

BIRTHS IN WESTERN AUSTRALIA IN 1980  
THE WESTERN AUSTRALIAN MIDWIVES' REPORT

Public Health Department,  
Perth, Western Australia

December, 1982

BIRTHS IN WESTERN AUSTRALIA IN 1980

THE WESTERN AUSTRALIAN MIDWIVES' REPORT

Errata

- p. 4 Line 4 under table, frontispiece should read page 33.
- p. 5 Table 29 - 1978 Aboriginal Stillbirths 11 should read 11\*.  
Notes under table 2a should include \*Believed to be error,  
verification of race not possible for this year.
- P. 7 Last line - table 2 should read Table 2a.
- p. 12 Table 6 - <15 should read  $\leq 15$
- p. 21 Table 10 - "% of column" should appear below column heading.
- p. 25 Note 1 below Table 13 should read "% of all women with complications"
- P. 26 Note 1 below Table 14 should read "% of all women with complications"
- p. 30 Figure 49 - Refer figure 4b for "grid labels".

## CONTENTS

	Page
INTRODUCTION	1
DEFINITIONS	2
METHODOLOGICAL NOTE	3
RESULTS	3
Livebirths, Stillbirths, Deaths and Low Birth Weight	4
Pregnancy, Labour and Delivery	18
The Baby	27
ACKNOWLEDGEMENTS	32
BIRTHS 1960-1980	33
MAP OF WESTERN AUSTRALIA	34

BIRTHS IN WESTERN AUSTRALIA IN 1980

THE WESTERN AUSTRALIAN MIDWIVES' REPORT

Fiona Stanley, Joan Bedford and Marlene M. Lugg

INTRODUCTION

This report is an account of the 20,720 births which occurred in Western Australia in 1980 and which were notified to the Commissioner of Public Health by Midwives.

Over 95% of confinements in Western Australia take place in hospitals. Midwives conducting confinements are required to complete notifications on the confinements of any women giving birth to an infant or foetus which weighs at least 400 gms and/or which has a gestational age of at least 20 weeks, whether in hospital or not. Notification is achieved by submitting a completed "Midwives Notification of Case Attended" Form 2 for each baby. This notification enables mothers to be introduced to and offered the services of the Community and Child Health Services Branch of the Public Health Department and also provides statistical information which can assist in the planning and evaluation of midwifery and neo-natal services in the State.

The report provides a summary of these notifications. A few tables have been selected from the large number produced, because of their special interest to Midwives and to provide you with a report of your years' work. A larger report of standard tabulations is also being prepared for those interested in delving further into aspects of the data. Any specific tables can also be obtained by request from Statistics Branch, Public Health Department, Beaufort Street, Perth.

DEFINITIONS

Livebirth	is the complete expulsion or extraction from its mother of a product of conception, irrespective of duration of pregnancy, which after separation breathes or shows other signs of life.
Stillbirth (foetal death)	is the complete expulsion or extraction from its mother of a product of conception of at least 20 weeks gestation or 400 gm in weight, which did not breathe after birth or show any other sign of life.
Neonatal Death	is the death of a child, born alive, within 28 days of birth.
Perinatal Death	is a stillbirth or neonatal death.
Post-neonatal Death	is the death of a child, born alive, which occurs between 28 and 365 days of age.
Infant death	is the death of a child, born alive, within its first year of life.
Stillbirth rate	number of stillbirths per thousand total (live and still) births
Neonatal death rate	is the number of neonatal deaths per 1,000 live births in a year.
Perinatal Death rate	is the number of stillbirths and neonatal deaths per 1,000 live and stillbirths in a year.
Infant death rate	is the number of infant deaths per 1,000 live births in a year.
Low birthweight	a first weight of the foetus or newborn (usually obtained within the first hour) which is below 2500 gms.

Maternal Age is the age of mother at parturition.

Maternal Parity (previous issue) is the total number of live and stillbirths of the mother, prior to the parturition under consideration.

