons given for caesarean section were failure to progress in labour or cephalopelvic disproportion (27%), previous caesarean section (25%), fetal distress (17%) and malpresentation (12%).

11. The proportion of multiple births, which has been increasing since the 1980s in relation to assisted conception pregnancies and the increasing proportion of older mothers, increased in 2002 to 3.6% of births.

12. The perinatal mortality rate and the neonatal mortality rate for all births in 2002 were 9.9 per 1000 births and 3.1 per 1000 livebirths respectively. For international comparisons, the World Health Organization recommends including only births of at least 1000g birthweight (or 28 weeks gestation if birthweight unavailable) and early neonatal deaths within the first 7 days of life (instead of 28 days) in calculating the perinatal mortality rate. This rate for international comparisons for South Australia for 2002 was 4.0 per 1000 births. This rate has declined by 44% from 7.2 per 1000 births in 1981. The decline has been even greater for neonatal deaths (a decline of 68% from 2.5 per 1000 livebirths in 1981 to 0.8 per 1000 livebirths in 2002).

I. INTRODUCTION

This Report summarizes the statistics for 2002 from the following two collections in the Pregnancy Outcome Unit:

1. The Perinatal Statistics Collection

This collection utilises notifications of births in South Australia made by midwives and neonatal nurses on the Supplementary Birth Record (SBR - Appendix 1).

Information on congenital abnormalities detected at birth or in the neonatal period is provided by doctors using the Congenital Abnormality Form (Appendix 2). These data are provided under legislation, the South Australian Health Commission (Pregnancy Outcome Statistics) Regulations 1999.

Perinatal death certificates and Burial Orders in coronial cases are obtained from the Births, Deaths and Marriages Registration Division, chromosome analysis reports from cytogenetics departments and autopsy reports from pathology departments and the Coroner's Office. All these are linked with the SBRs.

2. The Abortion Statistics Collection

Notifications made by doctors of medical terminations of pregnancy under the Criminal Law Consolidation (Medical Termination of Pregnancy) Regulations 1996, are utilised in this collection.

Some definitions used by the Pregnancy Outcome Unit are provided in Appendix 3. Guidelines* with some of these definitions are issued to all obstetric units to promote the uniform completion of forms.

II. PERINATAL EPIDEMIOLOGY

The births in 2002 in South Australia described in this Report include all livebirths and stillbirths (including terminations of pregnancy) of at least 400g birthweight or 20 weeks gestation. Thirty-three births of less than 400g birthweight have been included, all of which were perinatal deaths and 14 were terminations of pregnancy for congenital abnormalities. These thirty-three births consisted of five livebirths born at 20-24 weeks gestation and 28 stillbirths. Six of the babies were from twin pregnancies, and two of these babies were intrauterine deaths which were retained in utero until their twins were delivered at 35 and 36 weeks gestation respectively.

SBRs were received for all 17745 births reported by hospital and home birth midwives in their monthly notification lists. These comprised 17623 livebirths and 122 stillbirths. The number of women confined was 17421.

Findings relating to Aboriginal mothers and babies in the text of this Report have been *italicised* for easy identification.

* *Pregnancy Outcome Unit,* Guidelines for the Supplementary Birth Record, *Adelaide: South Australian Health Commission,1997.*

1. Place of residence of mother

South Australia is divided into 9 CURB* Regions, comprising 5 country Regions and 4 Central Regions. Each of the Central Regions (Northern, Eastern, Western, Southern) has a Metropolitan (Adelaide) and a non-metropolitan component (Figures 1A and 1B). The distribution of births according to place of residence of mother by CURB Regions is provided in Table 1 together with the estimated resident population and Crude Birth Rate. Only livebirths are used in calculating the Crude Birth Rate (see Appendix 3). The Crude Birth Rate in 2002 for South Australia was 11.6 per 1000 population. It was lowest in the Yorke and Lower North and the Central Western, Eastern and Southern Regions, and highest in Eyre, the South East and the Central Northern Regions.

TABLE 1
BIRTHS AND CRUDE BIRTH RATE BY CURB REGIONS, SA, 2002

CURB REGION (Mother's Residence)	TOTAL BIRTHS		LIVEBIRTHS	ESTIMATED RESIDENT POPULATION, June 30, 2002+	CRUDE BIRTH RATE per 1000 population
	NO	%	NO	NO	
Central Northern	5035	28.4	5002	390398	12.8
Central Western	2280	12.8	2264	214834	10.5
Central Eastern	2770	15.6	2756	263462	10.5
Central Southern	3901	22.0	3871	361903	10.7
Yorke & Lower North	476	2.7	476	44542	10.7
Murraylands	809	4.6	801	68634	11.7
South East	862	4.9	854	62780	13.6
Northern	981	5.5	972	79474	12.2
Eyre	484	2.7	484	34215	14.1
Interstate	147	0.8	143	na	na
TOTAL	**17745**	**100.0**	**17623**	**1520242**	**11.6**

\+ *Australian Bureau of Statistics.* POPULATION ESTIMATES BY AGE AND SEX, SOUTH AUSTRALIA, 2002. *Canberra: (ABS), 14th August 2003 (Catalogue No 3235.0).*

n.a. not applicable

* *CURB - Committee on Uniform Regional Boundaries.*

2. Place of Birth

Of the 17745 births in 2002, 47 (0.3%) were planned home births. One mother was not booked at any hospital and delivered a stillbirth at home. The remaining 17697 births took place in hospitals or (in 56 cases) before arrival at hospitals into which the mothers had been booked. These births which occurred before arrival at hospitals (also called BBAs) have been included in the statistics for those hospitals. The distribution of births by place of birth (home or hospital) and plurality is provided in Table 2. Locations of South Australian hospitals with obstetric beds in 2002 are provided in Figures 1A and 1B.

TABLE 2
TOTAL BIRTHS NOTIFIED IN 2002, BY PLACE OF BIRTH AND PLURALITY
(Based on Supplementary Birth Records)

CONDITION AT BIRTH	HOME BIRTHS	HOSPITAL BIRTHS			TOTAL
	SINGLETON	SINGLETON	TWIN	TRIPLET	
Livebirth	47	16946	618	12	17623
Stillbirth	1*	107	14	0	122
TOTAL BIRTHS	**48**	**17053**	**632**	**12**	**17745**

* *Unplanned home birth, not booked at any hospital*

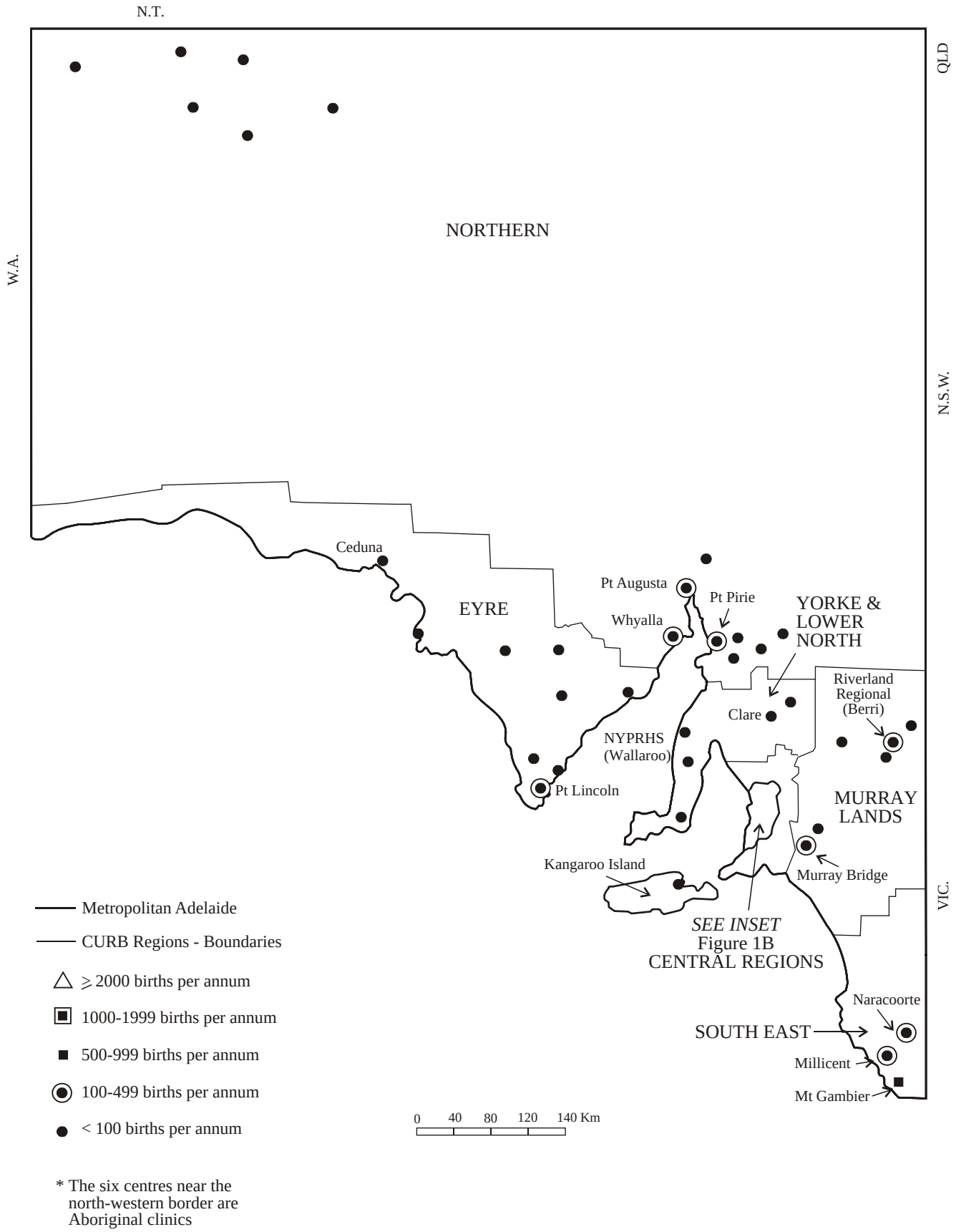
Of the 17697 hospital births, 78% occurred in metropolitan hospitals (teaching and private) and 22% in country hospitals. This distribution is summarized in Table 3A and Figure 2 and the numbers of births and confinements by race in individual hospitals are provided in Table 3B. Metropolitan hospitals are listed in order of number of births and country hospitals in alphabetic order in their category of number of births. Nearly 50% of births in South Australia in 2002 occurred in metropolitan teaching hospitals. Level III teaching hospitals - the Women's and Children's Hospital and Flinders Medical Centre - provide a high risk pregnancy service and neonatal intensive care. Two other teaching hospitals have neonatal special care units - Lyell McEwin Health Service and Modbury Hospital. The Queen Elizabeth Hospital now provides only Level I services. These levels are defined in the Report 'Operational Policy, Guidelines and Standards for Maternal and Neonatal Services in South Australia.'[1]

Compared with 2001, the numbers of births increased slightly in some metropolitan teaching hospitals and decreased slightly in country hospitals. In metropolitan teaching hospitals, births decreased mainly at The Queen Elizabeth and the Women's and Children's Hospitals. Births increased at all the six remaining metropolitan private hospitals. During 2002 obstetric services ceased at Balaklava, Burra, Southern Districts War Memorial Hospital, Stirling Private Hospital and Western Hospital. Low level II nursery services commenced at Flinders Private and North Eastern Community Hospitals in November 2002.

In the country, births increased at Mt Gambier, Whyalla, Gawler Health Service, Naracoorte, Tanunda, Renmark, Booleroo Centre, Cummins and Jamestown Hospitals, while decreases occurred at Mannum, Millicent, Port Augusta, Port Pirie, Port Lincoln, Murray Bridge, Crystal Brook, South Coast District and Kangaroo Island Hospitals.

Figure 1A

SOUTH AUSTRALIAN HOSPITALS WITH OBSTETRIC BEDS IN 2002*



* The six centres near the north-western border are Aboriginal clinics

Figure 1B

CENTRAL REGIONS

(as at June 2002)

TABLE 3A HOSPITAL BIRTHS BY CATEGORY OF HOSPITAL, SA, 2002		
CATEGORY OF HOSPITAL	**NO. OF BIRTHS**	**% HOSPITAL BIRTHS**
Metropolitan teaching	**8798**	**49.7**
Level III	(5996)	(33.9)
Other teaching	(2802)	(15.8)
Metropolitan private	**4958**	**28.0**
500+ births per annum	(4294)	(24.3)
<500 births per annum	(664)	(3.7)
Country	**3941**	**22.3**
Major country	(856)	(4.9)
100-399 births per annum	(2128)	(12.0)
50-99 births per annum	(616)	(3.5)
<50 births per annum	(341)	(1.9)
TOTAL	**17697**	**100.0**

Figure 2: DISTRIBUTION OF HOSPITAL BIRTHS BY HOSPITAL CATEGORY SOUTH AUSTRALIA 2002 (n=17697)

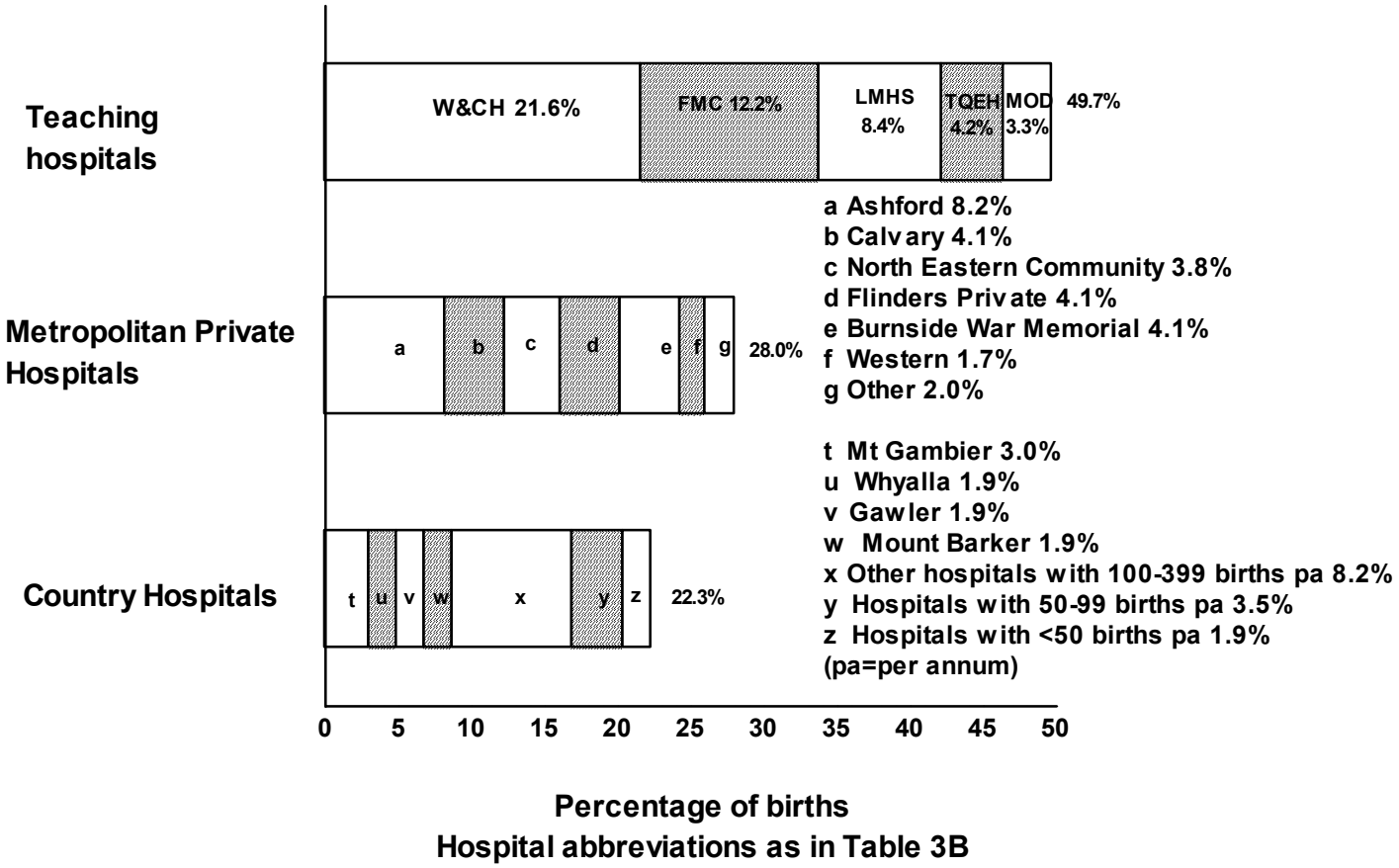


TABLE 3B

HOSPITAL BIRTHS IN SOUTH AUSTRALIA IN 2002 BY RACE AND HOSPITAL

(as indicated by returned SBRs for hospital births)

HOSPITAL	CAUCASIAN	ABORIGINAL	ASIAN	OTHER	TOTAL BIRTHS	TOTAL CONFINEMENTS
METROPOLITAN TEACHING						
Women's & Children's Hospital (W&CH)	3245	126	300	159	3830	3700
Flinders Medical Centre (FMC)	2019	35	85	27	2166	2119
Lyell McEwin Health Service (LMHS)*	1307	51	105	16	1479	1453
The Queen Elizabeth Hospital (TQEH)	527	32	162	27	748	748
Modbury Hospital (MOD)*	509	6	38	22	575	570
TOTAL	**7607**	**250**	**690**	**251**	**8798**	**8590**
METROPOLITAN PRIVATE						
500+ Births p.a.						
Ashford Community *	1414	1	31	7	1453	1425
Flinders Private	711	2	15	7	735	723
Calvary*	690	2	25	3	720	698
Burnside War Memorial (BWMH)*	700	0	14	4	718	710
North Eastern Community (NECH)	661	0	6	1	668	656
< 500 Births p.a.						
Western	306	0	3	1	310	304
Central Districts	291	0	5	1	297	295
Stirling	56	0	0	1	57	56
TOTAL	**4829**	**5**	**99**	**25**	**4958**	**4867**
COUNTRY						
Major Country						
Mt. Gambier	514	4	1	8	527	519
Whyalla	290	25	7	7	329	325
SUBTOTAL	**804**	**29**	**8**	**15**	**856**	**844**
100-399 Births p.a.						
Gawler Health Service**	330	3	2	1	336	335
Millicent	104	1	2	1	108	108
Mt. Barker	325	0	11	1	337	331
Murray Bridge Soldiers' Memorial	209	22	4	0	235	235
Naracoorte	163	2	3	3	171	170
Pt. Augusta	113	77	1	4	195	194
Pt. Lincoln	220	15	2	3	240	240
Pt. Pirie	180	8	1	2	191	190
Riverland Regional (Berri)	157	8	3	3	171	168
Tanunda	143	1	0	0	144	144
SUBTOTAL	**1944**	**137**	**29**	**18**	**2128**	**2115**

* These hospitals have neonatal special care nurseries.

** Although this is a metropolitan hospital, it is close to the country, and, like most country hospitals, is a recognised hospital.

HOSPITAL	CAUCASIAN	ABORIGINAL	ASIAN	OTHER	TOTAL BIR	TOTAL CONFINEMENTS
50-99 Births p.a.						
Clare	76	1	1	0	78	78
Crystal Brook	53	2	0	0	55	55
Kapunda	50	0	1	0	51	51
Loxton	86	4	0	0	90	90
Northern Yorke Peninsula Regional Health Service (Wallaroo)	94	3	1	1	99	99
Renmark	81	4	8	3	96	96
South Coast District (Victor Harbor)	92	1	0	0	93	93
Waikerie	50	2	1	1	54	54
SUBTOTAL	**582**	**17**	**12**	**5**	**616**	**616**
1-49 Births p.a.						
Balaklava	4	0	0	0	4	4
Booleroo Centre	23	0	0	0	23	23
Bordertown	1	0	0	0	1	1
Burra Burra	5	0	0	0	5	5
Ceduna	3	2	0	0	5	5
Central Yorke Peninsula (Maitland)	8	1	0	0	9	9
Cleve	21	0	1	0	22	22
Coober Pedy	0	1	0	0	1	1
Cowell	4	0	0	0	4	4
Cummins	26	1	0	0	27	27
Jamestown	42	1	0	0	43	43
Kalka	0	1	0	0	1	1
Kangaroo Island	32	0	1	1	34	34
Kimba	9	0	0	0	9	9
Lower Murray District Hospital (Tailem Bend)	1	0	0	0	1	1
Mannum	17	0	0	0	17	17
Mid West Health (Wudinna)	11	0	0	0	11	11
Mid West Health (Streaky Bay)	20	0	0	0	20	20
Mimili	0	1	0	0	1	1
Peterborough	5	0	0	0	5	5
Quorn	8	2	0	0	10	10
Southern Districts War Memorial (McLaren Vale)**	39	0	0	0	39	39
Southern Yorke Peninsula (Yorketown)	33	0	1	0	34	34
Tumby Bay	13	1	0	0	14	14
Yalata	0	1	0	0	1	1
SUBTOTAL	**325**	**12**	**3**	**1**	**341**	**341**
TOTAL (COUNTRY)	**3655**	**195**	**52**	**39**	**3941**	**3916**
GRAND TOTAL	**16091**	**450**	**841**	**315**	**17697**	**17373**

** Although this is a metropolitan hospital, it is close to the country, and like most country hospitals, is a recognised hospital.

3. Maternal Race

The distribution of South Australian confinements by race of mother is provided in Table 4A and also by category of birthplace in Table 4B. *In this table and all others where distribution by race is shown, 'Aboriginal' includes Aboriginal (414 women), Torres Strait Islander (2 women) and those who are Aboriginal and Torres Strait Islander (27 women). Aboriginal mothers accounted for 2.5% of confinements and delivered mainly in country hospitals and metropolitan teaching hospitals,* while Asian mothers, accounting for 4.8%, delivered mainly in metropolitan teaching hospitals.

TABLE 4A
CONFINEMENTS BY RACE OF MOTHER, SA, 2002

RACE OF MOTHER	NO OF CONFINEMENTS	% CONFINEMENTS
Caucasian	15835	90.9
Aboriginal	443	2.5
Asian	832	4.8
Other	311	1.8
TOTAL	**17421**	**100.0**

TABLE 4B
CONFINEMENTS BY RACE AND BIRTHPLACE CATEGORY, SA, 2002

BIRTHPLACE	RACE OF MOTHER									
	CAUCASIAN		ABORIGINAL		ASIAN		OTHER		TOTAL	
	NO	%	NO	%	NO	%	NO	%	NO	%
Metropolitan teaching hospital	7416	46.8	244	55.1	682	82.0	248	79.7	8590	49.3
Metropolitan private hospital	4740	29.9	4	0.9	98	11.8	25	8.0	4867	27.9
Country hospital	3631	22.9	195	44.0	52	6.3	38	12.2	3916	22.5
Home	48	0.3	0	0.0	0.0	0.0	0	0.0	48	0.3
TOTAL	**15835**	**(90.9)**	**443**	**(2.5)**	**832**	**(4.8)**	**311**	**(1.8)**	**17421**	**100.0**

The perinatal mortality rate for births to Aboriginal mothers was 24.4 per 1000 births in 2002 compared with 9.5 per 1000 births for births to non-Aboriginal mothers (Table 4C).