METHODOLOGICAL NOTE

All data reported in the tables are from Midwives' forms. In addition, stillbirths and infant deaths were made available by the Registrar General to check stillbirths recorded by Midwives (both sources agreed), and to provide stillbirth and infant death rates for your interest.

Parents are also required by law to register a birth with the Registrar General. This birth registration system is different from the Midwives' Notification system.

All tables exclude multiple births unless specified.

RESULTS are divided into 3 sections :-

- I Livebirths, Stillbirths, Deaths and Low Birthweight
- II Pregnancy, Labour and Delivery
- III The Baby.

I. LIVEBIRTHS, STILLBIRTHS, DEATHS AND LOW BIRTHWEIGHT.

TABLE 1  
LIVEBIRTHS AND STILLBIRTHS BY PLURALITY AND RACE  
WESTERN AUSTRALIA - 1980\*

	CAUCASIAN	ABORIGINAL	OTHER RACE	TOTAL
Singleton :				
- Live	18419	1006	719	20144
- Still	156	12	1	169
Multiple :				
- Live	366	18	6	390
- Still	15	2	0	17
TOTAL :				
- Live	18785	1024	725	20534
- Still	171	14	1	186
- All	18956	1038	726	20720

Note:

The 20720 births (Table 1) resulted from 20516 confinements which were notified and which occurred in Western Australia in 1980. The number of births was similar to previous recent years (see figure 1 frontis piece) and produced a Crude Birth Rate in 1980 of 16.3/1000 compared to 16.7/1000 in 1979. The small annual fall in the Crude Birth Rate, a trend begun in 1972 continued (figure 2) and was similar to the trend for Australia. The Australian Crude Birth Rate was 15.4/1000 in 1980.<sup>1</sup> There were 10407 male and 9887 female births, of which 73 and 93 respectively were stillborn.

<sup>1</sup> Australian Bureau of Statistics.

\* This Table contains 16 extra singleton livebirths which were added in (late notifications). They have not been included in subsequent Tables.

TABLE 2a.

STILLBIRTHS, NEONATAL AND PERINATAL DEATHS BY RACE

WESTERN AUSTRALIA - 1976-1980

Year of Birth	Stillbirths				Neonatal Deaths				Perinatal Deaths			
	Caucasian		Aboriginal		Caucasian		Aboriginal		Caucasian		Aboriginal	
	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>1</sup>	No.	Rate <sup>1</sup>
1976	207	11.0	20	19.3	157	8.4	19	18.7	364	19.3	39	37.7
1977	174	9.2	18	18.0	157	8.4	18	18.3	331	17.5	36	35.9
1978	176	9.3	11	10.2	136	7.3	19	17.8	312	16.5	30	27.9
1979	158	8.3	15	14.2	134	7.1	11	10.4	292	15.4	26	24.6
1980	171	9.0	14	13.5	107	5.5	21	20.5	278	14.1	35	33.7

Sources: Midwives' Notification System.  
 Registrar General's Death Certificates.  
 Community & Child Health Services' Client Index.

<sup>1</sup>Rates per 1,000 total births

<sup>2</sup>Rates per 1,000 livebirths

Multiple births are included in this Table.

Note - Caucasian Rates:

Steady falls occurred in both components of perinatal mortality (i.e. stillbirths and neonatal deaths) amongst caucasian infants between 1976 and 1980. The caucasian stillbirth rate of 9 and neonatal death rate of 5.5 compares favourably internationally. It must be remembered that many countries still only report stillbirths over 28 weeks, whereas the Western Australian rates include all those over 20 weeks.

Note - Aboriginal Rates:

The Aboriginal stillbirth rates have also fallen and the 1980 rate of 13.5 is the lowest recorded for any Aboriginal population in Australia.



Aboriginal neonatal death rates were high and have showed no fall over time. This kept the Aboriginal perinatal mortality rate high compared with that for Caucasians. Some of this high rate is due to the higher proportion of low birthweight babies amongst Aboriginal infants.

TABLE 2b.

POSTNEONATAL AND TOTAL INFANT DEATHS BY RACE

WESTERN AUSTRALIA - 1976-1980

Year of Birth	Postneonatal Deaths				Infant Deaths			
	Caucasian		Aboriginal		Caucasian		Aboriginal	
	No.	Rate	No.	Rate <sup>1</sup>	No.	Rate	No.	Rate
1976	70	3.8	27	26.8	227	12.2	46	45.6
1977	64	3.4	12	12.1	221	11.8	36	29.6
1978	65	3.5	10	9.4	201	10.7	29	27.5
1979	59	3.2	14	13.4	193	10.3	25	24.0
1980	55	2.8	11	10.7	162	8.3	32	31.3

<sup>1</sup>Rates per 1,000 livebirths.

Multiple births are included in this Table.

Note:

Infant and postneonatal deaths (28 day to 1 year deaths) are included for interest. Both rates are falling steadily for both Aboriginal and Caucasian infants.

The fall in Aboriginal postneonatal deaths has contributed most to the fall in Aboriginal infant mortality, as the neonatal death rate (shown in Table 2) remained high.

TABLE 3

LIVE AND STILLBIRTHS BY STATISTICAL DIVISION OF RESIDENCE AND RACE

1980 SINGLETON AND MULTIPLE BIRTHS (BIRTHWEIGHT ≥ 500 GMS)<sup>1</sup>

Statistical Division of Residence	Caucasian			Aboriginal			Other Race		Total		
	Live	Still	Rate	Live	Still	Rate	Live	Still	Live	Still	Rate
Metropolitan	12853	95	7.3	216	1	-	528	1	13579	97	7.1
South West	1544	11	7.1	48	1	-	23	0	1615	12	7.4
Lower Great Southern	733	11	14.8	38	1	-	15	0	786	12	15.0
Upper Great Southern	444	2	-	36	0	-	6	0	486	2	-
Midlands	862	4	-	59	1	-	9	0	930	5	5.3
South Eastern	685	9	13.0	99	0	-	16	0	800	9	11.1
Central	776	3	-	152	2	-	28	0	956	5	5.2
Pilbara	712	5	7.0	101	0	-	91	0	904	5	5.5
Kimberley	134	0	-	275	6	21.4	7	0	416	6	14.2
W.A. unspecified	23	5	-	0	0	-	2	0	25	5	-
Outside W.A.	14	0	-	0	0	-	0	0	14	0	-
TOTAL :	18762	145	7.7	1024	12	11.6	725	1	20511	158	7.6

<sup>1</sup>Excluded are - 7 liveborn and 26 stillborn Caucasians, and  
2 stillborn Aboriginals weighing less than 500 Gm.

Rates (per 1,000 births) have only been calculated for 5 or more deaths.

Note:

Three areas had higher than average stillbirth rates. They were - lower Great Southern, South Eastern, and Kimberley Divisions. The high rate in the Kimberley was due entirely to an excess of Aboriginal stillbirths. Although these rates were based on small numbers, it will be important to continue to monitor them.

TABLE 4

LIVEBIRTHS AND STILLBIRTHS BY RACE AND BIRTHWEIGHT  
SINGLETONS

1980

(a) Births

Birthweight (gms)	Caucasian		Aboriginal		Other		Total	
	Live	Still	Live	Still	Live	Still	Live	Still
<500	4	24	0	2	0	0	4	26
500-999	47	40	1	2	1	0	49	42
1000-1499	81	28	7	0	3	0	91	28
1500-1999	116	15	27	1	5	0	148	16
2000-2499	526	11	79	0	24	0	629	11
2500+	17622	36	890	6	686	1	19198	43
Unknown	7	2	2	1	0	0	9	3
TOTAL :	18403	156	1006	12	719	1	20128	169