TABLE 4C
PERINATAL MORTALITY BY RACE
(all births)

RACE	TOTAL BIRTHS	STILLBIRTH	NEONATAL DEATH	ALIVE AT 28 DAYS	PERINATAL DEATH	
	NO	NO	NO	NO	NO	RATE per 1000 births
Caucasian	16139	110	41	15988	151	9.4
Aboriginal	450	6	5	439	11	24.4
Asian	841	4	8	829	12	14.3
Other	315	2	0	313	2	6.3
TOTAL	**17745**	**122**	**54**	**17569**	**176**	**9.9**

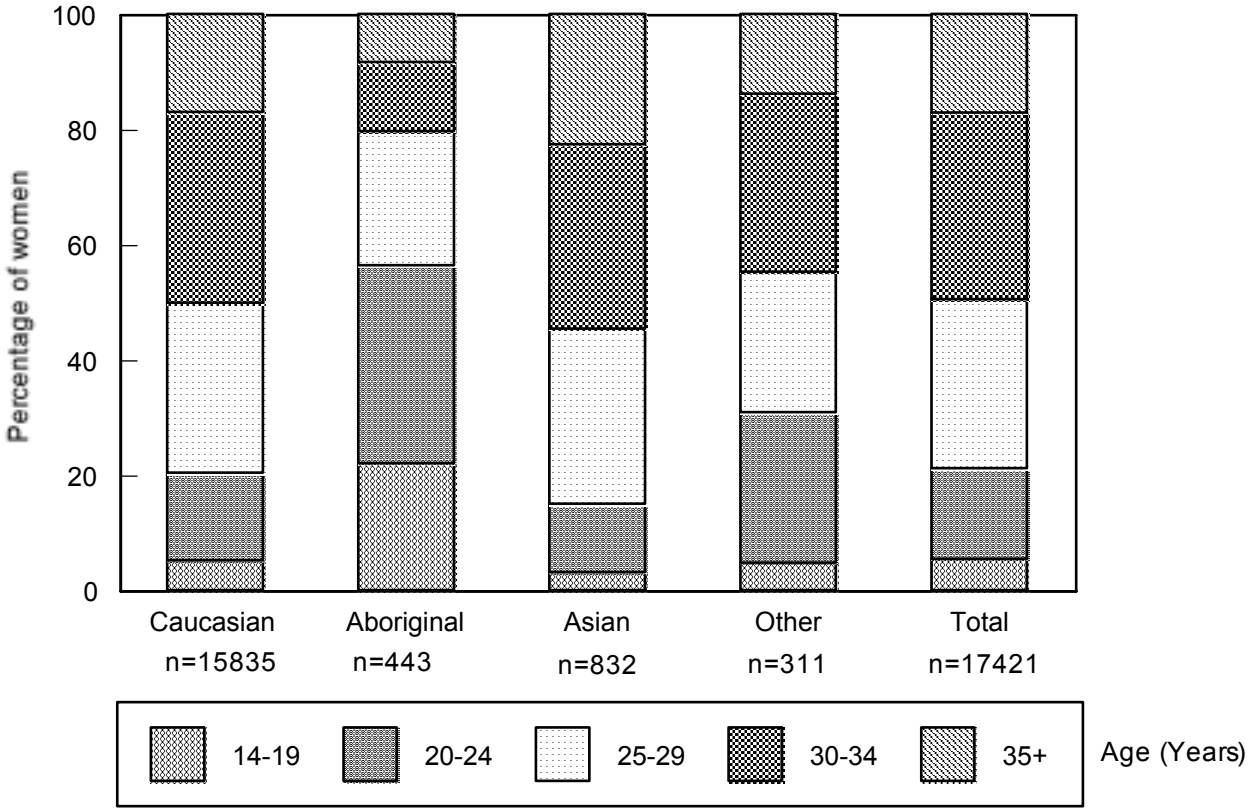
4. Maternal age

Among the five year age groups the largest proportion of confinements (32.4%) was contributed by women in the 30-34 years age group (Table 4D). Confinements of teenagers comprised 5.5% and those of older women (≥35 years) 17.1%. *Aboriginal mothers were generally younger, 22.1% being teenagers (Figure 3).* Among Asian women, on the other hand, there were fewer teenagers (3.1%) and a larger proportion (22.6%) of older women.

TABLE 4D
MATERNAL AGE BY RACE
(all confinements)

AGE (years)	CAUCASIAN		ABORIGINAL		ASIAN		OTHER		TOTAL	
	NO	%	NO	%	NO	%	NO	%	NO	%
<15	5	0.0	2	0.5	0	0.0	0	0.0	7	0.0
15-19	817	5.2	96	21.7	26	3.1	15	4.8	954	5.5
20-24	2405	15.2	152	34.3	99	11.9	81	26.1	2737	15.7
25-29	4663	29.5	103	23.3	253	30.4	76	24.4	5095	29.3
30-34	5235	33.1	53	12.0	266	32.0	96	30.9	5650	32.4
35-39	2281	14.4	33	7.5	158	19.0	31	10.0	2503	14.4
40-44	408	2.6	4	0.9	28	3.4	12	3.9	452	2.6
45+	21	0.1	0	0.0	2	0.2	0	0.0	23	0.1
TOTAL	**15835**	**(90.9)**	**443**	**(2.5)**	**832**	**(4.8)**	**311**	**(1.8)**	**17421**	**100.0**

Figure 3: MATERNAL AGE BY RACE, SA CONFINEMENTS 2002 (n=17421)



5. Country of birth

The distribution of women by country of birth is provided in Table 5A and by specified countries of birth with 40 or more confinements in Table 5B. Of the 15.2% of women born outside Australia, the largest proportion was born in the United Kingdom and Ireland (4.3%). Other countries contributing relatively large proportions of migrant women were Vietnam (1.6% of confinements), New Zealand (1.1%), the Philippines (0.7%), Cambodia, Yugoslavia, India, China and South Africa (0.4% each), and Malaysia, Poland, and the United States of America (0.3% each).

TABLE 5A
CONFINEMENTS BY COUNTRY OF BIRTH OF MOTHER, MAJOR GROUPS,* SA, 2002

	COUNTRY OF BIRTH	NO	%
1	Oceania and Antarctica	15035	86.3
2	Europe and the USSR	1140	6.5
3	The Middle East and North Africa	122	0.7
4	Southeast Asia	613	3.5
5	Northeast Asia	143	0.8
6	Southern Asia	121	0.7
7	Northern America	76	0.4
8	South America, Central America and the Caribbean	56	0.3
9	Africa (excluding North Africa)	115	0.7
	TOTAL	**17421**	**100.0**

* *Australian Bureau of Statistics. Australian Standard Classification of Countries for Social Statistics (ASCCSS). Canberra: ABS, 1990 (Catalogue No 1269.0).*

TABLE 5B CONFINEMENTS BY SPECIFIED COUNTRY OF BIRTH OF MOTHER, SA, 2002				
SPECIFIED COUNTRY OF BIRTH*		**NO**	**% of confinements**	**% of confinements of migrant women (n=2642)**
1100	Australia	14779	84.8	na
4102	Cambodia	64	0.4	2.4
5101	China	75	0.4	2.8
6104	India	63	0.4	2.4
4105	Malaysia	54	0.3	2.0
1301	New Zealand	199	1.1	7.5
4107	Philippines	125	0.7	4.7
2504	Poland	56	0.3	2.1
9220	South Africa	62	0.4	2.3
2101-2107	The United Kingdom and Ireland	752	4.3	28.5
4110	Vietnam	273	1.6	10.3
7104	United States of America	45	0.3	1.7
2212	Yugoslavia	67	0.4	2.5
	All other countries	807	4.6	30.5
TOTAL		**17421**	**100.0**	**100.0**

* *ASCCSS, Australian Bureau of Statistics*

6. Marital Status

While 86.0% of women who delivered in 2002 were married or in a de facto relationship, 12.3% were never married and 1.6% were widowed, separated or divorced (Table 6A). A quarter of never married women were teenagers, and another third were in their early twenties. A much larger proportion of single women were hospital/public patients compared to the proportion for married women and women in de facto relationships (92.4% v 62.5%, Table 6B).

TABLE 6A
MARITAL STATUS BY AGE OF MOTHER

AGE OF MOTHER (years)	MARITAL STATUS									
	Never married		Married/ de facto		Widowed/ separated/ divorced		Unknown		Total	
	NO	%	NO	%	NO	%	NO	%	No	%
<20	557	25.9	398	2.7	6	2.1	0	0.0	961	5.5
20-24	717	33.4	1987	13.3	33	11.7	0	0.0	2737	15.7
25-29	465	21.6	4543	30.3	86	30.6	1	50.0	5095	29.3
30-34	265	12.3	5305	35.4	80	28.5	0	0.0	5650	32.4
35-39	117	5.4	2331	15.6	54	19.2	1	50.0	2503	14.4
40-44	27	1.3	405	2.7	20	7.1	0	0.0	452	2.6
45+	1	0.1	20	0.1	2	0.7	0	0.0	23	0.1
TOTAL	**2149**	**(12.3)**	**14989**	**(86.0)**	**281**	**(1.6)**	**2**	**(0.0)**	**17421**	**100.0**

TABLE 6B
TYPE OF PATIENT BY MARITAL STATUS OF MOTHER

TYPE OF PATIENT	MARITAL STATUS									
	Never married		Married/ De facto		Widowed/ separated/ divorced		Unknown		Total	
	NO	%	NO	%	NO	%	NO	%	NO	%
Hospital/Public	1985	92.4	9360	62.5	256	91.1	2	100.0	11603	66.6
Private	164	7.6	5629	37.6	25	8.9	0	0.0	5818	33.4
Total	**2149**	**(12.3)**	**14989**	**(86.0)**	**281**	**(1.6)**	**2**	**(0.0)**	**17421**	**100.0**

7. Occupation of father and mother

This distribution based on the Australian Statistical Classification of Occupations (ASCO) of the Australian Bureau of Statistics is provided in Table 7. Unclassified occupations have been given a separate category (Category 9). A much larger proportion of mothers than fathers (28.1% v 0.3%) was included in the occupation of 'home duties', and also in the groups clerks, salespersons and personal service workers. More fathers were managers and administrators, tradespersons, plant and machine operators, and labourers, but occupation was unknown for 10.1% of fathers.

TABLE 7
OCCUPATION OF FATHER AND MOTHER

	OCCUPATION	FATHER		MOTHER	
		NO	%	NO	%
1	Managers and administrators	3100	17.8	1300	7.5
2	Professionals	2167	12.4	1933	11.1
3	Para professionals	769	4.4	942	5.4
4	Tradespersons	3104	17.8	620	3.6
5	Clerks	450	2.6	2290	13.1
6	Salespersons and personal service workers	930	5.3	2613	15.0
7	Plant and machine operators and drivers	1077	6.2	103	0.6
8	Labourers and related workers	2296	13.2	657	3.8
9	Students	334	1.9	543	3.1
	Pensioners	124	0.7	80	0.4
	Home Duties	55	0.3	4902	28.1
	Unemployed	968	5.6	834	4.8
	Other	282	1.6	138	0.8
	Unknown	1765	10.1	466	2.7
	TOTAL	**17421**	**100.0**	**17421**	**100.0**

8. Previous pregnancy outcomes

Forty one percent of women had no previous birth and 30.3% were pregnant for the first time. *Among Aboriginal women, these proportions were lower, with 32.5% giving birth for the first time.*

The proportion of women of parity 4 or greater was higher among Aboriginal women (16.3%) than among Caucasian women (2.8%) or Asian women (3.0%) (Table 8A).

TABLE 8A PARITY BY RACE											
PARITY		RACE OF MOTHER								TOTAL	
		CAUCASIAN		ABORIGINAL		ASIAN		OTHER			
		NO	%	NO	%	NO	%	NO	%	NO	%
0	- PRIMIGRAVIDA	4824	30.5	115	26.0	243	29.2	90	28.9	5272	30.3
	- MULTIGRAVIDA	1807	11.4	29	6.6	97	11.7	21	6.8	1954	11.2
1		5670	35.8	101	22.8	316	38.0	108	34.7	6195	35.6
2		2294	14.5	74	16.7	115	13.8	45	14.5	2528	14.5
3		799	5.1	52	11.7	36	4.3	26	8.4	913	5.2
4		269	1.7	35	7.9	19	2.3	12	3.9	335	1.9
≥5		172	1.1	37	8.4	6	0.7	9	2.9	224	1.3
TOTAL		**15835**	**(90.9)**	**443**	**(2.5)**	**832**	**(4.8)**	**311**	**(1.8)**	**17421**	**100.0**

Among women with previous pregnancies (multigravid women), the proportions who have had previous adverse pregnancy outcomes are shown in Table 8B.

TABLE 8B PREVIOUS PREGNANCY OUTCOMES (multigravidae only, n= 12149)		
PREVIOUS PREGNANCY OUTCOME	NO	%
Miscarriage	3903	32.1
Termination of pregnancy	2352	19.4
Stillbirth	200	1.6
Neonatal death (NND)	94	0.8
Ectopic pregnancy	256	2.1

9A. Antenatal care

Women who delivered a baby are grouped in Table 9A according to the number of reported antenatal visits: no visits, only 1 - 6 visits, 7 or more visits. *If we exclude women for whom the number of antenatal visits was unknown, 40.9% of Aboriginal women compared with 6.4% of Caucasian women were reported as having less than 7 visits.* Among Asian women this proportion was 8.2%. A low frequency of antenatal visits may be taken, particularly in term births, as an indication of inadequate antenatal care. *However, for 11.8% of women (21.0% of Aboriginal women), the number of antenatal visits made was not known.* It is hoped that this proportion will be reduced by the use of the Pregnancy Hand-held Record,[2] which will also facilitate continuity of care.

TABLE 9A

ANTENATAL VISITS BY RACE

(all confinements)

ANTENATAL VISITS	RACE OF MOTHER								TOTAL	
	CAUCASIAN		ABORIGINAL		ASIAN		OTHER			
	NO	%	NO	%	NO	%	NO	%	NO	%
None	41	0.3	19	4.3	0	0.0	1	0.3	61	0.4
1-6	856	5.4	124	28.0	61	7.3	30	9.7	1071	6.1
≥7	13122	82.9	207	46.7	679	81.6	228	73.3	14236	81.7
Unknown	1816	11.5	93	21.0	92	11.1	52	16.7	2053	11.8
TOTAL	**15835**	**(90.9)**	**443**	**(2.5)**	**832**	**(4.8)**	**311**	**(1.8)**	**17421**	**100.0**

9B. Type of antenatal care

Table 9B shows that the main types of antenatal care used were hospital clinics (40.5%), obstetricians in private practice (33.7%), general practitioners (28.1%) and birth centres (9.2%). There were 83 women (0.5%) who had no antenatal care at all. Individual women may have used more than one type of antenatal care.

TABLE 9B

TYPE OF ANTENATAL CARE

(n = 17421)

TYPE OF CARE	NO	%
No antenatal care	83	0.5
Hospital clinic	7056	40.5
Obstetrician in private practice	5871	33.7
General practitioner (GP)	4897	28.1
Birth centre	1602	9.2
Home birth midwife	47	0.3
Obstetrician/midwife (shared care) in private practice	198	1.1
GP/midwife (shared care)	497	2.9
Other	107	0.6
Not stated	31	0.2

10. Smoking

In 1998 two new items were added to the Supplementary Birth Record to ascertain the smoking status of pregnant women, an important factor in pregnancy outcome. The first item requested information on the woman's tobacco smoking status at her first antenatal visit (Table 10A), and the second on the average number of tobacco cigarettes smoked daily in the second half of her pregnancy (Table 10B). Table 10A shows that 21.1% of women were reported to be smokers at their first antenatal visit, and 4.1% had quit smoking before their first visit. Smoking status was unknown for 1.8% of women. In the second half of pregnancy 19.2% of women were reported to be smokers and 1.3% smoked more than 20 cigarettes per day, but the number of cigarettes smoked was not known for 2.8% of women.

A higher proportion of Aboriginal women was reported to be smokers at their first antenatal visit (54.6%, but 57.2% if those of unknown smoking status are excluded) and in the second half of pregnancy (50.1%). A higher proportion (4.3%) was also smoking more than 20 cigarettes per day, but the number of cigarettes smoked was not known for 8.1% of Aboriginal women.

TABLE 10A
TOBACCO SMOKING STATUS AT FIRST VISIT

SMOKING STATUS	NO	% OF CONFINEMENTS (n = 17421)
Smoker	3677	21.1
Quit in pregnancy before first visit	716	4.1
Non-smoker	12722	73.0
Unknown smoking status	306	1.8

TABLE 10B
AVERAGE NO. OF TOBACCO CIGARETTES SMOKED PER DAY IN 2nd HALF OF PREGNANCY

AVERAGE NO PER DAY	NO	% OF CONFINEMENTS (n = 17421)
None	13591	78.0
Occasional (<1)	93	0.5
1-10	2013	11.6
11-20	1025	5.9
21-30	190	1.1
31-40	18	0.1
41+	9	0.1
Unknown	482	2.8

11. Medical conditions

A medical condition was recorded in the current pregnancy for 4955 women (28.4%). The frequencies of specified medical conditions are provided in Table 11.

TABLE 11
MEDICAL CONDITIONS IN CURRENT PREGNANCY

	MEDICAL CONDITION	NO	% OF CONFINEMENTS (n = 17421)
1	None	12466	71.6
2	Anaemia	1402	8.0
3	Urinary tract infection	482	2.8
4	Hypertension (pre-existing)	191	1.1
5	Diabetes (pre-existing)	82	0.5
6	Epilepsy	89	0.5
7	Asthma	1238	7.1
8	Other	2475	14.2

12. Obstetric Complications

An obstetric complication was recorded in 5468 confinements (31.4%). The reported frequencies of the more common complications are presented in Table 12. There were three maternal deaths (cf definition in Appendix 3) notified to the Maternal, Perinatal and Infant Mortality Committee in 2002.[3]

TABLE 12
FREQUENCY OF SOME OBSTETRIC COMPLICATIONS
(all confinements)

OBSTETRIC COMPLICATION	NO	% OF CONFINEMENTS (n = 17421)
No complication	11953	68.6
Threatened miscarriage	400	2.3
Antepartum haemorrhage (APH) - Abruption	146	0.8
APH - Placenta praevia	121	0.7
APH – Other & unknown causes	392	2.3
Pregnancy hypertension	1387	8.0
Intrauterine growth restriction (suspected)	519	3.0
Gestational diabetes	615	3.5
Other complications (including 112 women with impaired glucose tolerance)	2915	16.7

13. Procedures performed in current pregnancy

Procedures performed are listed as reported in Table 13. At least one ultrasound examination was performed for 95.9% of women, amniocentesis for 7.1% and chorion villus sampling for 0.9%.

For quite a large proportion of women it was not known whether a specific procedure had been performed, eg 9.6% for maternal serum alpha feto-protein (MSAFP) screening. The figures for MSAFP and Down syndrome screening are believed to be underestimates, when compared with statistics from the Chemical Pathology Department of the Women's and Children's Hospital. It is hoped that the use of the Pregnancy Hand-held Record will reduce the number of 'unknown' entries.

TABLE 13
PROCEDURES PERFORMED IN CURRENT PREGNANCY

PROCEDURE	YES		NO		UNKNOWN	
	NO	%	NO	%	NO	%
MSAFP (Neural tube defect screen etc) (Maternal serum alpha feto-protein)	8231	47.3	7516	43.1	1674	9.6
Triple/Quadruple screen (Down etc)	8735	50.1	7060	40.5	1626	9.3
Ultrasound	16701	95.9	458	2.6	262	1.5
Chorion villus sampling	160	0.9	16836	96.6	425	2.4
Amniocentesis	1234	7.1	15808	90.7	379	2.2
Cordocentesis	6	0.0	17000	97.6	415	2.4
Other surgical procedure	74	0.4	17347	99.6	0	0.0

14A. Onset of labour

Labour occurred spontaneously in 55.7% of confinements (Table 14A). It was induced in 29.3%, and the methods of induction used were artificial rupture of membranes (ARM) in 61.8% of inductions, prostaglandins in 63.9% and oxytocics in 44.2% (Table 14B). More than one method was used in many cases.

TABLE 14A
ONSET OF LABOUR
(all confinements)

ONSET OF LABOUR	NO	%
Spontaneous	9712	55.7
No labour - LSCS*	2606	15.0
Induction	5103	29.3
TOTAL	**17421**	**100.0**

* *Lower segment caesarean section*

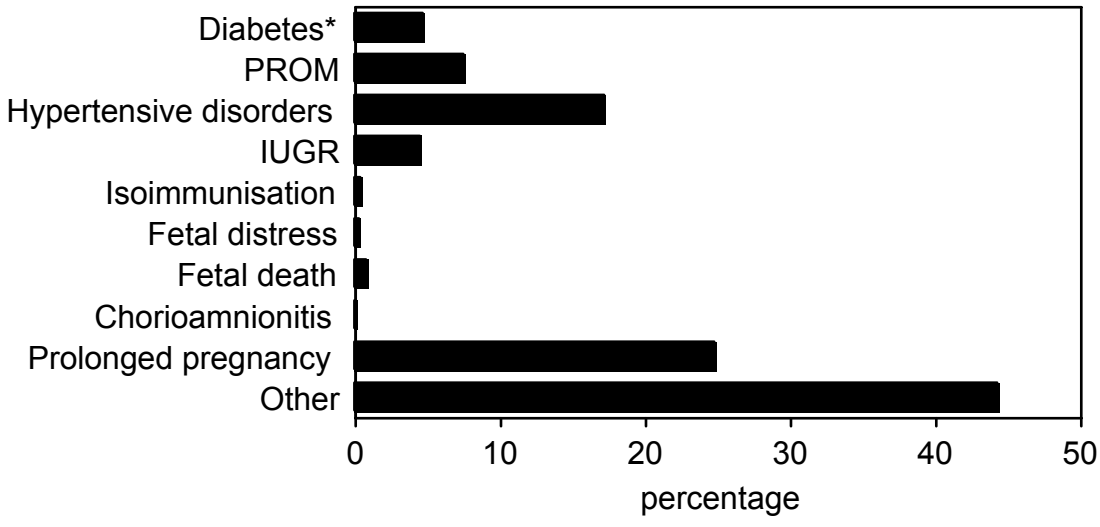
TABLE 14B METHOD OF INDUCTION OF LABOUR (all confinements)			
METHOD OF INDUCTION	**NO**	**% OF CONFINEMENTS (n =17421)**	**% OF INDUCTIONS (n =5103)**
No induction	12318	70.7	-
ARM	3155	18.1	61.8
Oxytocics	2256	12.9	44.2
Prostaglandins	3260	18.7	63.9

14B. Reasons for induction of labour

Up to two reasons could be provided for reason for induction. These reasons for induction of labour are the ones listed in the Australian Council for Healthcare Standards 'Clinical Indicators – A Users' Manual : Obstetrics and Gynaecology Indicators Version 2' (cf p 54).

Fig 4 demonstrates that 24.8% of women were induced for prolonged pregnancy (41 or more completed weeks), 17.2% for hypertension, 7.5% for premature rupture of membranes (PROM), 4.5% for intrauterine growth restriction (IUGR) and 4.7% for diabetes (including gestational diabetes and glucose intolerance), but in 44.3% of cases the reasons were not one of these.

Figure 4: REASONS FOR INDUCTION OF LABOUR, SA 2002
(n-5103)



*includes diabetes mellitus, gestational diabetes and glucose intolerance

Labour was augmented for 3563 (36.7%) of the 9712 women who went into spontaneous labour. Methods used in augmentation were artificial rupture of membranes (ARM) (72.7%), oxytocics (40.5%) and prostaglandins (2.0%). It should be noted that prostaglandins are not recommended by the manufacturers as a method of augmenting labour. The proportion of women delivered who had labour augmented was 20.5%.