(b) Percentage of Births

Birthweight (gms)	Caucasian		Aboriginal		Other		Total		Rate <sup>1</sup>
	Live	Still	Live	Still	Live	Still	Live	Still	
<500	0.02	15.4	0		0		0.02	15.4	866.7
500-	0.26	25.6	0.10	16.7	0.14	0	0.24	24.8	461.5
1000-	0.44	17.9	0.70	16.7	0.42	0	0.45	16.6	235.3
1500-	0.63	9.6	2.68	0	0.70	0	0.74	9.5	97.6
2000-	2.86	7.1	7.85	8.3	3.34	0	3.13	6.5	17.2
2500+	95.76	23.1	88.47	50.0	95.41	(1)	95.38	25.4	2.2
Unknown	0.04	1.3	0.20	8.3	0	0	0.04	1.8	-
TOTAL :	100.00	100.0	100.00	100.0	100.0		100.00	100.0	8.3

<sup>1</sup> per 1,000 total births in each birthweight category.

Note: Birthweight Distributions

These two Tables show the differences in birthweight distributions between livebirths and stillbirths, and how these differ between Caucasian and Aboriginal races. The birthweight distribution for Aboriginal infants

shifted downwards compared with that for Caucasian and other races, i.e. there were more Aboriginal infants of low birthweight.

This makes their improved stillbirth rate even more impressive, and may well be the reason why their neonatal mortality rates are not falling.

Note:

Stillbirth rates show a marked association with low birthweight as expected (Table 4b.). Less than 5% of births occur at low birthweights, but over 70% of stillbirths are under 2500g.

TABLE 5

PERCENTAGE OF SINGLETON LIVEBIRTHS WHICH WERE OF LOW BIRTHWEIGHT<sup>1</sup> BY RACE

1980

	No.	%
Caucasian	774	4.2
Aboriginal	114	11.4
Other Race	33	4.6
TOTAL:	921	4.6

<sup>1</sup>Low birthweight is less than 2500g.

Note:

The percentages of liveborn singletons of low birthweight were low for caucasian and other races when compared with other developed countries (for example the percent of low birthweights in the United Kingdom is around 7%). This low rate contributes to our low perinatal mortality rate. The percentage for Aborigines is much higher, possibly reflecting poor social conditions.

Note:

Of the 390 multiple livebirths in 1980 (data not shown), 45.4% were of low birthweight. Of the 17 multiple stillbirths in 1980, 88.4% were of low birthweight. The high proportion of multiples who are of low birthweight account for their much higher stillbirth and neonatal mortality rates than singletons.

TABLE 6

PERCENTAGE OF SINGLETON BIRTHS WHICH WERE OF LOW BIRTHWEIGHT<sup>1</sup> BY MATERNAL AGE AND PARITY

1980

Maternal Age (yrs)	% Births (A)	PARITY 0		PARITY 1-2		PARITY 3-5		PARITY 6+		TOTAL No. of Births	births % LBW
		No. of Births	% LBW	No. of Births	% LBW	No. of Births	% LBW	No. of Births	% LBW		
<15	0.4	66	9.1	5	40.0	1	0.0	0	-	72	11.1
16-19	7.9	1283	8.2	322	8.4	4	25.0	0	-	1609	8.3
20-35	88.3	6445	5.6	9741	4.0	1659	5.9	63	6.3	17908	4.8
36+	3.3	90	12.2	302	5.3	226	6.6	59	11.9	677	7.2
Unknown	0.0	4	0.0	13	0.0	2	0.0	0	-	19	-
TOTAL		7888	6.1	10383	4.2	1892	6.0	122	9.0	20285	5.1
(B) % births	100.0	38.9		51.2		9.3		0.6		100.0	

<sup>1</sup>Low birthweight is less than 2500g.

12 babies whose weights were not recorded are excluded.

Note:

This Table describes the risk of low birthweight by maternal age and parity groups. It also gives the percentage of births in each of the maternal age (vertical column A) and maternal parity (horizontal row B) groups.

Only 0.4% (72) of mothers were less than 16 years of age at the time of the birth, but they had high rates of low birthweight, especially the very small number who had had a previous child.

The majority of mothers were aged between 20-35 years and having their second or third child. They had the lowest risk of low

birthweight (4.0%). The risk of low birthweight rose in parity and age groups outside this group. Mothers over 35 years and having their sixth child are at high risk of low birthweight (11.9%), although only 59 mothers were in that category in 1980.

This Table helps to categorise mothers at risk from characteristics known in early pregnancy.



TABLE 7

LIVE AND STILL SINGLETON BIRTHS BY MATERNAL AGE,  
MARITAL STATUS AND RACE

1980

(a) Numbers

Maternal Age (years)	Caucasian				Aboriginal				Other			
	Not Married <sup>1</sup>		Married <sup>2</sup>		Not Married		Married		Not Married		Married	
	LB	SB	LB	SB	LB	SB	LB	SB	LB	SB	LB	SB
≤15	29	2	3	0	34	1	2	1	0	0	0	0
16-19	512	5	744	7	202	3	113	0	7	0	15	1
20-35	907	11	15592	118	190	3	431	3	20	0	634	0
36+	26	0	564	11	9	0	23	1	1	0	42	0
Unknown	2	0	17	0	0	0	0	0	0	0	0	0
TOTAL:	1476	18	16920	136	435	7	569	4	28	0	691	1

<sup>1</sup>Includes single and other, i.e. divorced, separated.

<sup>2</sup>Includes stable de facto

LB = livebirth      SB = stillbirth

(b) Still birth Rates per 1,000 Total Births

Maternal Age (years)	Caucasian		Aboriginal		Other
	Not Married	Married	Not Married	Married	
≤15	(64.5)	0	(28.6)	(333.3)	Numbers of SB too small to calculate rates.
16-19	9.7	9.3	14.6	0	
20-35	12.0	7.5	15.5	(6.9)	
36+	0	19.5	0	(41.7)	
Unknown					
TOTAL:	12.0	8.0	15.8	7.0	

Rates in brackets are based on less than 5 SB.

Note:

Over half of the very young (≤15years) mothers were Aboriginal.

A much higher proportion of not married mothers were also Aboriginal. Very young and unmarried mothers had high stillbirth

rates. This Table helps to categorise high risk mothers from information known about them early in pregnancy.

TABLE 8

SINGLETON LIVE AND STILLBIRTHS BY BIRTHWEIGHT, MARITAL STATUS AND RACE

1980

(a) Numbers

Marital Status	Caucasian		Aboriginal				Others					
	Birthweight (gms)											
	< 2500		≥ 2500		< 2500		≥ 2500					
	LB	SB	LB	SB	LB	SB	LB	SB	LB	SB		
Not Married	120	15	1356	3	53	4	381	4	2	0	26	0
Married	604	103	16266	33	61	1	508	3	31	0	660	1
TOTAL:	774	118	17622	36	114	5	889	7	33	0	686	1

(b) Rates Singleton Stillbirths - 1980

Marital Status	Caucasian		Aboriginal		Other	
	< 2500	≥ 2500	< 2500	≥ 2500	< 2500	≥ 2500
Not Married	111.1	(2.2)	(70.2)	(10.4)	Numbers of SB too small to calculate rates.	
Married	136.1	2.0	16.1	(5.9)		
TOTAL:	132.3	2.0	40.3	7.8		

Rates with brackets were based on less than 5 SB.