TABLE 14C
AUGMENTATION OF LABOUR AFTER SPONTANEOUS ONSET

	METHOD OF AUGMENTATION	NO	% OF CONFINEMENTS (n=17421)	% OF AUGMENTATIONS (n=3563)
	Any augmentation	3563	20.5	100.0
1	ARM	2592	14.9	72.7
2	Oxytocics	1442	8.3	40.5
3	Prostaglandins	70	0.4	2.0

15A. Presentation and method of delivery

Of the women who delivered, 58.7% had normal spontaneous vaginal deliveries (Table 15A and Figure 5A). Caesarean section (LSCS) was performed for 29.2% of women, with 12.6% of deliveries being elective sections; forceps were utilised for 5.9%, ventouse for 5.9% and breech delivery for the remaining 0.4%. The method of delivery given for confinements in multiple births is that for the first birth. The method of delivery by presentation for all births is provided in Table 15B. Breech presentation occurred in 4.7% of births and caesarean section was the method of delivery for 88.6% of breech presentations. Caesarean section was utilised for 89.6% of breech presentations in singletons (Table 15C).

TABLE 15A METHOD OF DELIVERY (all confinements)		
METHOD OF DELIVERY	**NO**	**%**
Normal spontaneous vaginal	10220	58.7
Forceps	1020	5.9
Assisted breech	29	0.2
LSCS (elective)	2195	12.6
LSCS (emergency)	2886	16.6
Ventouse	1025	5.9
Breech extraction	4	0.0
Breech spontaneous	41	0.2
Unknown	1	0.0
TOTAL	**17421**	**100.0**

Figure 5A: METHOD OF DELIVERY IN ALL CONFINEMENTS 2002
n = 17421

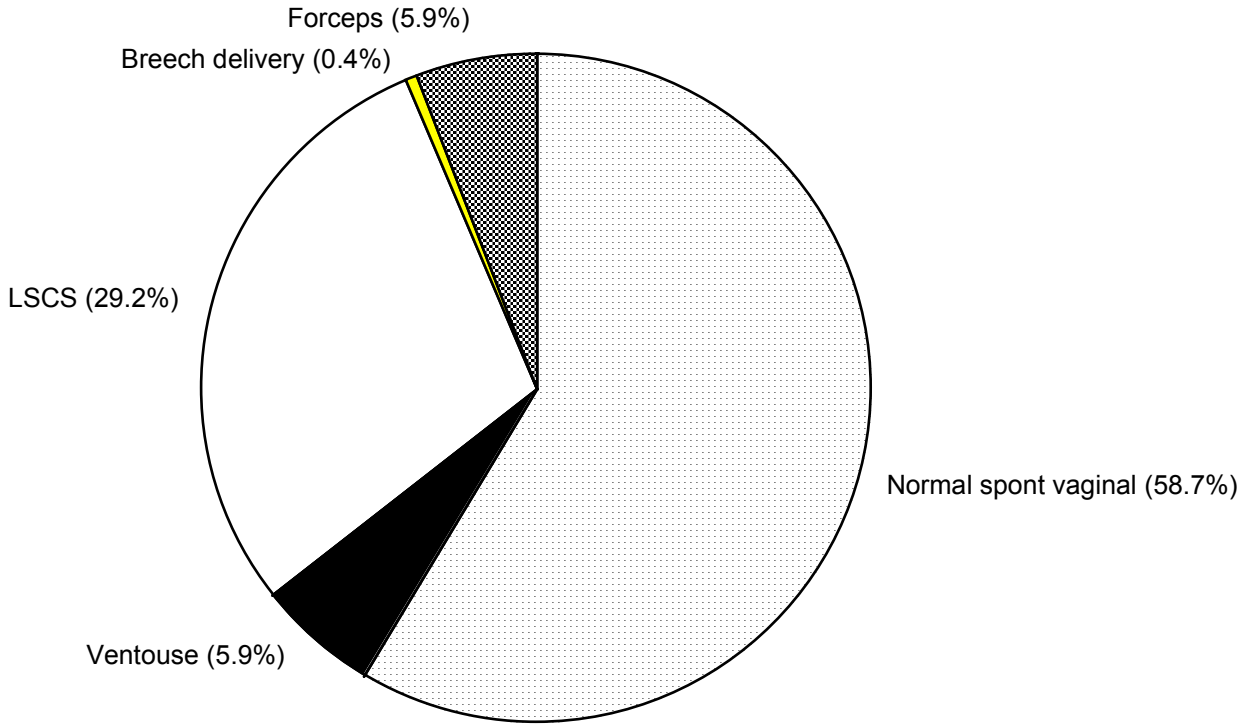


TABLE 15B
METHOD OF DELIVERY BY PRESENTATION
(all births, n=17745)

	METHOD OF DELIVERY	PRESENTATION								TOTAL	
		VERTEX		BREECH		OTHER		UNKNOWN			
		NO	%	NO	%	NO	%	NO	%	NO	%
1	Normal spontaneous	10227	61.4	0	0.0	40	20.1	5	12.2	10272	57.9
2	Forceps	1022	6.1	0	0.0	10	5.0	0	0.0	1032	5.8
3	Assisted breech	0	0.0	42	5.0	3	1.5	0	0.0	45	0.2
4	Elective LSCS	1798	10.8	436	51.8	42	21.1	24	58.5	2300	13.0
5	Emergency LSCS	2591	15.6	310	36.8	97	48.7	11	26.8	3009	17.0
6	Ventouse	1025	6.2	0	0.0	5	2.5	0	0.0	1030	5.8
7	Breech extraction	0	0.0	10	1.2	2	1.0	0	0.0	12	0.1
8	Breech spontaneous	0	0.0	44	5.2	0	0.0	0	0.0	44	0.2
8	Unknown	0	0.0	0	0.0	0	0.0	1	2.4	1	0.0
	TOTAL	**16663**	**(93.9)**	**842**	**(4.7)**	**199**	**(1.1)**	**41**	**(0.2)**	**17745**	**100.0**

TABLE 15C
METHOD OF DELIVERY IN BREECH PRESENTATION,
BY PLURALITY (n = 842)

PLURALITY	ASSISTED BREECH	LSCS ELEC	LSCS EMERG	BREECH EXTRACT	BREECH SPONT	TOTAL
Singleton	27	371	225	3	39	665
Twins	15	63	80	7	5	170
Triplets	0	2	5	0	0	7
TOTAL	**42 (5.0%)**	**436 (51.8%)**	**310 (36.8%)**	**10 (1.2%)**	**44 (5.2%)**	**842 (100.0%)**

15B. Reason for Caesarean section

Up to two reasons may be provided on the supplementary birth record for caesarean section, and these have been collated in Figure 5B (all caesarean sections), Figure 5C (elective sections only) and Figure 5D (emergency sections only). The main reasons given for all caesarean sections, were failure to progress/cephalopelvic disproportion (CPD) (26.5%), previous caesarean section (24.7%), fetal distress (16.7%) and malpresentation (11.6%). The main reasons for elective sections were previous section (50.0%), malpresentation (16.1%) and CPD (9.5%), and the main reasons given for emergency sections were failure to progress or CPD (38.3%), fetal distress (28.2%) and malpresentation (8.4%). 14.4% of women had had a previous caesarean section.

Figure 5B: REASON FOR LSCS, 2002 (n=5081)

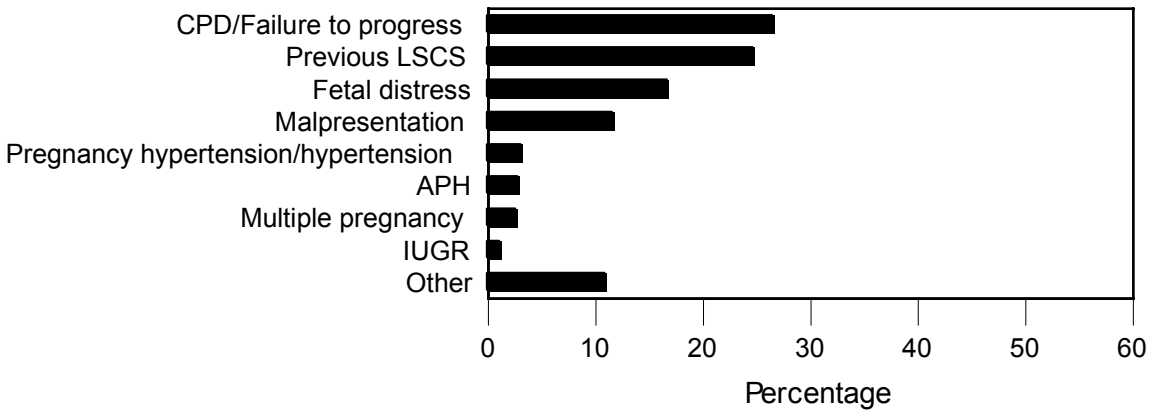


Figure 5C: REASON FOR ELECTIVE LSCS, 2002 (n=2195)

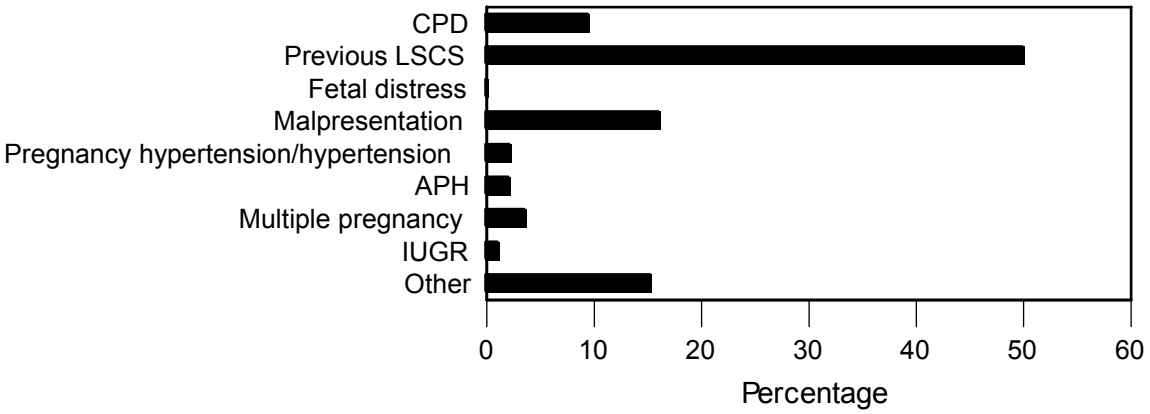
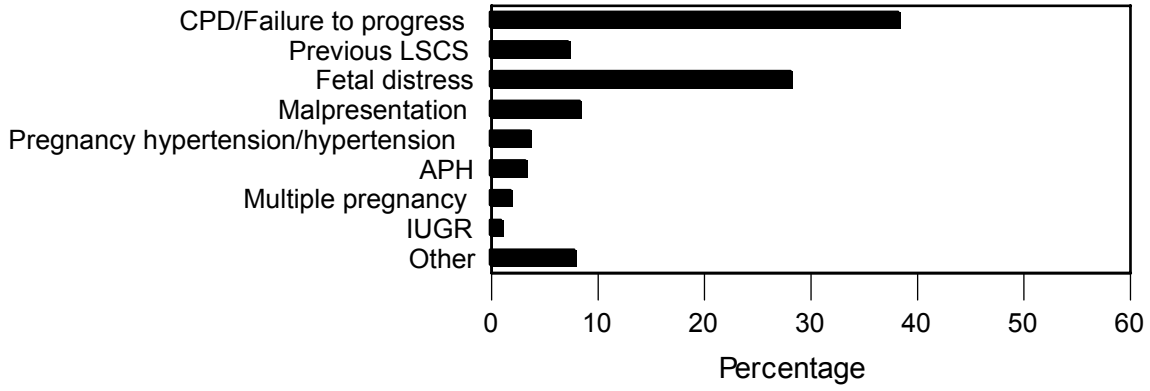


Figure 5D: REASON FOR EMERGENCY LSCS, 2002 (n=2886)



16. Complications of labour and delivery

A complication of labour or delivery was recorded in 5881 confinements (33.8%). The reported frequency of some complications is presented in Table 16. Episiotomy was performed for 2535 women (14.6%).

TABLE 16
FREQUENCY OF SOME COMPLICATIONS OF LABOUR AND DELIVERY
(all confinements)

COMPLICATION OF LABOUR	NO OF CONFINEMENTS	% OF CONFINEMENTS (n=17421)
None	11540	66.2
Post partum haemorrhage - primary	993	5.7
Fetal distress	2138	12.3
Retained placenta	239	1.4
Prolonged labour	180	1.0
Cord prolapse	24	0.1
Wound infection	35	0.2
Third degree tear (239) or fourth degree tear (22)	261	1.5
Failure to progress	1922	11.0
Other	3505	20.1

17. Fetal monitoring during labour

Cardiotocography (CTG) was performed during labour for 58.7% of women. The majority of these (51.2% of women) were external CTGs (Table 17A) while 7.5% had a scalp clip. A fetal scalp pH was taken during labour in 513 confinements (2.9%, Table 17B).

TABLE 17A
CTG PERFORMED DURING LABOUR
(all confinements)

	CTG DURING LABOUR	NO OF CONFINEMENTS	% OF CONFINEMENTS
1	None	7194	41.3
2	External	8925	51.2
3	Scalp clip	1302	7.5

TABLE 17B
FETAL SCALP pH TAKEN DURING LABOUR
(all confinements)

	FETAL SCALP pH TAKEN	NO OF CONFINEMENTS	% OF CONFINEMENTS
1	No	16908	97.1
2	Yes	513	2.9

18. Analgesia for labour and anaesthesia for delivery

These distributions are provided in Tables 18A and 18B. Epidurals were used for analgesia in labour for 31.8% and for anaesthesia in delivery for 27.8% of women. The proportion of women who had an epidural for either was 33.4% (5822 women). The proportion of women who had a spinal anaesthetic increased between 1991 and 2002 from 0.2% to 0.9% for analgesia and from 0.5% to 19.2% for anaesthesia. 32.8% of the women who delivered received none of the specified methods for analgesia during labour.

TABLE 18A
ANALGESIA FOR LABOUR

	ANALGESIA	NO	% OF CONFINEMENTS
1	None	5716	32.8
2	Nitrous oxide and oxygen	6406	36.8
3	Narcotic (parenteral)	4775	27.4
4	Epidural (lumbar/caudal)	5533	31.8
5	Spinal	159	0.9
6	Other	93	0.5

TABLE 18B
ANAESTHESIA FOR DELIVERY

	ANAESTHESIA	NO	% OF CONFINEMENTS
1	None	6877	39.5
2	Local anaesthesia	2069	11.9
3	Pudendal	228	1.3
4	Epidural (lumbar/caudal)	4837	27.8
5	Spinal	3349	19.2
6	General anaesthesia	545	3.1
7	Other	99	0.6

19. Postnatal length of stay of mother

The distribution of length of stay of mothers who delivered in hospitals is presented in Table 19A for public and private patients. The median duration for all women was three days for vaginal deliveries and 5 days for caesarean deliveries (Table 19B). The median duration of stay was two days shorter for public patients for both vaginal and caesarean deliveries (three and five days respectively, for public patients compared with five and seven days for private patients).

TABLE 19A
POSTNATAL LENGTH OF STAY OF MOTHER

DAYS	PUBLIC		PRIVATE		TOTAL	
	NO	%	NO	%	NO	%
<1	363	3.1	13	0.2	376	2.2
1	1308	11.3	54	0.9	1362	7.8
2	2437	21.0	144	2.5	2581	14.9
3	2967	25.6	405	7.0	3372	19.4
4	2041	17.6	974	16.8	3015	17.3
5	1423	12.3	2029	35.1	3452	19.9
6	546	4.7	857	14.8	1403	8.1
7 or more	504	4.4	1308	22.6	1812	10.4
TOTAL	**11589**	**100.0**	**5784**	**100.0**	**17373**	**100.0**

TABLE 19B
AVERAGE POSTNATAL LENGTH OF STAY OF MOTHER BY TYPE OF PATIENT & TYPE OF DELIVERY

	PUBLIC			PRIVATE			TOTAL		
	Vaginal (n=8702)	LSCS (n=2887)	Total (n=11589)	Vaginal (n=3590)	LSCS (n=2194)	Total (n=5784)	Vaginal (n=12292)	LSCS (n=5081)	Total (n=17373)
Mean (±SD) no. of days	2.78 (±1.74)	4.83 (±2.38)	3.29 (±2.11)	4.55 (±1.28)	6.43 (±1.43)	5.26 (±1.62)	3.29 (±1.81)	5.52 (±2.17)	3.95 (±2.17)
Median no. of days	3	5	3	5	7	5	3	5	4

20. Sex of baby

The sex distribution of babies is provided in Table 20; the male:female sex ratio was 1.06:1.

TABLE 20
SEX OF BABY

SEX	NO	%
Male	9148	51.6
Female	8595	48.4
Indeterminate	2	0.0
TOTAL	**17745**	**100.0**

21. Birthweight and gestation

The birthweight distribution of all births is presented in Table 21A. The percentage of low birthweight babies (<2500g) was 7.1%, and that of very low birthweight babies (<1500g) was 1.6%. The mean birthweight was 3348g (SD 623.6g), with birthweights ranging from 152g to 6270g. *Among babies of Aboriginal mothers, the proportion of low birthweight babies was 19.8%.*

TABLE 21A
BIRTHWEIGHT DISTRIBUTION OF ALL BIRTHS

BIRTHWEIGHT (g)	NO OF BIRTHS	PERCENTAGE OF BIRTHS
<500*	57	0.3
500-749	49	0.3
750-999	48	0.3
1000-1499	129	0.7
1500-1999	244	1.4
2000-2499	730	4.1
2500-2999	2685	15.1
3000-3499	6369	35.9
3500-3999	5318	30.0
4000-4499	1792	10.1
4500+	324	1.8
TOTAL	**17745**	**100.0**

* *includes 33 births of <400g birthweight described on page 1.*

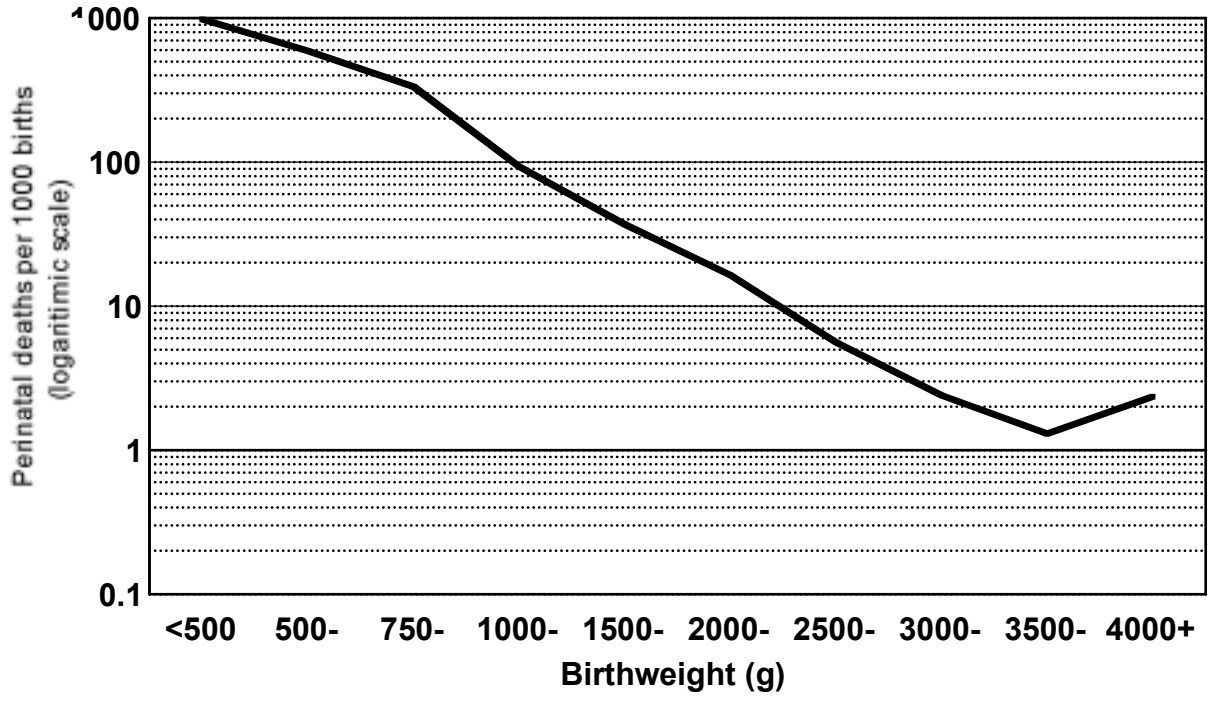
The improvement in perinatal mortality with increasing birthweight is demonstrated in Table 21B and Figure 6. The perinatal mortality rate for babies of normal birthweight (2500g or more) was 2.5 per 1000 births. In 2002, 1257 babies were of low birthweight and 1470 (8.3%) were preterm (<37 weeks gestation).

TABLE 21B
PERINATAL MORTALITY BY BIRTHWEIGHT, SA, 2002
(all births)

BIRTHWEIGHT (g)	TOTAL BIRTHS	LIVE-BIRTHS	STILLBIRTHS		NEONATAL DEATHS		PERINATAL DEATHS	
			NO	RATE per 1000 births	NO	RATE per 1000 live-births	NO	RATE per 1000 births
<500*	57	18	39	684.2	17	944.4	56	982.5
500-749	49	32	17	346.9	12	375.0	29	591.8
750-999	48	38	10	208.3	6	157.9	16	333.3
1000-1499	129	118	11	85.3	1	8.5	12	93.0
1500-1999	244	236	8	32.8	1	4.2	9	36.9
2000-2499	730	721	9	12.3	3	4.2	12	16.4
2500-2999	2685	2674	11	4.1	4	1.5	15	5.6
3000-3499	6369	6361	8	1.3	7	1.1	15	2.4
3500-3999	5318	5313	5	0.9	2	0.4	7	1.3
4000-4499	1792	1788	4	2.2	1	0.6	5	2.8
4500+	324	324	0	0.0	0	0.0	0	0.0
TOTAL	**17745**	**17623**	**122**	**6.9**	**54**	**3.1**	**176**	**9.9**

* *Includes 33 births of <400g birthweight, all of which were stillbirths or neonatal deaths.*

Figure 6: PERINATAL MORTALITY RATE BY BIRTHWEIGHT (SA Births 2002)



22. Birth injuries

Birth injuries were reported in 117 livebirths (0.7%). The most common injury reported was cephalhaematoma; fracture, nerve injury and dislocation occurred less frequently (Table 22).

TABLE 22
BIRTH INJURIES*
(in 17623 livebirths)

BIRTH INJURY	NO OF BIRTHS	% OF BIRTHS
None	17506	99.3
Fracture	16	0.1
Dislocation	3	0.0
Nerve Injury	19	0.1
Cephalhaematoma	60	0.3
Other	28	0.2

* *More than one injury may occur in each birth.*

23. Treatment given in neonatal period

The proportion of livebirths who received specified treatments in the neonatal period are provided in Table 23: 83.6% of neonates did not receive any of the treatments.

TABLE 23
NEONATAL TREATMENT GIVEN
(all livebirths)

NEONATAL TREATMENT	NO	% OF LIVEBIRTHS
None of the treatments listed below	14731	83.6
Oxygen therapy for more than 4 hours	1136	6.4
Phototherapy for jaundice	1245	7.1
Gavage feeding more than once	1362	7.7
Any intravenous therapy	1612	9.1

24. Level of care utilised

Table 24 shows that 84.0% of neonates utilised Level I care only. Level II care was used by 15.8% of neonates, Level III care at the Women's and Children's Hospital or Flinders Medical Centre by 2.8% and paediatric intensive care at the Women's and Children's Hospital by 0.2% of neonates. As would be expected, with decreasing birthweight, an increasing percentage of babies required Level II and Level III care.

TABLE 24 LEVEL OF NURSERY CARE UTILISED BY BIRTHWEIGHT (all livebirths)								
LEVEL OF CARE UTILISED	BIRTHWEIGHT (g)							
	<1500 (n=206)		1500-2499 (n=957)		2500+ (n=16460)		TOTAL (n=17623)	
	NO	%	NO	%	NO	%	NO	%
Level I only	22	10.7	200	20.9	14573	88.5	14795	84.0
Level II	168	81.6	751	78.5	1861	11.3	2780	15.8
Level III (W&CH & FMC)	171	83.0	166	17.3	154	0.9	491	2.8
Level III (W&CH paediatric intensive care)	3	1.5	8	0.8	27	0.2	38	0.2

25. Length of stay of babies

The distribution of length of stay of liveborn babies in hospital is presented in Table 25 for preterm (<37 weeks gestation) and term births (≥37 weeks gestation). The mean duration of stay was 5.5 days (SD 9.0) and the median duration 4 days. The mean duration was 4.0 days (SD 3.0) for term births and 22.3 days (SD 25.0) for preterm births, while the median durations were 4 and 14 days respectively.

TABLE 25 LENGTH OF STAY OF LIVEBORN BABIES IN HOSPITAL						
LENGTH OF STAY (DAYS)	PRETERM BIRTHS		TERM BIRTHS		TOTAL	
	NO	%	NO	%	NO	%
<1	29	2.1	337	2.1	366	2.1
1	12	0.9	1251	7.7	1263	7.2
2	33	2.4	2452	15.1	2485	14.1
3	52	3.8	3161	19.5	3213	18.3
4	49	3.6	2818	17.4	2867	16.3
5	90	6.5	3201	19.8	3291	18.7
6	86	6.3	1253	7.7	1339	7.6
7-13	327	23.8	1596	9.8	1923	10.9
14-20	212	15.4	79	0.5	291	1.7
21-27	133	9.7	30	0.2	163	0.9
28 or more	350	25.5	25	0.2	375	2.1
TOTAL	**1373**	**100.0**	**16203**	**100.0**	**17576**	**100.0**

26. Congenital abnormalities

Among the 17745 births in 2002 there were 426 births (2.4%) notified with congenital abnormalities; 404 of these births had abnormalities notified in the congenital anomalies range 74000-75999 of the British Paediatric Association (BPA) Classification of Diseases.* This is a 5-digit extension of the ICD-9** 4-digit classification. Table 26 includes births with the more readily identifiable defects used for international monitoring (sentinel defects) notified to the perinatal statistics collection in 1991-2001. Terminations of pregnancy are not included unless they meet a criterion for inclusion, ie at least 400g birthweight/20 weeks gestation. Notifications of births with birth defects identified after discharge from the hospital of birth but within the first 5 years of life are made to the South Australian Birth Defects Register at the Women's and Children's Hospital, and more complete statistics on birth defects in South Australia are available from the Register's Annual Report.[4]

TABLE 26

SELECTED CONGENITAL ABNORMALITIES

NOTIFIED TO THE PERINATAL STATISTICS COLLECTION, 1992-2002, SOUTH AUSTRALIA

CONGENITAL ABNORMALITY											
BPA CODE	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
NO OF BIRTHS =	20152	19969	19801	19620	19111	18674	18734	18519	17871	17704	17745
74000-74029 Anencephalus	0	1	1	3	1	0	1	2	3	1	4
74100-74199 Spina bifida	1	5	1	7	5	3	9	4	5	9	4
74200-74209 Encephalocele	1	2	1	1	1	1	0	1	0	0	1
74230-74239 Hydrocephalus	4	5	4	5	0	3	5	7	4	4	3
74900-74909 Cleft palate	14	8	11	12	14	14	16	8	10	14	17
74910-74929 Cleft lip and palate (Total cleft lip)	20	21	12	24	18	19	20	17	16	15	16
75030-75038 Tracheo-oesophageal fistula, oesophageal atresia and stenosis	8	12	8	8	8	5	7	6	2	10	3
75120-75124 Atresia and stenosis of large intestine, rectum and anal canal	8	9	3	4	9	4	13	5	9	3	9
75260-75261 Hypospadias and epispadias	51	52	53	47	53	43	46	43	40	40	42
75300-75301 Renal agenesis and dysgenesis	3	5	6	7	4	6	12	4	5	7	5
75520-75549 Limb reduction defects	16	8	9	14	9	5	9	9	11	6	7
75660-75669 Anomalies of diaphragm	7	7	3	3	5	5	3	4	7	6	7
75670-75679 Anomalies of abdominal wall	8	14	3	8	7	7	12	8	8	13	10
75800-75809 Down syndrome	21	18	16	20	11	24	25	25	19	21	19

* *British Paediatric Association Classification of Diseases, British Paediatric Association, London 1979.*

** *International Classification of Diseases. Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death, 1975 Revision, World Health Organisation, Geneva 1977.*

27. Multiple births

There were 316 twin and 4 triplet confinements compared with 17101 singleton ones. Thus there was one twin confinement in every 55 and 1 triplet confinement in every 4355 confinements. The total number of multiple births was 644 (3.6% of total births).

A comparison of multiple births with singleton ones shows that multiple births were of lower birthweight (with 50.5% being of low birthweight compared with 5.4% for singletons, Table 27A), and gestation (with 52.2% being preterm births compared with 6.6% for singletons, Table 27B). The proportion in hospital at 28 days was 17.4% for multiple births compared with 1.6% for singletons, and the perinatal death rate for multiple births was also elevated (31.1 compared with 9.1 per 1000 births for singletons, Table 27C).

TABLE 27A
BIRTHWEIGHT BY PLURALITY
(all births)

BIRTHWEIGHT (g)	SINGLETON BIRTHS		MULTIPLE BIRTHS	
	NO	%	NO	%
<500	51	0.3	6	0.9
500-749	39	0.2	10	1.6
750-999	38	0.2	10	1.6
1000-1499	82	0.5	47	7.3
1500-1999	162	1.0	82	12.7
2000-2499	560	3.3	170	26.4
2500-2999	2468	14.4	217	33.7
3000-3499	6279	36.7	90	14.0
3500-3999	5306	31.0	12	1.8
4000-4499	1792	10.5	0	0.0
4500+	324	1.9	0	0.0
TOTAL	**17101**	**100.0**	**644**	**100.0**

TABLE 27B
GESTATION AT DELIVERY, BY PLURALITY
(all births)

GESTATION (weeks)	SINGLETON BIRTHS		MULTIPLE BIRTHS		TOTAL	
	NO	%	NO	%	NO	%
<24	57	0.3	6	0.9	63	0.4
24-27	65	0.4	24	3.7	89	0.5
28-31	124	0.7	39	6.1	163	0.9
32-36	888	5.2	267	41.5	1155	6.5
37-41	15800	92.4	308	47.8	16108	90.8
42+	166	1.0	0	0.0	166	0.9
Unknown	1	0.0	0	0.0	1	0.0
TOTAL	**17101**	**100.0**	**644**	**100.0**	**17745**	**100.0**

TABLE 27C PERINATAL OUTCOME BY PLURALITY (all births)						
PERINATAL OUTCOME	**SINGLETON BIRTHS**		**MULTIPLE BIRTHS**		**TOTAL**	
	NO	**%**	**NO**	**%**	**NO**	**%**
Stillbirth	108	0.6	14	2.2	122	0.7
Discharged within 28 days	16669	97.5	512	79.5	17181	96.8
In hospital at 28 days	276	1.6	112	17.4	388	2.2
Neonatal death	48	0.3	6	0.9	54	0.3
TOTAL	**17101**	**100.0**	**644**	**100.0**	**17745**	**100.0**

28. Perinatal mortality

As demonstrated earlier, high crude perinatal mortality rates were associated with births to Aboriginal mothers (Table 4C), low birthweight births (Table 21B) and multiple births (Table 27C).

The perinatal mortality rate for all births (of at least 400g birthweight/20 weeks gestation) in 2002 was 9.9 per 1000 births and the neonatal mortality rate 3.1 per1000 livebirths. The perinatal mortality rates for other specified minimum birthweights or gestational ages (where birthweight was unavailable) are provided in Table 28. The perinatal mortality rate recommended by the World Health Organisation (WHO) for use in international comparisons refers only to births of at least 1000g birthweight (or, if birthweight is unavailable, 28 weeks gestation) and to neonatal deaths within the first 7 days of life. This rate was 4.0 per 1000 births in 2002, with a neonatal mortality rate of 0.8 per 1000 livebirths.

TABLE 28 PERINATAL MORTALITY, SA, 2002 (all births of specified birthweight/gestation)								
SPECIFIED BIRTHWEIGHT GESTATION	**TOTAL BIRTHS**	**LIVE-BIRTHS**	**STILLBIRTHS**		**NEONATAL DEATHS**		**PERINATAL DEATHS**	
	NO	**NO**	**NO**	**RATE PER 1000 BIRTHS**	**NO**	**RATE PER 1000 LIVE-BIRTHS**	**NO**	**RATE PER 1000 BIRTHS**
≥400g/20 weeks*	17745	17623	122	6.9	54	3.1	176	9.9
≥500g/22 weeks (WHO National Statistics)	17688	17605	83	4.7	37	2.1	120	6.8
					27**	1.5	110**	6.2
≥1000g/28 weeks (WHO International Statistics)	17591	17535	56	3.2	19	1.1	75	4.3
					14**	0.8	70**	4.0

* *includes 33 births of birthweight <400g*

** *only neonatal deaths within the first 7 days of life are included*

29. Home Births

Supplementary Birth Records were received from home birth midwives for 47 planned home births which occurred at home in 2002. There was one unplanned homebirth which was not booked at any hospital, and has not been included with the planned home births. This baby was stillborn.

Ascertainment of planned home births occurring at home in South Australia for the year 2002 is estimated to be 82.8% (48 out of 58 home births). This estimate has been derived from a comparison with data from the Births, Deaths and Marriages Registration Division on births registered, which did not occur in hospital (and were not BBAs - babies born before arrival at hospital). In addition, 21 women who planned to deliver at home were transferred to hospital care before delivery. Statistics for all 68 planned home confinements in 2002 are provided in Tables 29-32.

TABLE 29
PLANNED HOME CONFINEMENTS BY AGE OF MOTHER, 2002

AGE IN YEARS	DELIVERED AT HOME		DELIVERED IN HOSPITAL		TOTAL	
	NO	%	NO	%	NO	%
<20	0	0.0	2	9.5	2	2.9
20-24	4	8.5	3	14.3	7	10.3
25-29	11	23.4	5	23.8	16	23.5
30-34	17	36.2	7	33.3	24	35.3
35-39	9	19.1	3	14.3	12	17.7
40-44	6	12.8	1	4.8	7	10.3
TOTAL	**47**	**100.0**	**21**	**100.0**	**68**	**100.0**

TABLE 30
METHOD OF DELIVERY IN PLANNED HOME CONFINEMENTS, 2002

METHOD OF DELIVERY	DELIVERED AT HOME		DELIVERED IN HOSPITAL		TOTAL	
	NO	%	NO	%	NO	%
Normal spontaneous vaginal	46	97.9	11	52.4	57	83.8
Forceps	0	0.0	2	9.5	2	2.9
LSCS elective	0	0.0	3	14.3	3	4.4
LSCS emergency	0	0.0	5	23.8	5	7.4
Breech spontaneous	1	2.1	0	0.0	1	1.5
TOTAL	**47**	**100.0**	**21**	**100.0**	**68**	**100.0**

TABLE 31 BIRTHWEIGHT DISTRIBUTION OF PLANNED HOME BIRTHS, 2002						
BIRTHWEIGHT (g)	**DELIVERED AT HOME**		**DELIVERED IN HOSPITAL**		**TOTAL**	
	NO	**%**	**NO**	**%**	**NO**	**%**
<1500	0	0.0	1	4.5	1	1.5
1500-1999	0	0.0	0	0.0	0	0.0
2000-2499	0	0.0	0	0.0	0	0.0
2500-2999	4	8.5	3	13.6	7	10.1
3000-3499	11	23.4	6	27.3	17	24.6
3500-3999	19	40.4	10	45.5	29	42.0
4000-4499	9	19.2	2	9.1	11	15.9
4500+	4	8.5	0	0.0	4	5.8
TOTAL	**47**	**100.0**	**22**	**100.0**	**69**	**100.0**

TABLE 32 PERINATAL OUTCOME IN PLANNED HOME BIRTHS, 2002						
OUTCOME	**DELIVERED AT HOME**		**DELIVERED IN HOSPITAL**		**TOTAL**	
	NO	**%**	**NO**	**%**	**NO**	**%**
Stillbirth	0	0.0	1	4.6	1	1.5
Discharged within 28 days	47	100.0	21	95.4	68	98.5
Neonatal death	0	0.0	0	0.0	0	0.0
TOTAL	**47**	**100.0**	**22**	**100.0**	**69**	**100.0**

30. Birthing Unit births

Statistics presented for births in birthing units in South Australia (Tables 33-36) relate to the birthing units at The Queen Elizabeth Hospital, the Women's and Children's Hospital, the Lyell McEwin Health Service and Flinders Medical Centre. The units at the Women's and Children's Hospital and the Lyell McEwin Health Service were established in 1992 and 1993 respectively under the Alternative Birthing Services Programme. In October 1996 the birthing unit at Flinders Medical Centre commenced deliveries. These statistics relate to all 1865 planned birthing unit confinements. Of these, 1000 confinements occurred in the birthing units while 865 women (46.4%) were transferred to labour wards before delivery. Of the women transferred to labour wards, 27.7% had Caesarean sections, 4.9% had low birthweight babies and eleven had perinatal deaths. These statistics have also been included in the statistics for the respective hospitals.

TABLE 33
PLANNED BIRTHING UNIT CONFINEMENTS BY AGE OF MOTHER, 2002

AGE IN YEARS	DELIVERED IN BIRTHING UNIT		DELIVERED IN LABOUR WARD		TOTAL	
	NO	%	NO	%	NO	%
<20	78	7.8	87	10.1	165	8.8
20-24	210	21.0	194	22.4	404	21.7
25-29	347	34.7	285	33.0	632	33.9
30-34	245	24.5	201	23.2	446	23.9
35-39	103	10.3	86	9.9	189	10.1
40-44	16	1.6	12	1.4	28	1.5
45+	1	0.1	0	0.0	1	0.1
TOTAL	**1000**	**100.0**	**865**	**100.0**	**1865**	**100.0**

TABLE 34
METHOD OF DELIVERY IN PLANNED BIRTHING UNIT CONFINEMENTS, 2002

METHOD OF DELIVERY	DELIVERED IN BIRTHING UNIT		DELIVERED IN LABOUR WARD		TOTAL	
	NO	%	NO	%	NO	%
Normal spontaneous vaginal	999	99.9	486	56.2	1485	79.6
Forceps	0	0.0	59	6.8	59	3.2
Breech/Assisted breech	0	0.0	4	0.5	4	0.2
LSCS elective	0	0.0	38	4.4	38	2.0
LSCS emergency	0	0.0	202	23.3	202	10.8
Ventouse	0	0.0	71	8.2	71	3.8
Breech extraction	0	0.0	0	0.0	0	0.0
Breech spontaneous	1	0.1	5	0.6	6	0.3
TOTAL	**1000**	**100.0**	**865**	**100.0**	**1865**	**100.0**

TABLE 35
BIRTHWEIGHT DISTRIBUTION OF PLANNED BIRTHING UNIT BIRTHS, 2002

BIRTHWEIGHT (g)	DELIVERED IN BIRTHING UNIT		DELIVERED IN LABOUR WARD		TOTAL	
	NO	%	NO	%	NO	%
<1500	0	0.0	8	0.9	8	0.4
1500-1999	0	0.0	8	0.9	8	0.4
2000-2499	8	0.8	27	3.1	35	1.9
2500-2999	96	9.6	113	13.0	209	11.2
3000-3499	377	37.7	298	34.3	675	36.1
3500-3999	379	37.9	281	32.3	660	35.3
4000-4499	111	11.1	115	13.2	226	12.1
4500+	29	2.9	20	2.3	49	2.6
TOTAL	**1000**	**100.0**	**870**	**100.0**	**1870**	**100.0**

TABLE 36
PERINATAL OUTCOME IN PLANNED BIRTHING UNIT BIRTHS, 2002

OUTCOME	DELIVERED IN BIRTHING UNIT		DELIVERED IN LABOUR WARD		TOTAL	
	NO	%	NO	%	NO	%
Stillbirth	0	0.0	9	1.0	9	0.5
Discharged within 28 days	1000	100.0	847	97.4	1847	98.8
Prolonged hospitalisation (in hospital at 28 days)	0	0.0	12	1.4	12	0.6
Neonatal death	0	0.0	2	0.2	2	0.1
TOTAL	**1000**	**100.0**	**870**	**100.0**	**1870**	**100.0**

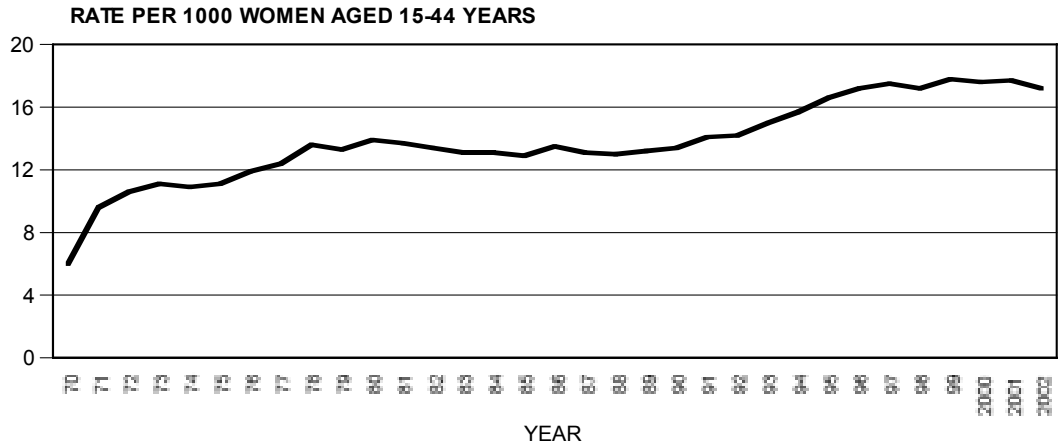
III. TERMINATIONS OF PREGNANCY

There were 5417 terminations of pregnancy notified in South Australia in 2002. The abortion rate per 1000 women aged 15-44 years was 17.2. This rate demonstrated a rapid rise in the early years after legislation in 1970 to a peak of 13.9 in 1980. There was a period of relative stability in the 1980s (between 12.9 and 13.9 per 1000 women) before the rise commencing in 1991 (Table 37 and Fig 7). However, the rate appears to be relatively stable in the last seven years.

TABLE 37 ABORTION RATE PER 1000 WOMEN AGED 15-44 YEARS, SA, 1970-2001

YEAR	NO	RATE PER 1000 WOMEN AGED 15-44 YEARS
1970	1440	6.0
1971	2409	9.6
1972	2692	10.6
1973	2847	11.1
1974	2867	10.9
1975	3000	11.1
1976	3289	11.9
1977	3494	12.4
1978	3895	13.6
1979	3880	13.3
1980	4081	13.9
1981	4096	13.7
1982	4061	13.4
1983	4036	13.1
1984	4091	13.1
1985	4079	12.9
1986	4327	13.5
1987	4229	13.1
1988	4263	13.0
1989	4342	13.2
1990	4463	13.4
1991	4696	14.1
1992	4717	14.2
1993	4959	15.0
1994	5140	15.7
1995	5475	16.6
1996	5546	17.2
1997	5608	17.5
1998	5485	17.2
1999	5663	17.8
2000	5572	17.6
2001	5572	17.7
2002	5417	17.2

FIGURE 7: ABORTION RATE IN SA 1970-2002



The age distribution of women who had terminations is shown in Table 38. Among the 5-year age groups (Table 39), the highest abortion rate (31.2 per 1000) was among women aged 20-24 years. The abortion proportion (abortion as a proportion of abortions and births) was 0.23; it was highest among teenagers (0.56), and was also high among women aged 20-24 years (0.35) and older women aged 40 years or more (0.34). This indicates that about 56% of known teenage pregnancies were terminated. This proportion was highest for younger teenagers (0.74 for those aged 12-14 years). Some of the rates for 1997-2001 have been amended - resulting in slight differences from earlier reports due to a few late abortion notifications received, but largely due to the revision of the ABS population estimates after the 2001 Census.

TABLE 38
TERMINATIONS OF PREGNANCY BY AGE, SOUTH AUSTRALIA, 2002

AGE (years)	No	%
12	1	0.0
13	4	0.1
14	15	0.3
15	86	1.6
16	189	3.5
17	223	4.1
18	357	6.6
19	374	6.9
20-24	1483	27.4
25-29	1066	19.7
30-34	846	15.6
35-39	525	9.7
40-44	233	4.3
45+	15	0.3
TOTAL	**5417**	**100.0**

The distribution of abortions and births by age in South Australia in 2002 (Table 39 and Figure 8A) demonstrates that the largest proportion of abortions occurred in the age group 20-24 years while the largest proportion of births occurred among those 30-34 years. However the highest birth rate of 109.2 per 1000 women was in the age group 25-29 years. Teenagers accounted for 23.1% of the abortions and 5.5% of the confinements in South Australia in 2002. The teenage pregnancy rate (per 1000 women aged 15-19 years) declined in the 1970s and 1980s with the decline in the teenage birth rate but increased in the 1990s till 1996 with the increase in the teenage abortion rate. Since then it has declined with a decline in the teenage birth rate (Figure 8B). The teenage pregnancy rate was 43.5 per 1000 women in 2002, slightly higher than in the preceding two years.