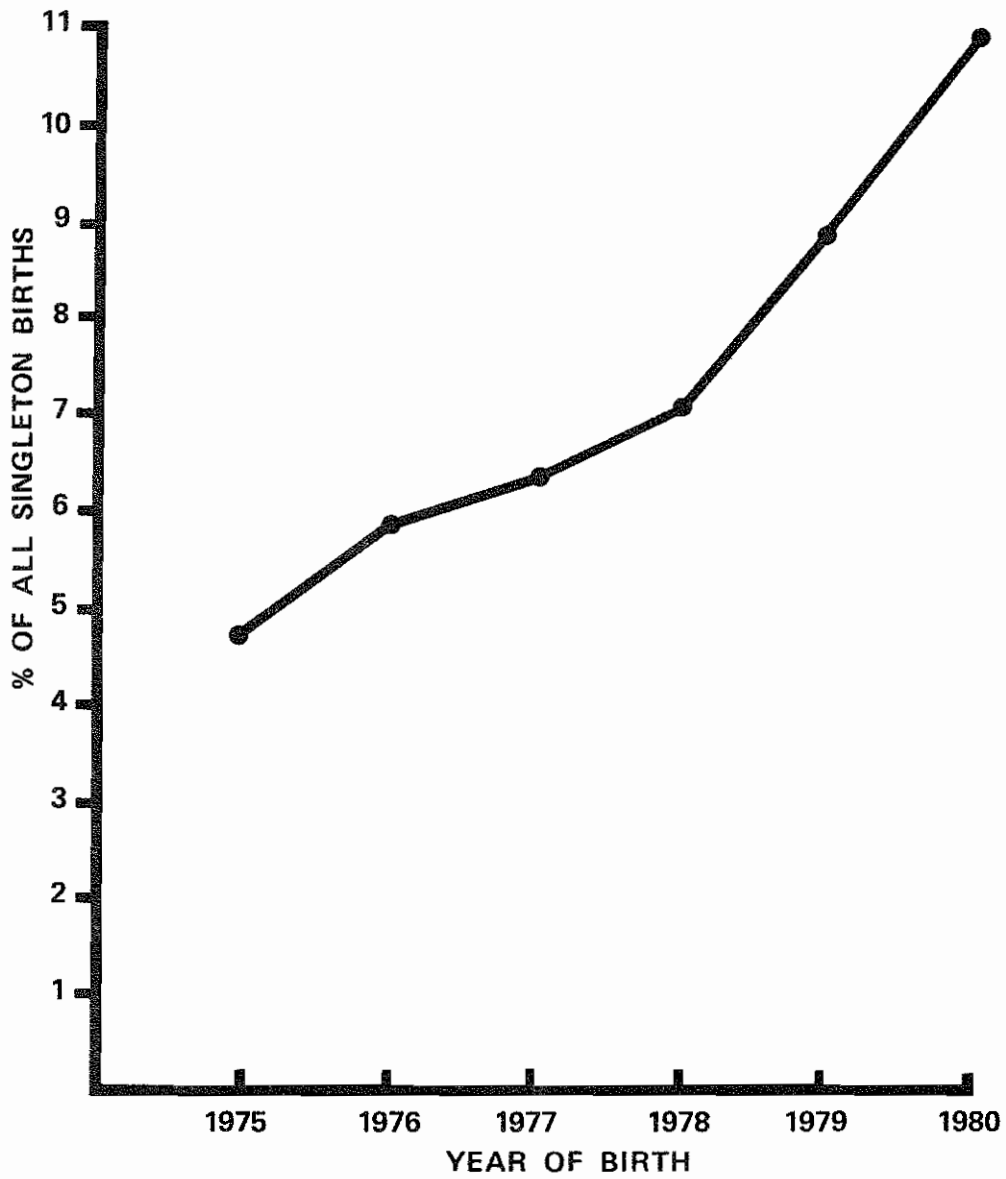
Note:

A higher proportion of not married mothers had babies of low birthweight than married mothers: 9% for Caucasian not married compared with 4.4% for married; 12.9% for Aboriginal unmarried, compared with 10.8% for married, and the other races were similar to Caucasian rates.

Caucasian stillbirth rates for low birthweight babies however were higher for married than not married mothers. Thus the overall higher stillbirth rate of unmarried mothers seems to be due to their higher proportion of low birthweight babies. The Aboriginal rates are based on small numbers, but tend to suggest that factors associated with not married mothers, in addition to low birthweight, may be important.

SECTION II. PREGNANCY, LABOUR AND DELIVERY.