TABLE 39
ABORTION AND BIRTH RATES AND ABORTION PROPORTIONS BY AGE, SA 2002

AGE (years)	NO OF TERMINATIONS	ESTIMATED RESIDENT FEMALE POPULATION JUNE 30 2002*	ABORTION RATE PER 1000 WOMEN	NO OF BIRTHS	BIRTH RATE PER 1000 WOMEN	ABORTION PROPORTION
<15	20	na	na	7	na	0.74
15-19	1229	50947	24.5**	959	19.0**	0.56
20-24	1483	47503	31.2	2766	58.2	0.35
25-29	1066	47540	22.4	5189	109.2	0.17
30-34	846	53988	15.7	5769	106.9	0.13
35-39	525	55486	9.5	2573	46.4	0.17
40-44	233	58868	4.2**	458	8.2	0.34
45+	15	na	na	24	na	0.38
TOTAL	**5417**	**314332**	**17.2****	**17745**	**56.5****	**0.23**

* *Australian Bureau of Statistics. Population Estimates by Age and Sex, South Australia 2002. Canberra: (ABS) 14th August 2003 (Catalogue No 3235.0).*

** *the abortion and birth rates for women aged 15-19 years include terminations and births for younger ages, and the rates for women aged 40-44 years include terminations and births for older ages, while the total rates include all terminations and births.*

Figure 8A: ABORTIONS AND BIRTHS BY AGE
SOUTH AUSTRALIA 2002

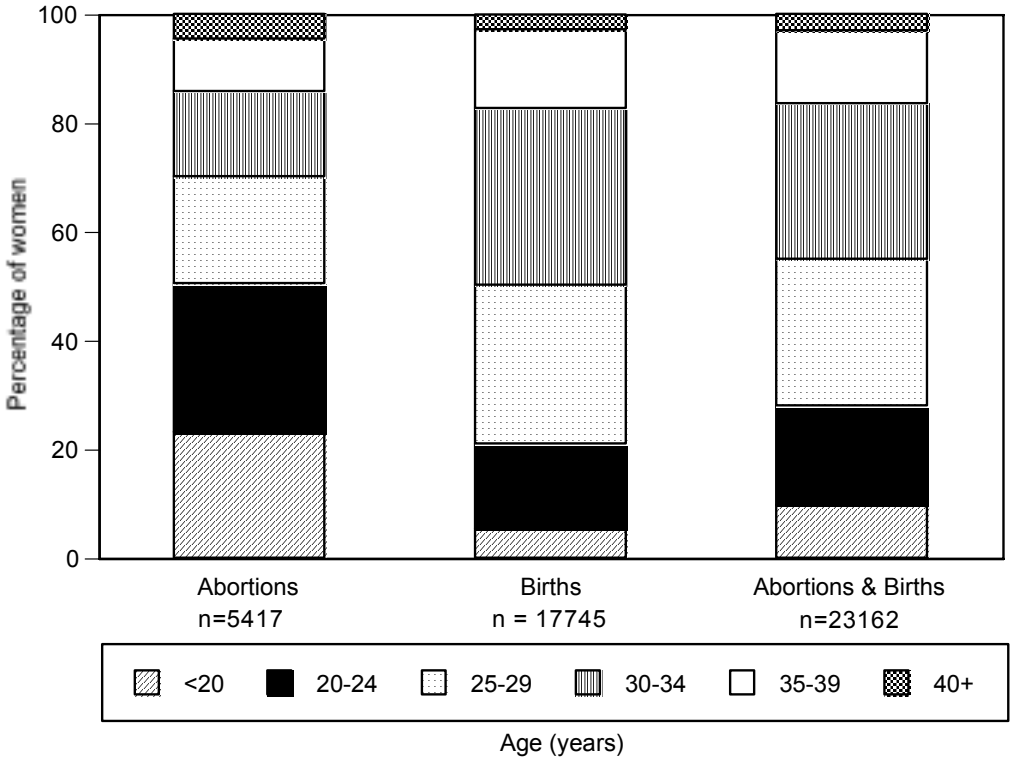
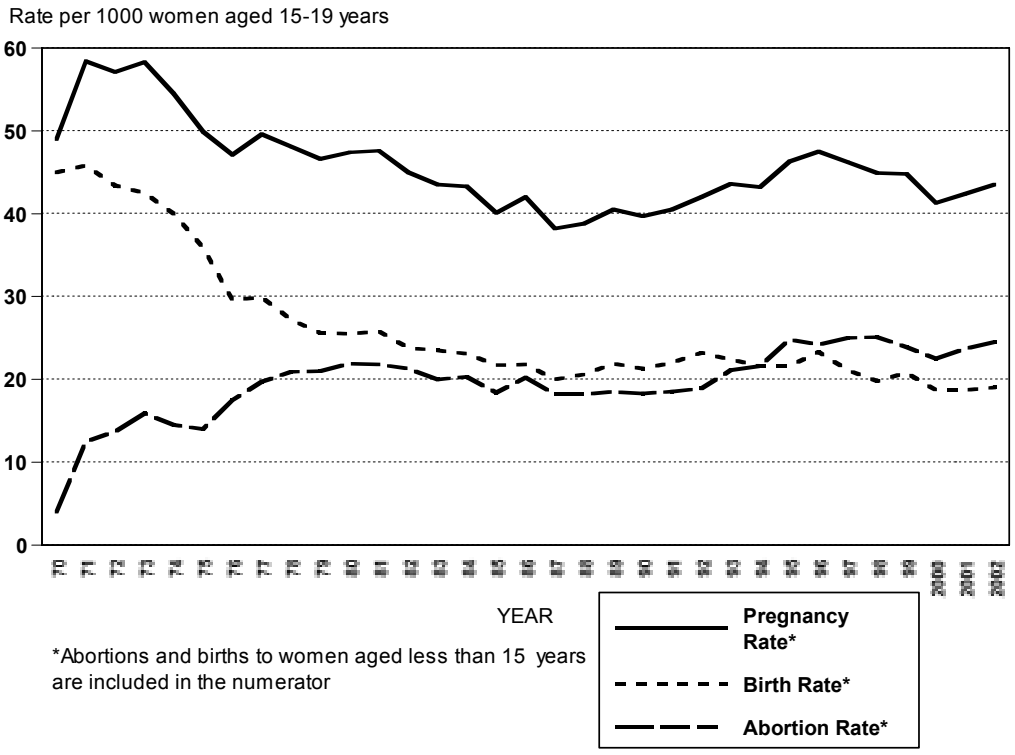


Figure 8B: TEENAGE PREGNANCY, ABORTION AND BIRTH RATES
SOUTH AUSTRALIA 1970-2002



*Abortions and births to women aged less than 15 years are included in the numerator

Terminations were performed in the majority of cases (63.4%) for single women (Table 40): however in 4.3% of cases the marital status was not known.

TABLE 40
TERMINATIONS BY MARITAL STATUS

MARITAL STATUS	N0	%
Never married	2657	49.0
Married	1214	22.4
De facto	532	9.8
Widowed	5	0.1
Divorced/Separated	774	14.3
Not known	235	4.3
TOTAL	**5417**	**100.0**

While 83.3% of terminations was performed for metropolitan residents (Table 41), a larger proportion (93.2%) was performed in metropolitan hospitals (Table 42), which include the Pregnancy Advisory Centre at which 3006 terminations (55.5% in the State) were performed.

TABLE 41
TERMINATIONS BY PLACE OF RESIDENCE

RESIDENCE OF WOMEN	N0	%
Metropolitan	4513	83.3
Country	904	16.7
TOTAL	**5417**	**100.0**

TABLE 42
TERMINATIONS BY HOSPITAL CATEGORY

HOSPITAL WHERE TERMINATION PERFORMED	N0	%
Metropolitan teaching	4803	88.7
Metropolitan private	245	4.5
Country	369	6.8
TOTAL	**5417**	**100.0**

The proportion of terminations performed by obstetricians was 28.4%, which has declined from 68.5% in 1991, while the proportion performed by medical practitioners in family advisory clinics has increased (from 23.8% in 1991 to 67.3% in 2002 (Table 43)). The number of terminations performed for suspected or identified abnormalities of the fetus was 115 (2.1% of terminations), of which 107 (93.0%) were for specified fetal or chromosomal abnormalities (Table 44).

TABLE 43
TERMINATIONS BY CATEGORY OF DOCTOR

CATEGORY OF DOCTOR PERFORMING TERMINATION	NO	%
Obstetrician	1537	28.4
Trainee obstetrician	143	2.6
Medical practitioner in family advisory clinic	3649	67.3
General practitioner	88	1.6
TOTAL	**5417**	**100.0**

TABLE 44
REASON FOR TERMINATION FOR SUSPECTED OR IDENTIFIED ABNORMALITY OF FETUS

REASON FOR TERMINATION	NO	%
Possibility of hereditary disease or congenital abnormality	1	0.9
Identified chromosomal abnormality	49	42.6
Other identified fetal abnormality	58	50.4
Possibility of damage from drugs	5	4.3
Possibility of damage from maternal infection (other than Rubella)	2	1.7
TOTAL	**115**	**100.0**

The majority of terminations (91.9%) was performed within the first 14 weeks of pregnancy and most frequently (in 90.1% of cases) by vacuum aspiration. Twenty-two complications were reported for 20 women (0.4%). The types of complications are listed in Table 45.

TABLE 45 COMPLICATIONS OF TERMINATIONS		
COMPLICATIONS	**NO**	**% OF COMPLICATIONS**
Sepsis	1	4.5
Haemorrhage - intra-operative	8	36.4
- post-operative	2	9.1
Perforation of or trauma to body of uterus	2	9.1
Anaesthetic complication	0	0.0
Other	9	40.9
TOTAL	**22**	**100.0**

Of the 5417 women who had terminations, 2094 (38.7%) had had a previous termination (Table 46A). Among the teenagers 18.6% had had a previous termination. The total abortion rate (TAR) for 2002 was 537.5 per 1000 women aged 15-44 years (Table 46B). This represents the number of abortions 1000 women would have during their lifetime if they experienced the abortion rates of the different age groups for 2002. As a woman may have more than 1 abortion in her lifetime, to estimate how prevalent abortion is at these age-specific abortion rates for 2002, a total first abortion rate (TFAR, Table 46C) may be calculated after exclusion of women with repeat terminations. This TFAR for 2002 was 329.0 per 1000 women aged 15-44 years. This suggests that about 1 in 3 women would have an abortion in their lifetime if they experienced the abortion rates of the different age groups for 2002.

TABLE 46A WOMEN WITH PREVIOUS TERMINATIONS BY AGE			
AGE (years)	**NO**	**%**	**% OF AGE GROUP**
< 15	0	0.0	0.0
15 - 19	228	10.9	18.6
20 - 24	582	27.8	39.2
25 - 29	552	26.4	51.8
30 - 34	412	19.7	48.7
35 - 39	229	10.9	43.6
40+	91	4.3	36.7
TOTAL	**2094**	**100.0**	**38.7**

Further details of abortions in South Australia in 2002 may be obtained from the Thirty-third Annual Report of the Committee Appointed to Examine and Report on Abortions notified in South Australia.[5]

Table 46B: Calculation of Total Abortion Rate (TAR) for 2002 for South Australia*			
Age (years)	**No of women who had terminations**	**Estimated female resident population 30th June 2002**	**Abortion rate per 1000 women**
15-19	1249	50947	24.5
20-24	1483	47503	31.2
25-29	1066	47540	22.4
30-34	846	53988	15.7
35-39	525	55486	9.5
40-44	248	58868	4.2
TOTAL	**5417**	**314332**	**107.5+**

* *In these calculations, abortions to women under 15 years are included in the age group 15-19 yrs and abortions to women aged 45 years or more are included in the age group 40-44 years, as is traditional.*

\+ *sum of abortion rates for 5 year age groups.*

Total abortion rate *= sum of abortion rates for 5 year age groups x 5 = 537.5 per 1000 women aged 15-44 years.*

Table 46C: Calculation of Total First Abortion Rate (TFAR) for 2002 for South Australia					
Age (years)	**No of women who had terminations (A)**	**No of women who had previous terminations (B)**	**No of women who had first termination (A) – (B)**	**Estimated female resident population June 30th 2002**	**First abortion rate per 1000 women**
15-19	1249	228	1021	50947	20.0
20-24	1483	582	901	47503	19.0
25-29	1066	552	514	47540	10.8
30-34	846	412	434	53988	8.0
35-39	525	229	296	55486	5.3
40-44	248	91	157	58868	2.7
TOTAL	**5417**	**2094**	**3323**	**314332**	**65.8+**

\+ *sum of abortion rates for 5 year age groups.*

Total First Abortion Rate *(TFAR) = 65.8 x 5 = 329.0 per 1000 women aged 15-44 yrs.*

IV. OBSTETRIC PROFILES BY HOSPITAL CATEGORY

Obstetric profiles for 6 hospital categories for 2002 are provided in Table 47 and Figures 9-28.

These hospital categories are:

1. Metropolitan teaching Level III hospitals with neonatal intensive care facilities, ie the Women's & Children's Hospital and Flinders Medical Centre,
2. Other metropolitan teaching hospitals, ie The Queen Elizabeth Hospital, Lyell McEwin Health Service and Modbury Hospital,
3. Metropolitan private hospitals with 500 or more births per year,
4. Metropolitan private hospitals with less than 500 births per year,
5. The two major country hospitals (Mount Gambier and Whyalla) and
6. Other country hospitals (mainly smaller).

A list of maternal and baby factors identified either as risk factors for poor perinatal outcome in earlier analyses,[6] or of general interest, is provided with "means" for all State hospital births as well as proportions for the 6 hospital categories.

The "mean" is the proportion for all State hospital confinements (for maternal factors) or births (for baby factors),

$$\text{e.g. \% Aboriginal mothers} = \frac{\text{No of confinements of Aboriginal mothers in State hospitals}}{\text{Total confinements in State hospitals}} \times 100$$

Where indicated (+) in Table 47, it is the mean (number of confinements or births) for the 27 hospitals or groups of hospitals for which obstetric profiles have been provided, and which have also been included in the provision of the 10^{th} and 90^{th} percentile values. These are as follows:

1. Women's & Children's Hospital
2. Flinders Medical Centre
3. Lyell McEwin Health Service
4. The Queen Elizabeth Hospital
5. Modbury Hospital
6. Ashford Community Hospital Inc
7. Flinders Private Hospital
8. Calvary Hospital Adelaide Inc
9. Burnside War Memorial Hospital Inc
10. North Eastern Community Hospital Inc
11. Western Hospital Inc
12. Central Districts Private Hospital
13. Stirling & Districts Hospital
14. Mount Gambier & District Health Service Inc

15. The Whyalla Hospital & Health Services Inc
16. Gawler Health Service
17. Millicent & District Hospital & Health Services Inc
18. Mount Barker District Soldiers' Memorial Hospital Inc
19. Murray Bridge Soldiers' Memorial Hospital Inc
20. Naracoorte Health Service Inc
21. Port Augusta Hospital & Regional Health Service Inc
22. Port Lincoln Health Service Inc
23. Port Pirie Regional Health Service Inc
24. Riverland Regional Health Service (Berri)
25. Tanunda War Memorial Hospital
26. Country hospitals with 50-99 births per year
27. Country hospitals with <50 births per year

The 10th percentile is the proportion below which 10% of the 27 hospital proportions, ie the 3 lowest hospital proportions, would be found if the 27 proportions were ranked from highest to lowest. The 90th percentile is the proportion above which 10% of the 27 hospital proportions, ie the 3 highest proportions, would be found if the 28 proportions were ranked from highest to lowest. As the two Level III hospitals which account for 33.9% of hospital births have proportions of some factors (such as prolonged hospitalisation and use of neonatal intensive care) which are much greater than for the other 25 hospitals, occasionally the mean for all hospitals will be seen to be higher than the 90th percentile.

The table and figures provide obstetric profiles for the 6 different categories of hospitals. These have been provided since 1986 to hospitals with 100 or more births per year, together with their individual hospital profiles, including crude and standardized perinatal mortality ratios,[7] the latter with exclusion of perinatal deaths from congenital abnormalities[3] and terminations of pregnancy. For country hospitals with less than 100 births per year, group reports have been provided.

It is possible for each hospital to compare its statistics for each factor with those for State hospitals and for categories of hospitals. It is also possible to note whether a hospital's proportion for any factor falls within the range of the more common proportions prevailing in hospitals in the State (ie between the 10th and the 90th percentiles).

TABLE 47
OBSTETRIC PROFILES BY HOSPITAL CATEGORY 2002
Births 400+ g/20+ weeks gestation

Maternal factors	ALL STATE HOSPITALS			METROPOLITAN HOSPITALS				COUNTRY HOSPITALS	
	Mean	10th percentile	90th percentile	Level III teaching	Other teaching	Private 500+ births p.a.	Private <500 births p.a.	Major	Other
Confinements (n=17373)	643+	168	1425	5819	2771	4212	655	844	3072
% Aboriginal mothers	2.6	0.0	6.3	2.7	3.2	0.1	0.0	3.4	5.4
% Antenatal visits <7*	7.4	0.3	13.3	12.0	9.3	0.6	0.5	7.3	8.8
% Teenage mothers	5.5	0.4	10.5	5.9	11.1	0.5	1.4	8.5	6.8
% Mothers ≥35 years	17.1	10.5	22.7	16.1	12.2	25.5	18.9	10.8	13.1
% Single mothers	14.0	2.9	22.0	20.7	20.9	2.6	3.2	12.1	13.3
% 4+ Prior livebirths	3.0	0.7	5.3	2.9	5.2	0.9	0.8	3.3	4.3
% 1+ Prior Perinatal deaths	1.6	0.6	1.7	2.5	1.5	1.2	1.5	0.7	1.0
% Obstetric complications	31.5	17.2	33.5	40.7	34.4	24.9	21.8	27.1	23.6
% Labour complications	33.8	21.1	41.1	43.0	35.2	29.9	26.0	25.4	24.5
% Induction	29.4	23.2	34.2	28.4	30.5	31.7	34.2	26.1	26.9
% Emergency LSCS	16.6	9.1	20.0	18.7	13.9	19.5	11.6	13.9	12.9
% Elective LSCS	12.6	9.2	18.6	9.4	9.2	19.3	17.7	10.4	12.2
% Total LSCS	29.3	19.5	38.3	28.1	23.1	38.8	29.3	24.3	25.1
% Ultrasound examination*	97.4	95.0	99.0	97.5	97.2	98.4	98.6	98.1	95.7
% Amniocentesis*	7.2	2.7	10.2	7.1	5.4	11.7	8.3	4.7	4.0
% Episiotomy	14.6	6.4	28.0	10.4	13.8	20.8	29.9	10.7	12.5
% Repair of perineal tear	24.3	13.8	32.0	25.5	23.0	25.5	20.6	25.4	22.2
% Epidural analgesia	31.9	13.0	47.4	32.3	26.6	46.1	45.8	20.4	16.3
% Spinal analgesia	0.9	0.3	1.8	0.7	0.7	1.1	0.8	1.1	1.2
% Private patients	33.3	1.8	100.0	8.7	2.4	100.0	100.0	12.1	7.9
% Primiparous women	40.9	34.6	46.4	42.9	36.0	47.1	43.5	39.6	36.1
% Previous LSCS	14.5	11.0	18.6	13.4	12.1	17.1	15.1	14.8	14.8
% PPH	5.7	2.7	5.5	9.0	4.9	3.0	4.7	5.2	4.3
Baby Factors									
Births (n=17697)	655+	171	1453	5996	2802	4294	664	856	3085
% Birthweight <2500g	7.1	1.8	8.2	12.0	6.5	4.6	2.6	4.8	3.2
% Gestational age <37 weeks at birth	8.3	1.3	9.7	14.3	7.3	5.9	1.4	5.5	3.1
% Prolonged hospitalisation (>27 days)	2.2	0.0	1.5	5.3	0.7	0.7	0.2	0.2	0.6
% Neonatal intensive care (Level III or W&CH paediatric intensive care)	2.9	0.4	2.9	6.1	1.2	1.4	2.1	1.2	0.9
% Birth defect	2.4	0.5	3.0	3.1	2.0	2.2	2.6	2.3	1.7

** adjusted for missing values.*

+ mean number of confinements or births for the 27 hospitals or groups of hospitals.

Figure 9: Percentage of Aboriginal mothers by hospital category

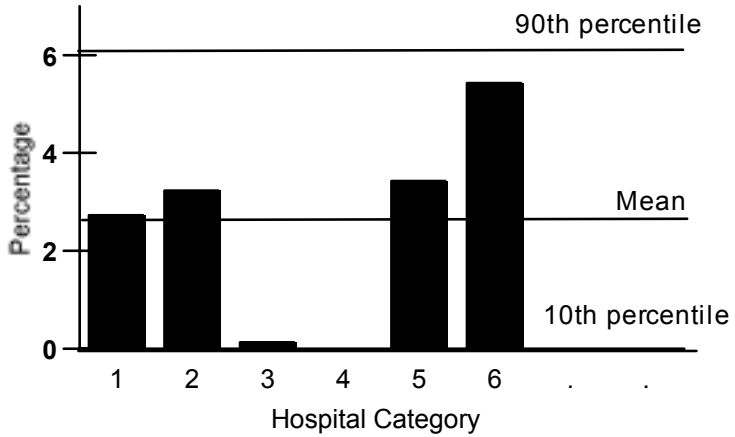


Figure 10: Percentage of mothers with <7 antenatal visits by hospital category

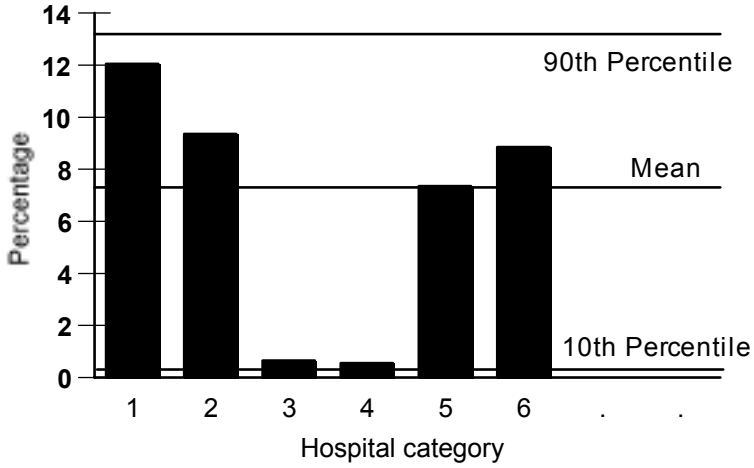


Figure 11: Percentage of teenage mothers by hospital category

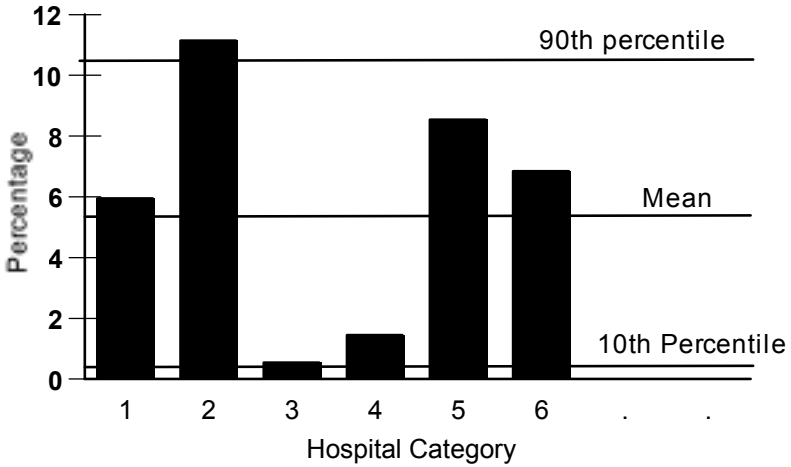


Figure 12: Percentage of mothers 35 years or more by hospital category

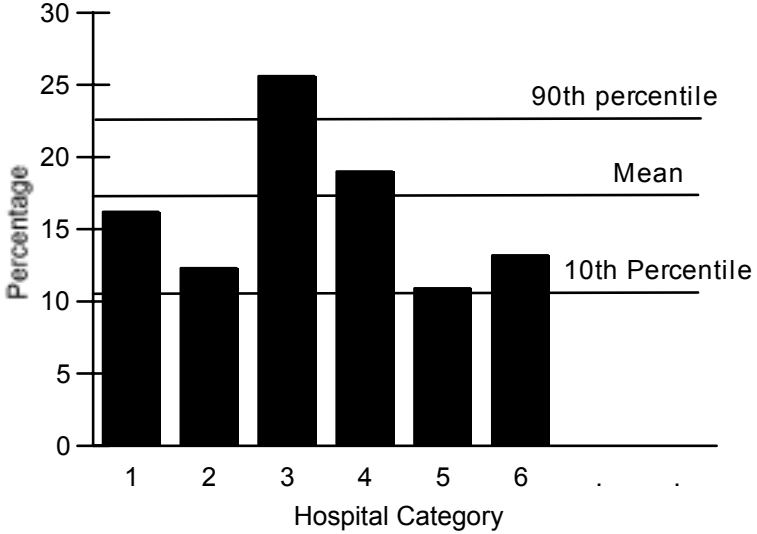


Figure 13: Percentage of single mothers by hospital category

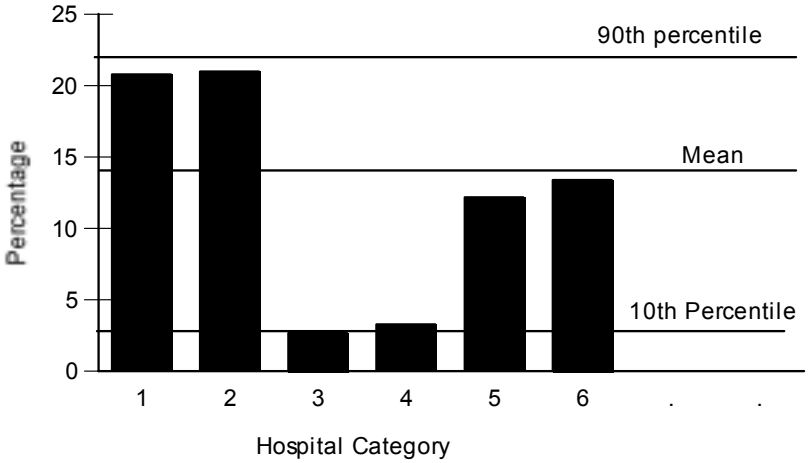


Figure 14: Percentage of mothers with 4 or more prior livebirths by hospital category

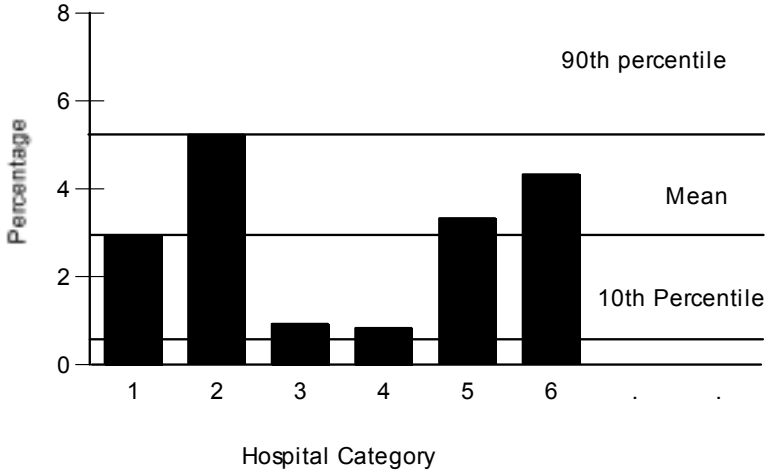


Figure 15: Percentage of mothers with 1 or more prior perinatal deaths by hospital category

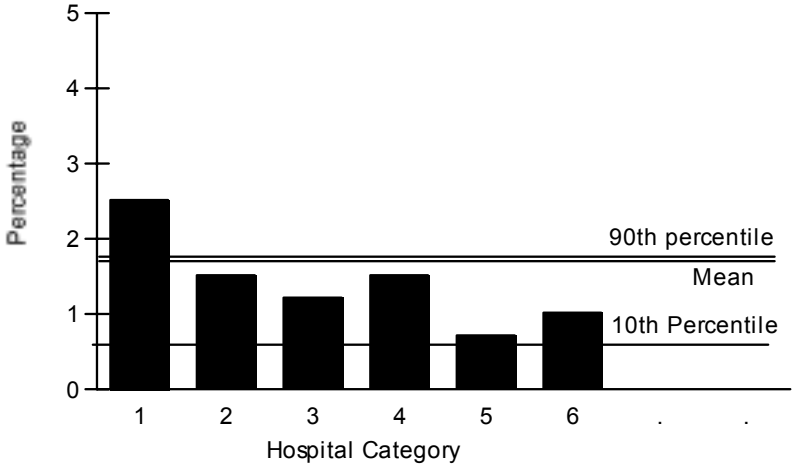


Figure 16: Percentage of mothers with obstetric complications by hospital category

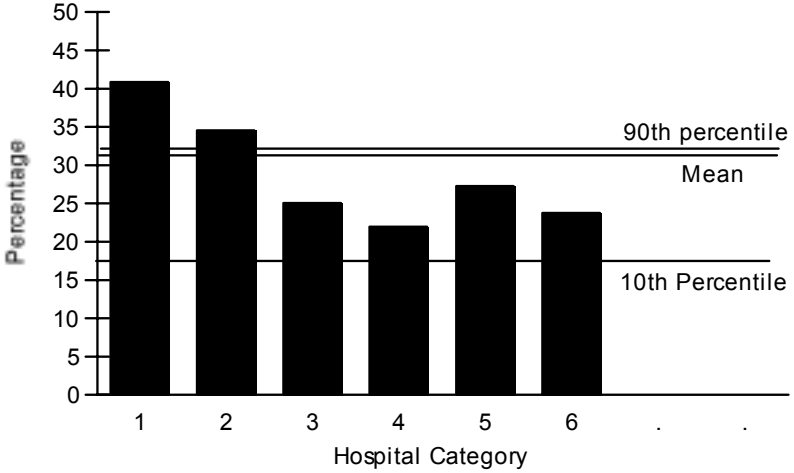


Figure 17: Percentage of mothers with complications during labour or delivery by hospital category

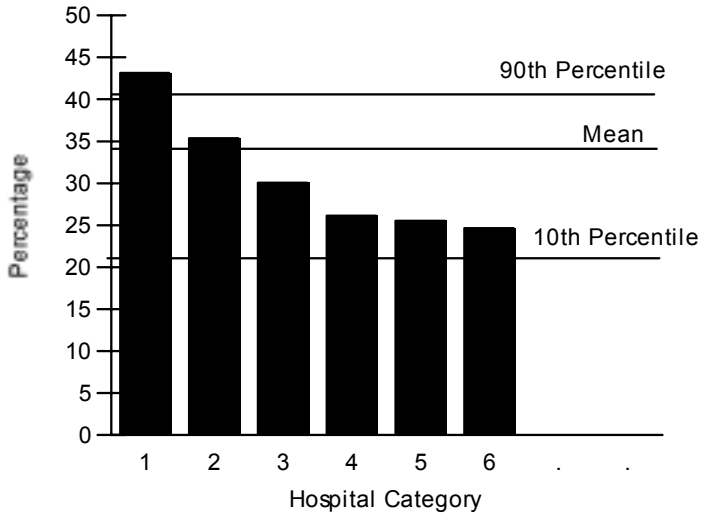


Figure 18: Percentage of mothers with induction of labour by hospital category

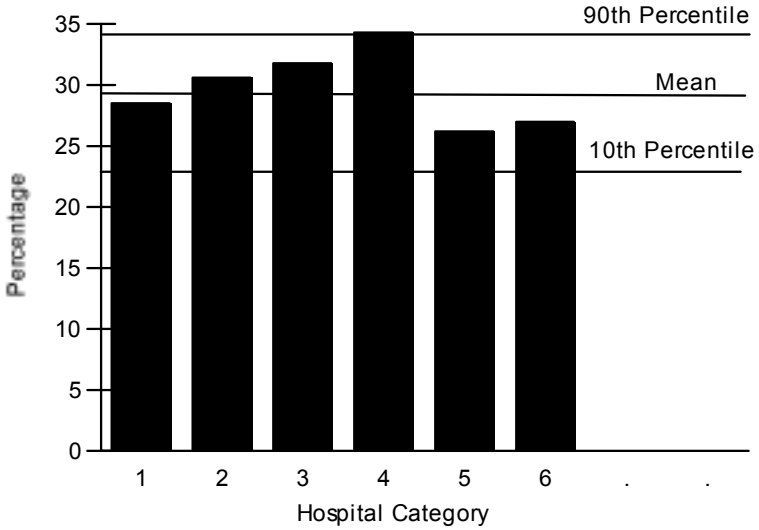


Figure 19: Percentage of mothers having epidural analgesia by hospital category

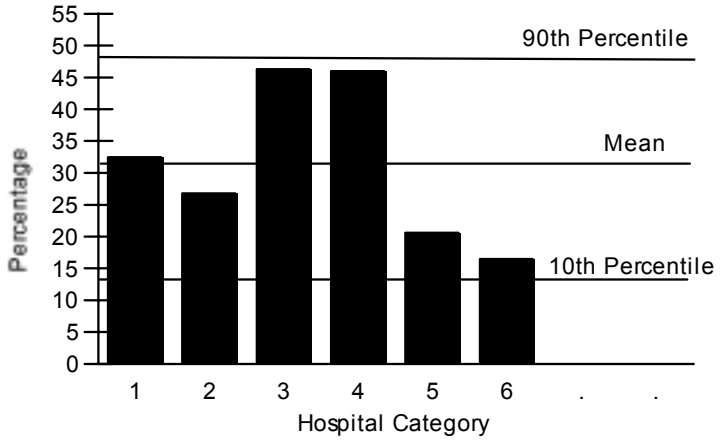


Figure 20: Percentage of breech deliveries by hospital category

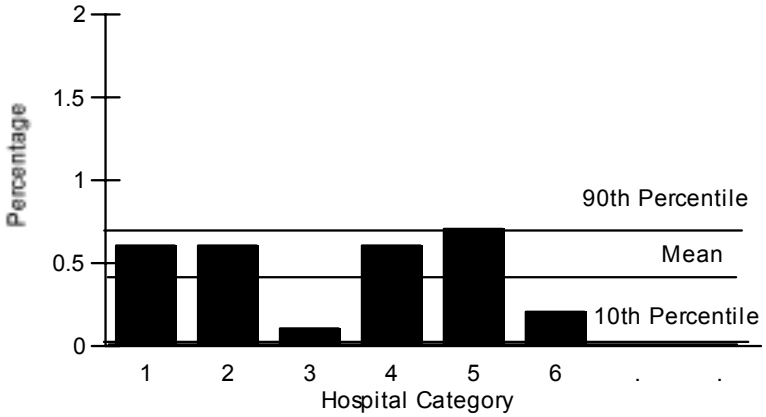


Figure 21: Percentage of emergency LSCS by hospital category

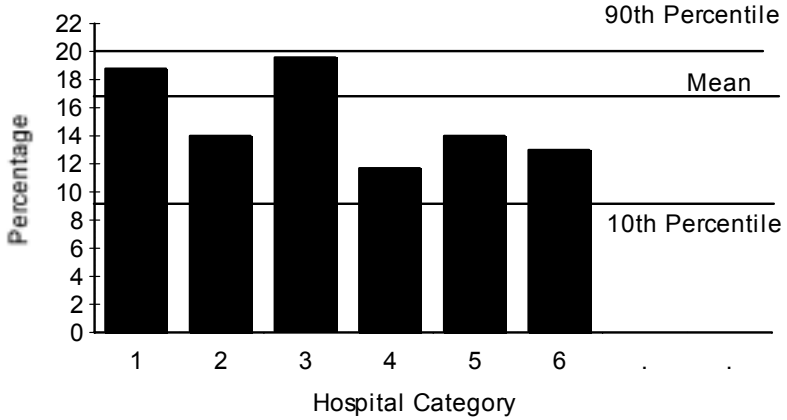


Figure 22: Percentage of elective LSCS by hospital category

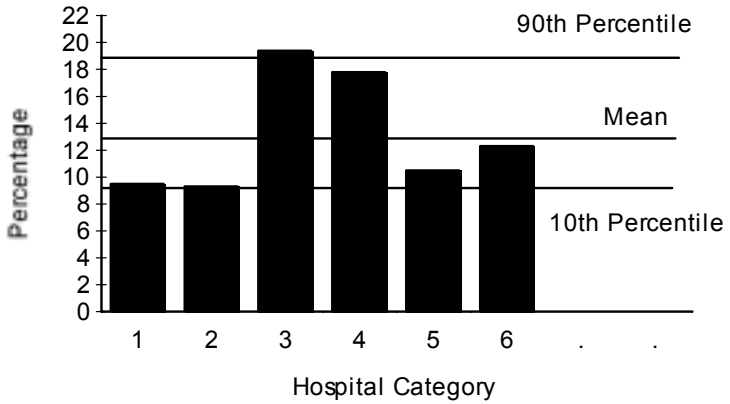


Figure 23: Percentage of total LSCS by hospital category

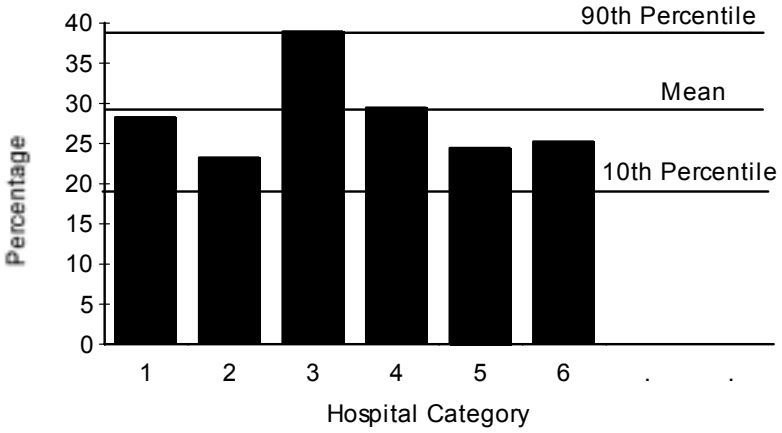


Figure 24: Percentage of births with birthweight below 2500g by hospital category

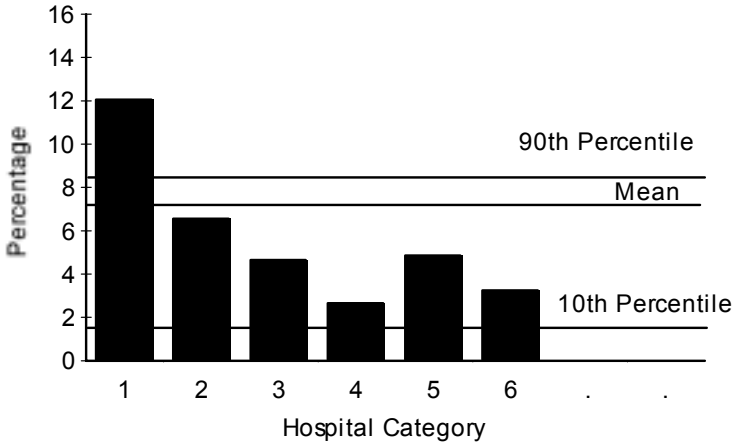


Figure 25: Percentage of births with gestation less than 37 weeks by hospital category

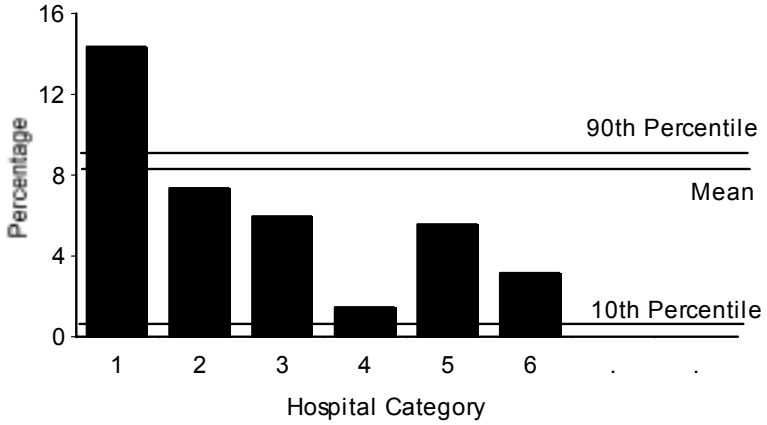


Figure 26: Percentage of births with prolonged hospitalisation by hospital category

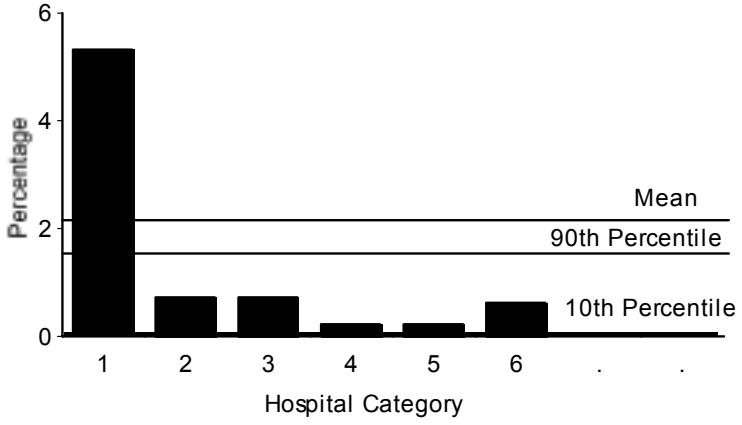


Figure 27: Percentage of livebirths requiring neonatal intensive care by hospital category

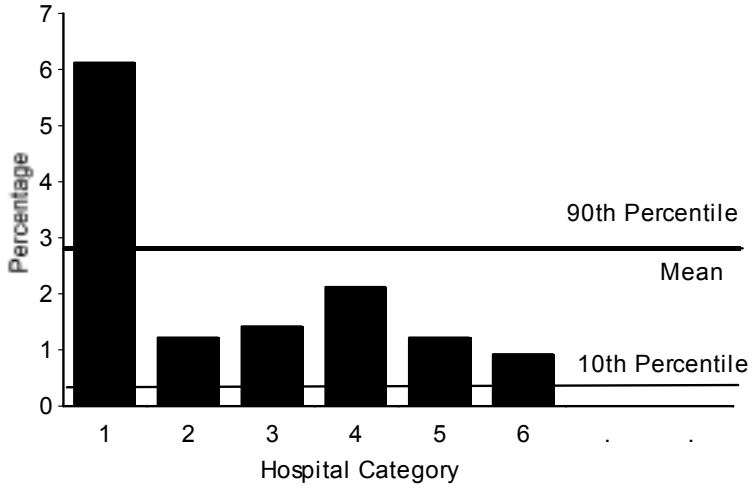
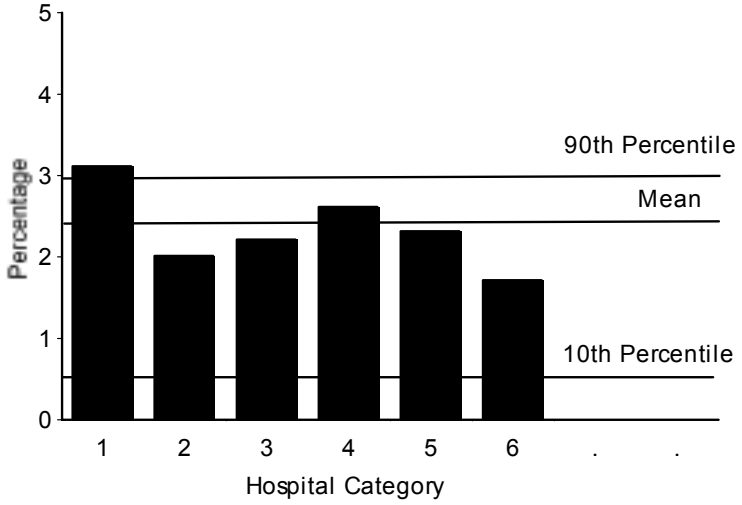


Figure 28: Percentage of births with birth defects by hospital category



V. CLINICAL INDICATORS* FOR SA 2002

1. INDICATOR TOPIC: INDUCTION OF LABOUR OTHER THAN FOR DEFINED INDICATIONS

Rationale: These indicators have been included because induction of labour is a common obstetric intervention and one which is often stated by community critics to be unnecessarily high.

1.1 Numerator: The number of women undergoing induction of labour for indications other than those defined which are diabetes, premature rupture of membranes, hypertensive disorders (including chronic renal disease), intrauterine growth restriction, isoimmunisation, fetal distress (as documented by the clinician), fetal demise, chorioamnionitis and prolonged pregnancy (41 completed weeks or more). Patients having augmentation of labour are excluded in both numerator and denominator data. (n=2186)

Denominator: The total number of women undergoing induction of labour for any reason (excluding augmentation of labour). (n = 5103)

Clinical indicator $1.1 = \frac{2186 \times 100}{5103} = 42.8\%$

1.2 Numerator: The number of women undergoing induction of labour for indications other than those listed above (excluding augmentation of labour). (n=2186)

Denominator: The total number of women delivering (including augmentation of labour). (n=17421)

Clinical indicator $1.2 = \frac{2186 \times 100}{17421} = 12.5\%$

2. INDICATOR TOPIC: RATE OF VAGINAL DELIVERY FOLLOWING PRIMARY CAESAREAN SECTION

Rationale: This indicator has been included to monitor the conduct of labour and trial of scar in those women who have had a previous primary (first) caesarean section.

2.1 Numerator: The number of women delivering vaginally following a previous primary (first) caesarean section and having no intervening pregnancies greater than 20 weeks gestation. (n=384)

Denominator: The total number of women delivering who have had a previous primary (first) caesarean section and no intervening pregnancies greater than twenty weeks gestation. (n=1787)

Clinical indicator $2.1 = \frac{384 \times 100}{1787} = 21.5\%$

* *Australian Council for Healthcare Standards. Clinical Indicators – A Users' Manual: Obstetrics and Gynaecology Indicators Version 2*

3. INDICATOR TOPIC: PRIMARY CAESAREAN SECTION FOR FAILURE TO PROGRESS

Rationale: This indicator is to monitor the adequacy of trial of labour. There are two indicators, one for failure to progress after a period of labour with cervical dilatation of 3cm or less and the other with cervical dilatation of more than 3cm, but as cervical dilatation is not collected, the two indicators have been combined.

3.0 Numerator: The number of women undergoing primary (first) caesarean section for failure to progress (clinician's documented statement), which may include CPD, uterine inertia, persistent occipitoposterior position. (n=1179)

Denominator: The total number of women undergoing primary non-elective caesarean section. (n=2318)

Clinical indicator $3.1 = \frac{1179 \times 100}{2318} = 50.9\%$

4. INDICATOR TOPIC: PRIMARY CAESAREAN SECTION FOR FETAL DISTRESS

Rationale: To determine comparative frequency of caesarean section for fetal distress.

4.1 Numerator: The number of women undergoing primary caesarean section for fetal distress in labour as evidenced by the clinician's documented diagnosis of fetal distress. (n=887)

Denominator: The total number of women delivering including those delivering vaginally. (n=17421)

Clinical indicator $4.1 = \frac{887 \times 100}{17421} = 5.1\%$

4.2 Numerator: The number of women undergoing primary caesarean section for fetal distress as defined above. (n=887)

Denominator: The total number of women delivering by primary caesarean section only. (n = 3133)

Clinical indicator $4.2 = \frac{887 \times 100}{3133} = 28.3\%$

5. INDICATOR TOPIC: INCIDENCE OF AN INTACT LOWER GENITAL TRACT IN PRIMIPAROUS PATIENTS DELIVERING VAGINALLY

Rationale: This indicator has been included because a high incidence of an intact perineum is considered a desirable outcome.

5.1 Numerator: The number of primiparous patients not requiring surgical repair or suture of the lower genital tract (those structures below and not including the cervix) following delivery. (n=1469)

Denominator: The total number of primiparous women delivering vaginally. (n=4884)

Clinical indicator $5.1 = \frac{1469 \text{ x } 100}{4884} = 30.1\%$

6. INDICATOR TOPIC: APGAR SCORE

Rationale: This indicator has been included as a measure of the outcome of labour, with particular emphasis on the assessment of baby well-being.

6.1 Numerator: The number of babies born with an Apgar score of 4 or below at five minutes post delivery. (n=63)

Denominator: The total number of babies born (excluding fetal deaths in utero diagnosed prior to commencement of labour). (n=17680)

Clinical indicator $6.1 = \frac{63 \text{ x } 100}{17680} = 0.4\%$

7. INDICATOR TOPIC: TERM BABIES TRANSFERRED OR ADMITTED TO A NEONATAL INTENSIVE CARE UNIT FOR REASONS OTHER THAN CONGENITAL ABNORMALITY

Rationale: This indicator has been included as an index of the overall management of labour in terms of outcome.

7.1 Numerator: The number of term babies (37 weeks gestation or later) transferred/admitted to a neonatal intensive care unit for reasons other than congenital abnormality. (n=100)

Denominator: The total number of term live babies born. (n=16250)

Clinical indicator $7.1 = \frac{100 \text{ x } 100}{16250} = 0.6\%$

VI. TRENDS IN PERINATAL STATISTICS IN SOUTH AUSTRALIA, 1981-2002

Perinatal statistics are presented in Tables 48 and 49 for both sociodemographic and obstetric aspects for each year from 1993-2002, as well as for 1981, when the perinatal data collection was commenced. The trends noted between 1981and 2002 are as follows, and some features are illustrated in Fig 29.1 – 29.8:

1. The fall in the crude birth rate, from 14.3 to 11.6 per 1000 population. The annual number of births has declined since 1995, but the numbers were relatively stable in the last 3 years.
2. The increase in the proportion of confinements of Asian mothers from 1.8% to 4.8% and of Aboriginal mothers from 1.5% to 2.5% in 2002. The proportion of Aboriginal mothers has been stable in the last four years.
3. The decrease in the proportion of teenage confinements from 7.8% to 5.5%, but this proportion has been relatively stable since 1993. The teenage pregnancy rate declined in the 1970s and 1980s and then rose, with the teenage abortion rate, in the 1990s till 1996, after which it has declined mainly due to the decline in the teenage birth rate.
4. The increase in the proportion of confinements of older women (35 years and over) from 4.6% to 17.1%.
5. The increase in mean age among primigravid women, from 23.77 years to 27.04 years. The proportion of primigravidae aged 30 years and over increased from 8.9% to 34.9%.
6. The increase in the proportion of confinements of never married women, from 7.6% to the peak of 13.2% in 1996, after which it decreased, but this has been relatively stable in recent years.
7. The increase in the proportion of multiple births, related to assisted conception pregnancies, and the older age of mothers, from 2.0% in 1981 to 3.6% in 2002.
8. The number and proportion of home births have declined since 1981. There were slight increases in 2002 after they had been stable for four years. The proportion of births in private hospitals declined in the last decade, but increased in 2001 and 2002. The number of births annually in birthing units in teaching hospitals has increased steadily from 125 (0.6%) in 1992 to 1000 (5.6%) in 2002, with nearly as many more women planning to deliver in birthing units but transferred to labour ward before delivery.
9. The induction rate increased from 22.1% to 29.3% and 43% were performed for other than defined indications.
10. The fall in the proportion of normal spontaneous vaginal deliveries (from 66.1% to 58.7%), breech deliveries (from 1.1% to 0.4%) and forceps deliveries (from 15.2% to 5.9%), with a rise in the proportion delivered by ventouse from 0.7% to 5.9% and by caesarean section, from 16.9% to 29.2%.
11. The increase in the proportions of low birthweight (from 5.8% to 7.1%) and preterm babies (from 5.5% to 8.2%). However, both proportions have been stable in recent years.
12. The proportion of births with congenital abnormalities has been relatively stable at around 2.4% over the last decade.
13. The increase in the proportion of babies utilising Level II care from 6.7% in 1982 to 15.8% in 2002. The peak was 16.6% in 1999.
14. The considerable fall in the perinatal mortality rate, despite the increasing proportion of preterm births. This fall is reflected in the standardized perinatal mortality ratio which has been calculated for each year utilising perinatal mortality rates for 500g birthweight groups for the years 1981-1989 combined as the standard. It was 70.3 in 2002 compared with 117.6 in 1981. The fall in neonatal mortality has been particularly outstanding.

TABLE 48: SOCIODEMOGRAPHIC ASPECTS OF PERINATAL STATISTICS, SA, 1981 and 1993 – 2002												
		YEAR										
		1981	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
1	Total births	19052	19969	19801	19620	19111	18674	18734	18519	17871	17704	17745
2	Livebirths	18905	19846	19673	19472	18979	18535	18613	18404	17765	17584	17623
3	Confinements	18857	19681	19519	19310	18784	18394	18421	18233	17577	17427	17421
4	Crude birth rate per 1000 population	14.3	13.6	13.4	13.2	12.9	12.5	12.5	12.3	11.9	11.6	11.6
5	Place of birth (%)											
	Teaching hospital	52.2%	48.9%	48.9%	49.6%	50.7%	50.9%	53.4%	53.6%	54.6%	51.6%	49.6%
	Private hospital	19.7%	26.4%	27.3%	26.3%	24.9%	24.2%	22.6%	22.3%	21.9%	25.2%	27.9%
	Country hospital	27.8%	24.5%	23.6%	24.1%	24.4%	24.9%	24.0%	24.0%	23.5%	22.9%	22.2%
	Domiciliary	0.3%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%
		(65)	(46)	(31)	(52)	(52)	(44)	(36)	(39)	(35)	(37)	(48)
6	Race (%)											
	Aboriginal	1.5%	2.0%	2.0%	2.0%	1.9%	2.1%	2.2%	2.4%	2.5%	2.3%	2.5%
	Asian	1.8%	3.5%	4.0%	3.9%	3.8%	3.8%	4.1%	4.3%	4.5%	4.4%	4.8%
7	Age (%)											
	Teenage (%)	7.8%	5.6%	5.3%	5.3%	5.9%	5.4%	5.1%	5.6%	5.3%	5.4%	5.5%
	≥35 years (%)	4.6%	10.8%	11.6%	12.5%	13.5%	14.2%	15.0%	15.0%	16.3%	16.5%	17.1%
8	Marital Status (%)											
	Never married	7.6%	12.2%	12.1%	12.0%	13.2%	12.3%	11.6%	12.0%	12.0%	12.3%	12.3%
	Widowed/ divorced/ separated (%)	2.0%	1.7%	1.4%	1.7%	1.7%	1.6%	1.7%	1.5%	1.7%	1.6%	1.6%
	(Single)	(9.6%)	(13.8%)	(13.5%)	(13.7%)	(14.9%)	(13.8%)	(13.3%)	(13.5%)	(13.7%)	(13.9%)	(13.9%)
9	Primigravidae											
	Mean age (years)	23.77	25.77	26.02	26.24	26.10	26.40	26.52	26.66	26.88	27.00	27.04
	Teenage	16.2%	12.2%	11.5%	11.7%	13.6%	12.2%	11.2%	12.2%	11.5%	11.3%	11.9%
	≥30 years	8.9%	22.5%	24.3%	26.2%	26.5%	27.3%	28.0%	29.9%	31.9%	34.3%	34.9%

TABLE 49: OBSTETRIC ASPECTS OF PERINATAL STATISTICS, SA, 1981 and 1993 - 2002

		1981	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	Plurality											
	Multiple births (%)	2.0%	2.8%	2.8%	3.1%	3.4%	3.0%	3.3%	3.1%	3.3%	3.1%	3.6%
	Twins	(363)	(548)	(526)	(608)	(606)	(528)	(614)	(564)	(560)	(550)	(632)
	Triplets	(21)	(21)	(24)	(9)	(36)	(24)	(9)	(6)	(21)	(3)	(12)
	Quadruplets	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	Induction of labour (%)	22.1%	23.1%	23.6%	23.5%	23.5%	25.0%	27.3%	27.9%	27.3%	28.3%	29.3%
3	Method of delivery											
	Normal spontaneous	66.1%	63.7%	62.6%	63.5%	63.5%	62.5%	62.8%	62.3%	61.7%	59.5%	58.7%
	LSCS elective	8.2%	9.9%	10.0%	10.3%	9.7%	10.3%	10.0%	10.4%	10.4%	11.9%	12.6%
	LSCS Emerg	8.7%	12.6%	13.7%	12.9%	13.4%	13.3%	13.8%	14.5%	14.8%	15.8%	16.6%
	Forceps	15.2%	10.9%	10.4%	9.2%	8.8%	9.3%	8.2%	7.1%	6.4%	6.1%	5.9%
	Breech	1.1%	0.6%	0.7%	0.7%	0.6%	0.7%	0.4%	0.5%	0.4%	0.4%	0.4%
	Ventouse	0.7%	2.3%	2.6%	3.4%	4.0%	4.0%	4.7%	5.2%	6.3%	6.3%	5.9%
	Total LSCS	(16.9%)	(22.5%)	(23.7%)	(23.2%)	(23.1%)	(23.5%)	(23.9%)	(24.9%)	(25.2%)	(27.8%)	(29.2%)
4	Birthweight <2500g	5.8%	6.8%	6.7%	6.8%	7.4%	7.0%	7.0%	6.6%	7.2%	6.8%	7.1%
	Singletons	4.9%	5.4%	5.3%	5.3%	5.6%	5.5%	5.3%	5.2%	5.6%	5.5%	5.4%
	Multiples	52.1%	55.4%	53.8%	52.8%	57.0%	56.5%	54.7%	49.6%	55.9%	46.3%	50.5%
5	Gestational age <37 weeks	5.5%	7.3%	7.3%	7.8%	8.1%	7.8%	8.0%	8.1%	8.6%	8.1%	8.3%
	Singletons	4.8%	5.8%	6.1%	6.3%	6.5%	6.4%	6.4%	6.7%	6.9%	6.7%	6.6%
	Multiples	41.1%	57.3%	50.4%	54.9%	53.9%	55.8%	54.4%	51.8%	57.3%	50.8%	52.2%
6	Congenital abnormalities	3.4%	2.4%	2.3%	2.5%	2.3%	2.3%	2.5%	2.5%	2.3%	2.5%	2.4%
7	Level II care	na	13.5%	13.8%	14.2%	13.8%	13.5%	14.5%	16.6%	15.8%	15.2%	15.8%
8	Level III care	3.3%	2.4%	2.5%	2.5%	2.5%	2.5%	2.8%	2.6%	3.0%	2.6%	2.8%
9	W&CH ICU care	na	0.5%	0.4%	0.3%	0.2%	0.2%	0.2%	0.3%	0.2%	0.3%	0.2%
10	Hospitalisation for 28 days or more	4.2%	2.0%	2.2%	2.2%	2.0%	2.0%	2.0%	2.1%	2.5%	2.1%	2.2%
11	Neonatal deaths	96	72	66	71	70	59	46	38	57	64	54
12	Stillbirths	147	123	128	148	132	139	121	115	106	120	122
13	Perinatal deaths	243	195	194	219	202	198	167	153	163	184	176
14	Perinatal mortality rate per 1000 births											
	≥400g/20 weeks	12.8	9.8	9.8	11.2	10.6	10.6	8.9	8.3	9.1	10.4	9.9
	≥500g/22 weeks	11.6	7.7	7.4	8.3	7.6	6.6	6.5	5.7	6.1	6.9	6.8
	≥1000g/28 weeks*	7.2	4.2	3.8	4.5	4.0	4.0	3.5	3.1	3.6	3.9	4.0
15	Standardized perinatal mortality ratio	117.6	79.1	72.5	76.5	72.5	72.1	69.1	60.2	62.0	70.6	70.3

** only neonatal deaths within the first 7 days of life are included.*

FIGURE 29: TRENDS IN PERINATAL STATISTICS IN SA, 1985-2002

Figure 29.1: Percentage of teenage mothers among women giving birth in S.A.

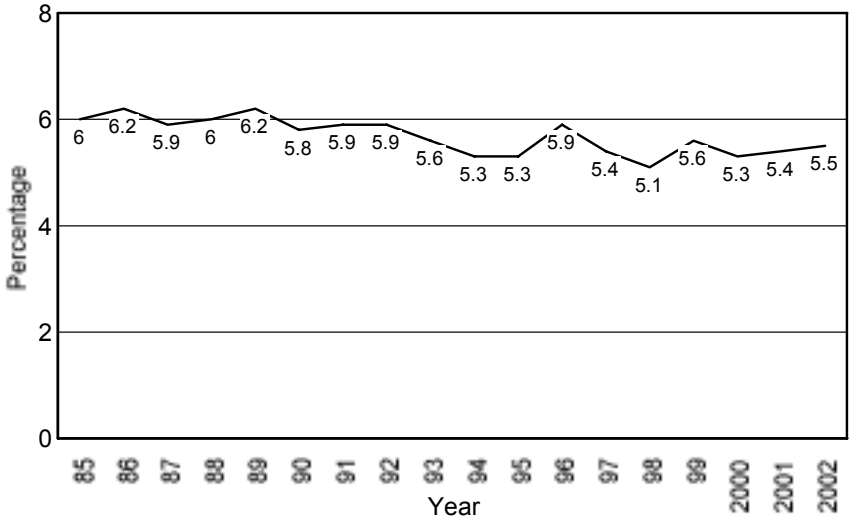


Figure 29.2: Percentage of mothers aged 35 years and over among women giving birth in S.A.

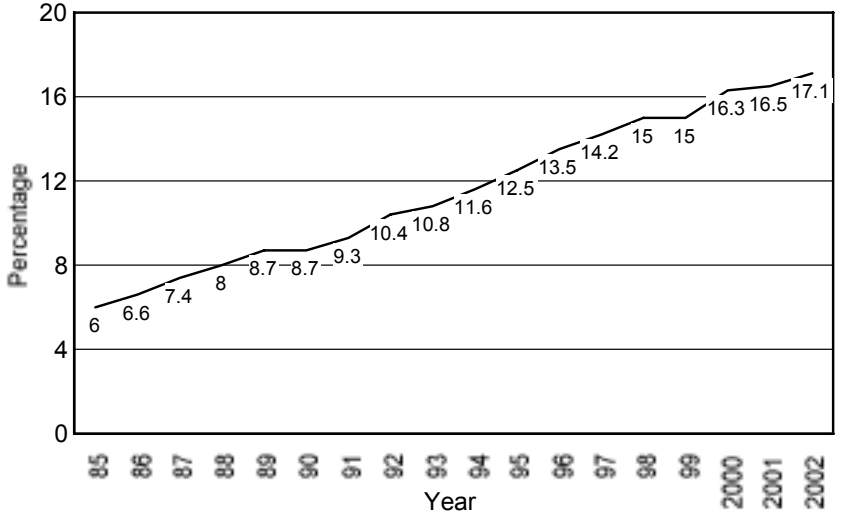


Figure 29.3: Percentage of primigravid women aged 30 years and over in S.A.

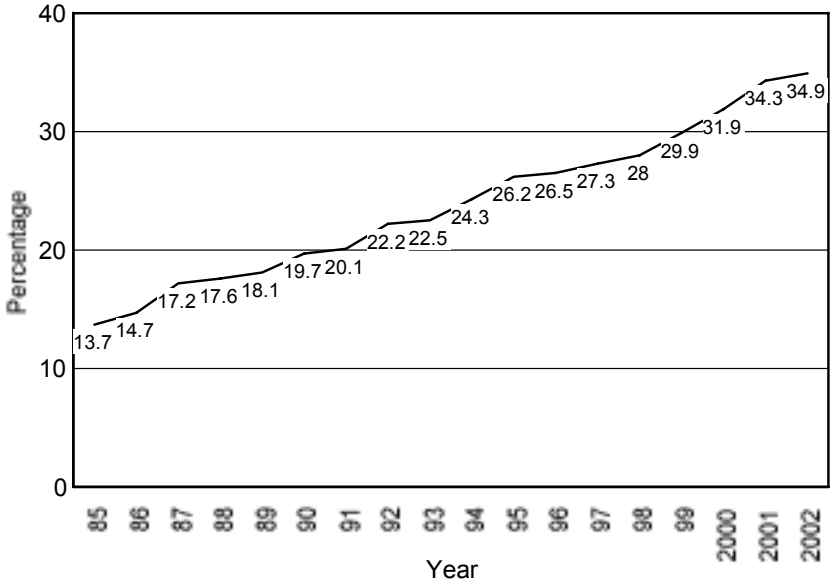


Figure 29.4: Percentage of confinements of Aboriginal women and Asian women in S.A.

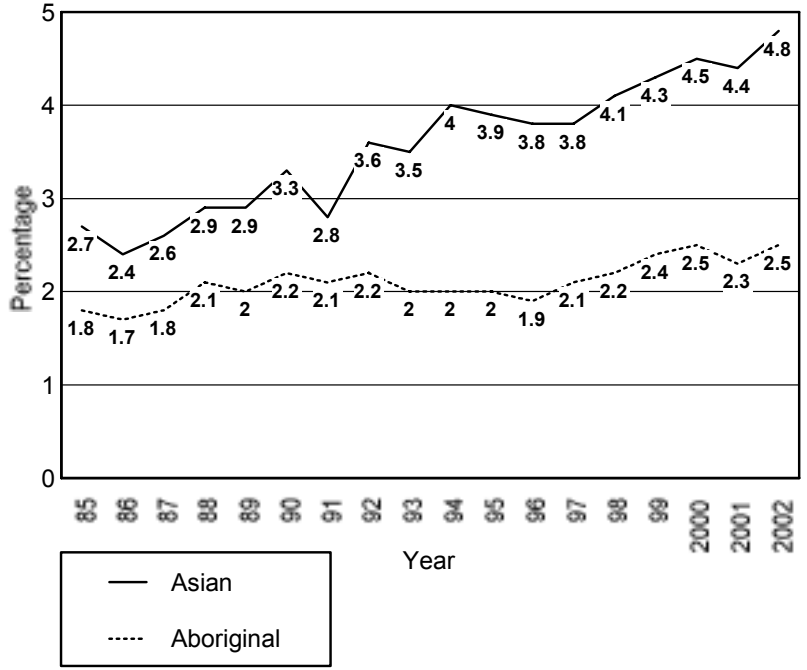


Figure 29.5: Percentage of mothers never married and with no defacto partner among women giving birth in S.A.

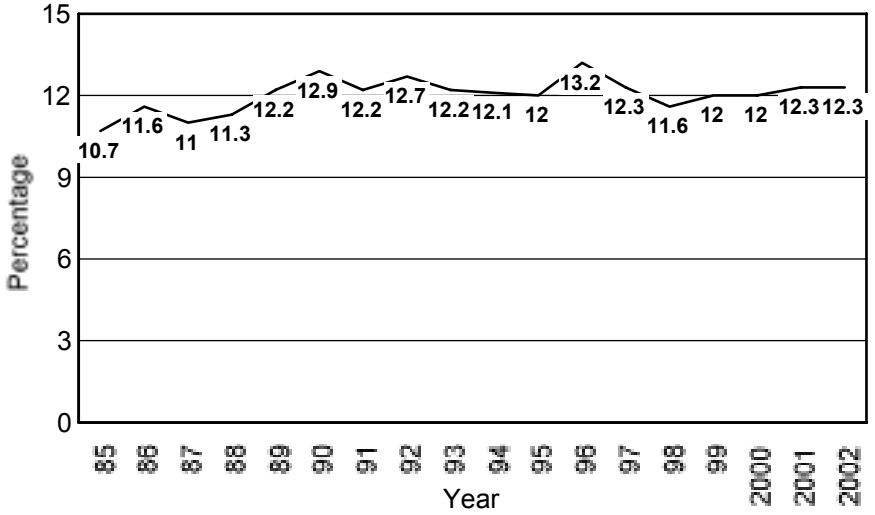


Figure 29.6: Percentage of multiple births among S.A. births

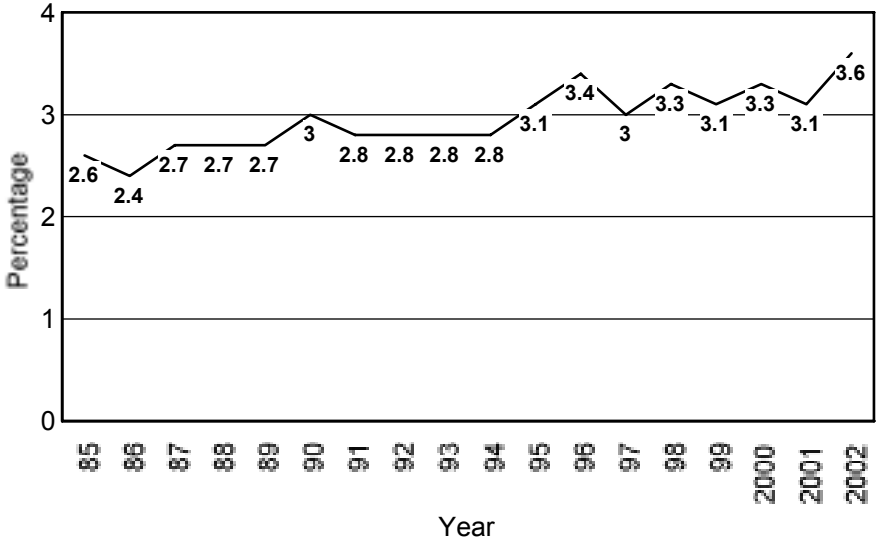


Figure 29.7: Percentage of low birthweight babies among S.A. births

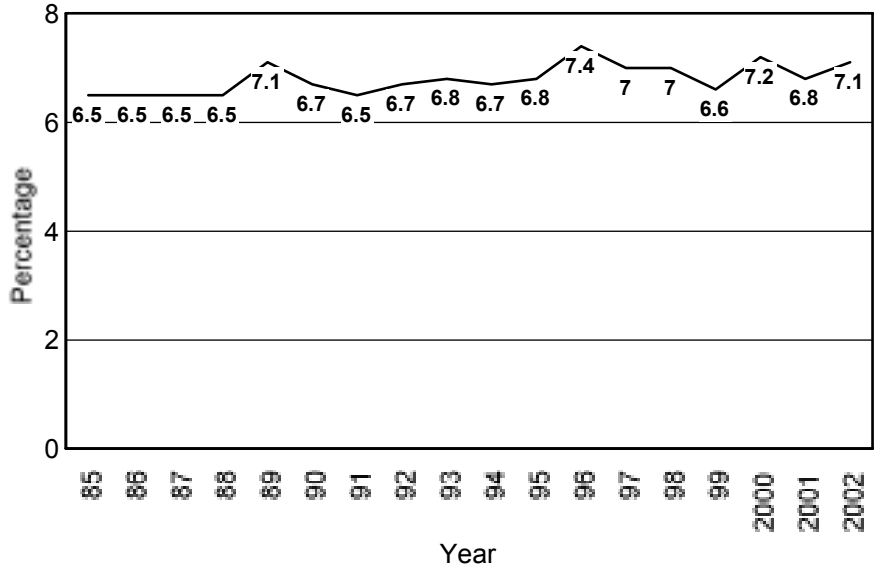
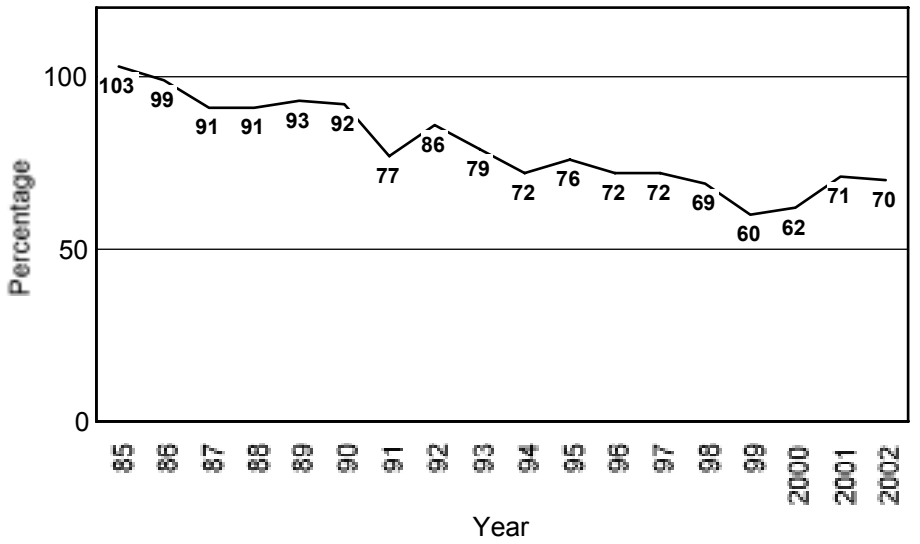


Figure 29.8: S.A. standardised perinatal mortality ratio



VII SUMMARY STATISTICS FOR 2002

These statistics refer to all births of at least 400g birthweight, or of at least 20 weeks gestation. Thirty-three babies of less than 400g birthweight have been included, as described on page 1.

1. Number of births

Reported number of births (from monthly notifications): 17745

Notified births with Supplementary Birth Records: 17745

Notified confinements with SBRs: 17421

Crude birth rate: 11.6 per 1000 population.

2. Place of birth

Planned home births : 47 (0.3% of births in the State)

One unplanned home birth, not booked at any hospital.

Hospital births:
Of hospital births, distribution by category of hospital:

Metropolitan teaching: 8798 (49.6% of State births)

Metropolitan private: 4958 (27.9% of State births)

Country: 3941 (22.2% of State births)

3. Sex

Males 9148, Females 8595, Indeterminate 2. Male: Female sex ratio = 1.06:1

4. Plurality and condition at birth

CONDITION AT BIRTH	PLURALITY			TOTAL
	Singleton	Twins	Triplets	
Livebirth	16993	618	12	17623
Stillbirth	108	14	0	122
TOTAL	**17101**	**632**	**12**	**17745**

5. Race of mother

RACE	NO OF CONFINEMENTS	%
Caucasian	15835	90.9
Aboriginal	443	2.5
Asian	832	4.8
Other	311	1.8
TOTAL	**17421**	**100.0**

6. Obstetric interventions in 17421 confinements

Induction of labour was performed in 5103 (29.3%) and labour was augmented in another 3563 (20.5%) confinements.

Forceps were utilised in 1020 (5.9%), ventouse in 1025 (5.9%) and episiotomy was performed in 2535 confinements (14.6%).

Caesarean section was performed in 5081 confinements (29.2%), of which 2195 (12.6%) were elective, and 2886 (16.6%) emergency operations.

7. Low birthweight (<2500g)

Number of singleton births of low birthweight =932 (5.4% of singleton births).

Number of multiple births of low birthweight =325 (50.5% of multiple births).

Number of all births of low birthweight =1257 (7.1% of all births).

8. Congenital Abnormalities

Births notified with congenital abnormalities : 426 (2.4 %).

9. Perinatal morality rate

BIRTHWEIGHT/ GESTATION		Stillbirth rate per 1000 births	Neonatal death rate per 1000 livebirths	Perinatal mortality rate per 1000 births
1	≥400g/20 weeks	6.9	3.1	9.9
2	≥500g/22 weeks (WHO National Statistics)	4.7	2.1	6.8
3	≥1000g/28 weeks if birthweight unavailable (WHO International/ Standard Statistics*)	3.2	0.8*	4.0*

* *Only neonatal deaths within the first 7 days of life are included.*

10. Terminations of Pregnancy

Total number of terminations notified : 5417

Abortion rate per 1000 women (15-44 years): 17.2

Total abortion rate per 1000 women (15-44 years): 537.5

Total first abortion rate per 1000 women (15-44 years): 329.0

Abortion proportion: 0.23

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5. Committee Appointed to Examine and Report on Abortions Notified in South Australia. *Thirty-third Annual Report - For the Year 2002*. Adelaide: Department of Human Services, 2003.
6. South Australian Health Commission Epidemiology Branch. *Risk factors for adverse perinatal outcome: determination from a perinatal statistics collection.* Adelaide: South Australian Health Commission, December 1986.
7. Mallett R, Knox E G. *Standardized perinatal mortality ratios: technique, utility and interpretation.* Community Med 1979; 1: 6-13.

PUBLICATIONS

The following is a list of publications from 1985 from the Pregnancy Outcome Unit or which utilised data from the Unit.

ANNUAL REPORTS

1. Pregnancy Outcome in South Australia (from 1981).
2. Maternal, Perinatal and Infant Mortality in South Australia. Annual Report of the Maternal, Perinatal & Infant Mortality Committee (from 1985).
3. Committee appointed to examine and report on abortions notified in South Australia (from 1985).
4. Pregnancy and Neonatal Care Bulletin (from 1983): for individual hospitals.

The Unit provides data to the South Australian Birth Defects Register at the Women's and Children's Hospital and the National Perinatal Statistics Unit in Sydney. The latter in turn provides congenital abnormality data to the International Clearinghouse for Birth Defects Monitoring Systems (currently in Rome). These reports are as follows:

1. The South Australian Birth Defects Register Annual Report (from 1986). Clinical Genetics Service, Women's and Children's Hospital, King William Road, North Adelaide, South Australia 5006. Telephone (08) 81616518.
2. Australia's Mothers and Babies (from 1991). AIHW National Perinatal Statistics Unit, Sydney Children's Hospital, Level 2, McNevin Dickson Building, Randwick Hospital Campus, Randwick NSW 2031. Telephone (02) 9382 1014 (website http://www.aihw.gov.au/npsu/).
3. Congenital Malformations Australia (from 1981). AIHW National Perinatal Statistics Unit.

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2002 SUPPLEMENTARY BIRTH RECORD

FOR COMPLETION BY MIDWIVES AND NEONATAL NURSES

APPENDIX 1

4 0 2 [ ][ ][ ][ ][ ][ ][ ]

Mother's name ..... Surname Initials

Child's surname (if different) .....

Mother's address .....

..... Postcode [ ][ ][ ][ ]

Personal information above this line is confidential SLA [ ] [ ][ ][ ][ ]

Hospital/Place of birth .....

Mother's Case Record Number .....

Plurality (1=single, 2=twin, 3=triplet, 4=quad) [ ]

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

MOTHER'S INFORMATION

1 Mother's date of birth [ ][ ] day [ ][ ] month [ ][ ] year

2 Race

1. Caucasian 2. Aboriginal 3. Asian
4. Torres Strait Islander (TSI)
5. Aboriginal & TSI 6. Other [ ]

3 Country of birth [ ][ ][ ][ ]

4 Type of patient [ ]

1. Hospital/Public 2. Private

5 Marital status

1. Never married 2. Married/De facto
3. Widowed 4. Divorced
5. Separated [ ]

OCCUPATION

6 Baby's father [ ][ ][ ][ ]

Baby's mother [ ][ ][ ][ ]

PREVIOUS PREGNANCY OUTCOMES

7 No. of previous pregnancies [ ][ ]

8 No. of previous *pregnancies* resulting in births ≥ 20 weeks (parity) [ ][ ]

9 Number of previous outcomes

	Singleton	Multiple
Livebirths, not neonatal deaths	[ ][ ]	[ ]
Livebirths, neonatal deaths	[ ][ ]	[ ]
Stillbirths	[ ][ ]	[ ]
Miscarriages	[ ][ ]	[ ]
Ectopic pregnancies	[ ][ ]	[ ]
Terminations of pregnancy	[ ][ ]	[ ]

10 Outcome of last pregnancy [ ]

11 Date of delivery/termination of last pregnancy [ ][ ] month [ ][ ] year

12 Method of delivery in last birth [ ]

0. No previous birth 1. Vaginal
2. Caesarean 9. Not known

13 No. of previous Caesareans [ ]

THIS PREGNANCY

14 Date of last menstrual period [ ][ ] day [ ][ ] month [ ][ ] year

15 Intended place of birth [ ]

1. Hospital 2. Birth centre
3. Home 4. Other (specify)
5. Not booked .....

16 Number of antenatal visits [ ][ ]

17 Type of antenatal care

1. ☐ No antenatal care
2. ☐ Hospital clinic
3. ☐ Obstetrician in private practice
4. ☐ General practitioner [ ]
5. ☐ Birth centre [ ]
6. ☐ Home birth midwife [ ]
7. ☐ Obstetrician/midwife (shared care) in private practice [ ]
8. ☐ GP/midwife (shared care)
9. ☐ Other (specify)
10. ☐ Not stated

18 Tobacco smoking status at first visit

1. Smoker
2. Quit in pregnancy before first visit
3. Non smoker [ ]
4. Unknown smoking status

19 Average no. of tobacco cigarettes smoked per day in 2nd half of pregnancy

☐ None
☐ No. per day = ...
☐ <1 (occasional) [ ][ ]
☐ Unknown no.

20 Medical conditions present in this pregnancy [ ][ ][ ][ ]

1. ☐ None
2. ☐ Anaemia
3. ☐ Urinary tract infection
4. ☐ Hypertension (pre-existing)
5. ☐ Diabetes (pre-existing)
6. ☐ Epilepsy
7. ☐ Asthma
8. ☐ Other (specify)

21 Obstetric complications [ ][ ][ ][ ]

1. ☐ None
2. ☐ Threatened miscarriage
3. ☐ APH - Abruption
4. ☐ APH - Placenta praevia
5. ☐ APH - Other & unknown cause
6. ☐ Pregnancy hypertension (all types)
7. ☐ Suspected IUGR
8. ☐ Gestational diabetes
9. ☐ Other (specify, including impaired glucose tolerance)

22 Date of admission prior to delivery [ ][ ] day [ ][ ] month [ ][ ] year

23 Procedures performed in this pregnancy

Tick if **Yes**	Tick if **Unknown**
1. ☐ MSAFP (NTD etc)	☐
2. ☐ Triple/Quadruple screen (Down's etc)	☐
3. ☐ Ultrasound examination	☐
4. ☐ Chorion villus sampling	☐
5. ☐ Amniocentesis	☐
6. ☐ Cordocentesis	☐
7. ☐ Other surgical procedures (specify)	

LABOUR AND DELIVERY

24 Onset of labour [ ]

1. Spontaneous
2. No labour (LSCS)
3. Induction (excluding augmentation) [ ]
Give **reason/s for induction** [ ]
(If postdates, state T+ ..... days)

25 If induction, or augmentation after spontaneous onset, specify method/s

1. ☐ ARM [ ]
2. ☐ Oxytocics [ ]
3. ☐ Prostaglandins [ ]
4. ☐ Other (specify) [ ]

26 Presentation prior to delivery [ ]

1. Vertex 2. Breech
3. Face 4. Brow
5. Other 6. Unknown

Please return top copy to Pregnancy Outcome Unit, PO Box 6, Rundle Mall, Adelaide SA 5000

27 Method of delivery

1. Normal spontaneous
2. Forceps [ ]
3. Assisted breech
4. LSCS (elective) [ ]
5. LSCS (emergency) [ ]
If LSCS state **reason/s** ..... [ ]

6. Ventouse 8. Breech spontaneous
7. Breech extraction 9. Unknown

28 Complications of labour, delivery and puerperium [ ][ ][ ][ ]

1. ☐ None
2. ☐ PPH (Primary) (600mls or more)
3. ☐ Fetal distress
4. ☐ Retained placenta
5. ☐ Prolonged labour (>18 hrs)
6. ☐ Cord prolapse
7. ☐ Wound infection
8. ☐ Failure to progress (specify)
9. ☐ Other (specify)

29 Perineal status after delivery

Tick tear, repair & episiotomy if all [ ]

1. ☐ Intact
2. ☐ 1st degree tear/vaginal graze
3. ☐ 2nd degree tear
4. ☐ 3rd degree tear
5. ☐ 4th degree tear
6. ☐ Repair of tear
7. ☐ Episiotomy
8. ☐ Other (specify) .....
9. ☐ Not stated

30 CTG performed during labour [ ]

1. None 2. External
3. Scalp clip

31 Fetal scalp pH taken during labour [ ]

1. No 2. Yes

32 Analgesia for labour

1. ☐ None [ ]
2. ☐ Nitrous oxide and oxygen [ ]
3. ☐ Narcotic (parenteral) [ ]
4. ☐ Epidural (lumbar/caudal) [ ]
5. ☐ Spinal [ ]
6. ☐ Other (specify) [ ]

33 Anaesthesia for delivery

1. ☐ None [ ]
2. ☐ Local anaesthesia to perineum [ ]
3. ☐ Pudendal [ ]
4. ☐ Epidural (lumbar/caudal) [ ]
5. ☐ Spinal [ ]
6. ☐ General anaesthesia [ ]
7. ☐ Other (specify) [ ]

34 Mother's outcome for birth hospital/home birth

1. ☐ Discharged 2. ☐ Transferred 3. ☐ Died

Transferred to [ ][ ][ ][ ]

on [ ][ ] day [ ][ ] month [ ][ ] year

35 MOTHER'S FINAL DISCHARGE/ DEATH

Date [ ][ ] day [ ][ ] month [ ][ ] year

BABY DETAILS

1 Case record number [ ][ ][ ][ ][ ][ ][ ][ ]

2 Place of birth [ ]

1. Hospital 2. BBA
3. Domicilary 4. Birthing unit/centre

3 Date of delivery [ ][ ] day [ ][ ] month [ ][ ] year

4 Hour of birth (24 hour clock) [ ][ ][ ][ ]

5 Sex [ ]

1. Male 2. Female 3. Indeterminate

6 Birthweight (grams) [ ][ ][ ][ ]

7 Gestation at birth (best clinical estimate in weeks) [ ][ ]

CONDITION AT BIRTH

8 Apgar Score 1 minute [ ][ ]

5 minute [ ][ ]

9 Time to establish regular breathing (to nearest minute) [ ][ ]

10 Resuscitation at delivery [ ]

1. ☐ None
2. ☐ Aspiration
3. ☐ O_2
4. ☐ IPPV - bag & mask
5. ☐ IPPV - intubation
6. ☐ Narcotic antagonist
7. ☐ Sodium bicarbonate
8. ☐ Ext. cardiac massage
9. ☐ Other (specify)

11 Condition occurring during birth [ ][ ][ ][ ]

1. ☐ None
2. ☐ Fracture
3. ☐ Dislocation
4. ☐ Nerve injury
5. ☐ Other (specify)

12 Congenital abnormalities

1. ☐ Nil apparent 2. ☐ Yes (specify)

13 Treatment given [ ]

1. ☐ None of the treatments below
2. ☐ Oxygen therapy > 4 hours
3. ☐ Phototherapy for jaundice
4. ☐ Gavage feeding more than once
5. ☐ Any intravenous therapy

14 Nursery care required

1. ☐ Level 1 only
2. ☐ Special nursery (Level 2)
No. of days [ ][ ][ ]
3. ☐ Neonatal Intensive Care Unit (NICU) - FMC/WCH (Level 3)
No. of days [ ][ ][ ]
4. ☐ Paediatric Intensive Care Unit (PICU) - WCH
No. of days [ ][ ][ ]

15 Was transfer to NICU/PICU for a congenital abnormality?

☐ Yes ☐ No

OUTCOME OF BABY

16 Outcome of baby [ ]

1. Fetal death
2. Discharged
3. In hospital at 28 days
4. Neonatal death

17 Baby transferred to [ ][ ][ ][ ]

on [ ][ ] day [ ][ ] month [ ][ ] year

18 Date of final discharge (or death)

[ ][ ] day [ ][ ] month [ ][ ] year

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

CONGENITAL ABNORMALITY FORM

APPENDIX 2

ACC NO. 4 | | | | | | | |

BABY'S SURNAME .....

BABY'S FIRST NAME .....

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

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

HOSPITAL .....

ADDRESS OF MOTHER .....

.....

FAMILY HISTORY OF CONGENITAL ABNORMALITY *Yes No Not known*

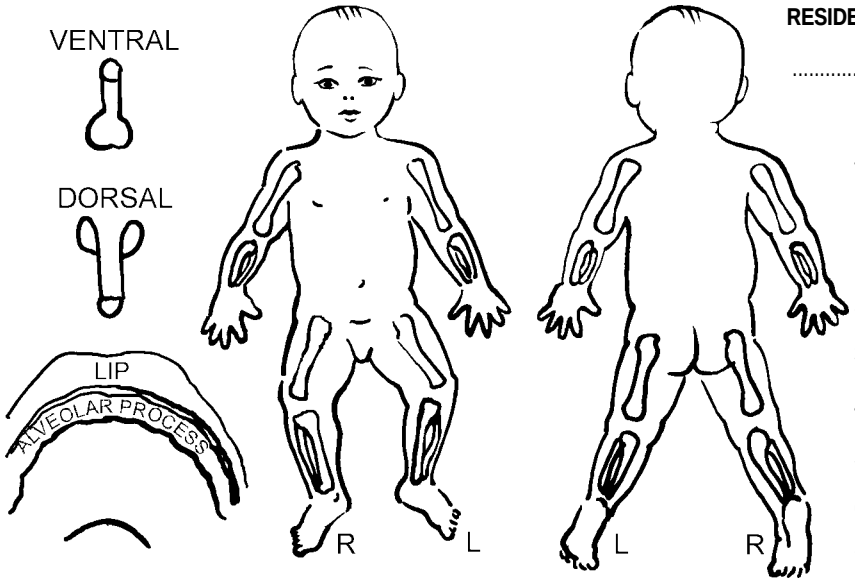
1. Parents *(specify)* ..... ☐ ☐ ☐

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

(specify) .....

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

.....



RESIDENCE OF MOTHER DURING THE FIRST 16 WEEKS OF PREGNANCY

..... | | | | |

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

Yes If yes, details

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

Comments .....

.....

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

Office use only

1 ..... | | | | | |
2 ..... | | | | | |
3 ..... | | | | | |
4 ..... | | | | | |
5 ..... | | | | | |
6 ..... | | | | | |
7 ..... | | | | | |
8 ..... | | | | | |
9 ..... | | | | | |
10 ..... | | | | | |
SPECIFIC SYNDROME/S (if known) ..... | | | | | |
..... | | | | | |

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

(specify) .....

ADDITIONAL INFORMATION (eg drinking water supply/local epidemics)

.....

PRENATAL DIAGNOSIS

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

Comments .....

.....

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

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

APPENDIX 3 : DEFINITIONS

Livebirth: The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Crude birth rate = $\frac{\text{Number of livebirths in any year}}{\text{Average population in that year}}$ X 1000

Neonatal death: Death of a liveborn infant within 28 days of birth.

Neonatal death rate = $\frac{\text{No of neonatal deaths in any year}}{\text{No of livebirths in that year}}$ X 1000

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

Early fetal death: Death in a fetus of less than 400g birthweight, or of less than 20 weeks gestation. A miscarriage is a spontaneous early fetal death.

Late fetal death or stillbirth: Death in a fetus of at least 400g birthweight, or of at least 20 weeks gestation.

Late fetal death rate or stillbirth rate

= $\frac{\text{No of late fetal deaths or stillbirths in any year}}{\text{Number of livebirths and stillbirths in that year}}$ X 1000

Perinatal death: Includes late fetal death (stillbirth) and neonatal death.

Perinatal mortality rate (PMR)

= $\frac{\text{No of stillbirths and neonatal deaths}}{\text{No of stillbirths and livebirths}}$ X 1000

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

For national statistics, the rate refers to all births of at least 500g birthweight, or when birthweight is unavailable, of at least 22 weeks gestation (as recommended by WHO).

For international comparisons, the rate refers to all births of at least 1000 g birthweight or, when birthweight is unavailable, of at least 28 weeks gestation and neonatal deaths occurring within seven days of birth (as recommended by WHO).

Race

1. **Caucasian:** individuals of European descent.

2. **Aboriginal**: this includes part-Aboriginals as well as full blood Aboriginals. An Aboriginal is a person of Aboriginal descent who identifies as an Aboriginal and is accepted as such by the community in which he or she lives.

3. **Asian:** (exclude Asia Minor) - In this category, include women originating from all Asian countries, including the Indian subcontinent (India, Bangladesh, Pakistan, Nepal, Sri Lanka), who were formerly listed as 'Other' race.

4. **Torres Strait Islander (TSI):** A Torres Strait Islander is a person of Torres Strait Islander descent who identifies as a Torres Strait Islander and is accepted as such by the community in which he or she lives.

5. **Aboriginal & TSI:** persons of both Aboriginal **and** Torres Strait Islander descent.

6. **Other:** Races other than (1) - (5). Include women from the Middle East and Africa.

Guidelines for use regarding Indigenous Status - categories (2), (4) and (5).

There are three components to the definition:

- descent
- self identification
- community acceptance

It is not possible to collect the three components of the definition in a single question. The Australian Bureau of Statistics (ABS) proposes that the focus of a single question should be the descent, the first component of the definition. The ABS therefore proposes the use of the following alternative questions, depending on whether the person is present or not.

Where the person is present

"Are you of Aboriginal or Torres Strait Islander origin?";
or
where the person is not present and someone who knows the person well responds for him/her

"Is the person of Aboriginal or Torres Strait Islander origin?"

If the response is "Yes", then clarify whether the person is of Aboriginal origin (2), Torres Strait Islander origin (4) or both Aboriginal ***and*** Torres Strait Islander origin (5).

Self reporting of descent is not equivalent to self reporting of identity but because of the absence of a second 'identity' question some respondents will interpret the 'origin' question to mean both descent and identification. What identification in the context of the variable Indigenous Status should measure is an individual's self assessed historical and cultural affiliation.

Confinements: The number of women giving birth

Primigravida: A woman pregnant for the first time

Multigravida: A woman who has been pregnant more than once

Parity: the total number of previous pregnancies resulting in livebirths or stillbirths.

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

Caesarean section: Delivery of a child by an abdominal operation.

Elective caesarean section: One which takes place as a planned procedure before the spontaneous onset of labour.

Emergency caesarean section: One which is undertaken for a complication:

(a) before the onset of labour or

(b) during labour, whether that labour is of spontaneous onset or following induction of labour.

Gestational age: The duration of pregnancy in completed weeks from the first day of the last normal menstrual period.

Pre-term: less than 37 completed weeks gestation.

Birthweight: The first weight of a fetus or newborn obtained after birth. This is preferably measured within the first hour of life before significant post-natal weight loss has occurred.

Low birthweight: Birthweight of less than 2500g.

Very low birthweight: Birthweight of less than 1500g.

Apgar score: A numerical scoring system applied after birth (usually at 1 minute and again at 5 minutes) to evaluate the condition of the baby, as specified below:

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

Congenital abnormality: Any defect probably of prenatal origin; thus structural, chromosomal and biochemical defects are included. An exclusion list of isolated minor abnormalities is provided by the Unit. Abnormalities are classified as major if they are either lethal or significantly affect the individual's function or appearance.

Termination of pregnancy: Termination performed by a medical practitioner in a prescribed hospital in South Australia, on specified indications, up to the 28th week of gestation, under the Criminal Law Consolidation (Medical Termination of Pregnancy) Regulations 1996. Aborted fetuses of at least 400g birthweight or 20 weeks gestation are classified as late fetal deaths and should be included in perinatal mortality statistics. Those of shorter gestation (the majority) are early fetal deaths.

Abortion rate

$$= \frac{\text{Number of induced abortions in a group of women over a certain period of time}}{\text{Average population of same group in the same period}} \text{ x } 1000$$

The abortion rate per 1000 women in the reproductive age group 15-44 years has been calculated in this report using as the numerator all abortions; the denominator used has been the estimated resident population for women aged 15-44 years in that year.

Abortion proportion = $\dfrac{\text{Abortions}}{\text{Abortions + births}}$

It is more usual to include only livebirths in the denominator. This is often

called the **abortion ratio**, which is strictly $\dfrac{\text{Abortion}}{\text{Livebirths}}$

Total abortion rate = the sum of the 5 year age-specific abortion rates multiplied by 5. This represents the number of abortions 1000 women would have during their lifetime if they experienced the rates of the year shown.

Maternal death: is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management (World Health Organisation).

As an extension of the W.H.O. definition, and as is the practice in Australia, accidental and incidental deaths occurring in pregnant women are included by the Maternal, Perinatal and Infant Mortality Committee in its definition of maternal death.

Maternal deaths in Australia are divided into three groups:

1. Direct obstetric deaths: those resulting from obstetric complications of the pregnant state (pregnancy, labour and puerperium) from interventions, omissions, inappropriate treatment, or from a chain of events resulting from any of the above.

2. Indirect obstetric deaths: those resulting from pre-existing disease or disease that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by physiological effects of pregnancy.

3. Incidental deaths in pregnancy: examples of incidental deaths are deaths from drowning and road accidents, where the pregnancy is unlikely to have contributed significantly to the death, although it may be possible to postulate a remote association.