FIGURE 3



CAESAREAN SECTIONS AS A PERCENTAGE OF ALL BIRTHS  
1975 TO 1980

Note:

A rising rate of caesarean sections was observed. Reasons for this rise, which is occurring throughout Australia, are being sought by a special study.

TABLE 8

ONSET OF LABOUR BY TYPE OF HOSPITAL  
SINGLETON BIRTHS - 1980

Hospital Type	Spontaneous N (%) <sup>1</sup>	Induced N (%)	Augmented N (%)	No Labour <sup>2</sup> N (%)	Total N (%) of births by hospital type
Teaching	2820 (57.6)	1076 (21.8)	651 (13.2)	365 (7.4)	4935 (24.3)
Mid Tchg	1055 (49.5)	718 (33.7)	227 (10.7)	130 (6.1)	2131 (10.5)
Metro Dept	2857 (55.1)	1432 (27.6)	581 (11.2)	312 (6.0)	5184 (25.5)
Metro Priv	1186 (51.4)	673 (29.1)	305 (13.2)	145 (6.3)	2309 (11.4)
Country Reg.	1578 (62.9)	493 (19.6)	248 (9.9)	190 (7.6)	2509 (12.4)
Country Priv.	232 (69.5)	78 (23.4)	3 (0.9)	21 (6.3)	334 (1.6)
Country (other)	2010 (72.2)	544 (19.5)	167 (6.0)	63 (7.3)	2784 (13.7)
Home	108 (100.0)	0	0	0	108 (0.5)
TOTAL: % of Births by Onset of Labour	11866 (58.3)	5014 (24.7)	2182 (10.8)	1266 (6.0)	20294 (100.0)

Note:

Three labours of unknown onset are excluded.

<sup>1</sup>% here is of hospital group.

<sup>2</sup>"No labour" occurs with elective caesarean sections.

Note:

The majority (58.3%) of all labours resulting in singletons were of spontaneous onset, a quarter were induced and over 10% augmented. Higher proportions of induced births were obvious in metropolitan hospitals, particularly the midwifery teaching hospitals.

TABLE 9

SINGLETON BIRTHS BY HOURS OF ESTABLISHED  
LABOUR AND ONSET OF LABOUR

1980

Hours	Spontaneous %	Induced %	Augmented %	No Labour %	Total N	Total %
1-4	35.6	39.9	24.9	0.0	6768	33.3
5-12	53.2	50.8	52.5	0.0	10011	49.3
13-24	9.5	8.1	19.8	0.0	1963	9.7
25+	0.7	0.4	2.2	0.0	152	0.7
Unknown	1.0	0.9	0.6	0.0	174	0.9
0	0.0	0.0	0.0	100.0	1226	6.0
TOTAL:	58.5	24.7	10.8	6.0	20294	100.0

% are of types of onset of total.

Three cases with unknown onset of labour were excluded.

Note:

There was little difference in lengths of labour between those with spontaneous and with induced onset. Labours which were augmented had a shift towards longer labour, as would be expected.

TABLE 10

LENGTH OF LABOUR BY PARITY OF MOTHER

SINGLETON BIRTHS<sup>1</sup>

1980

Hours of Labour	Parity 0	Parity 1+	Total
1-4	17.7	48.2	36.4
5-12	63.2	46.9	53.1
13-24	18.1	4.2	9.5
25+	1.3	0.2	0.6
Unknown	0.4	0.4	0.4
TOTAL: N	6767	11124	17891
%	37.8	62.2	100.0

<sup>1</sup>

Excludes those born by Caesarean section and those with unknown parity.

Note:

The lengths of labour in primiparae were longer than in multiparae. The majority of all labours lasted 12 hours or less.



TABLE 11

SINGLETON BIRTHS BY HOURS OF ESTABLISHED LABOUR  
AND TYPE OF DELIVERY

1980

Hours	Unassisted Vertex % of column	Instrumental % of column	Failed Instrumental % of column	Breech % of column	Caesarean section <sup>1</sup> % of column	Total
1-4	42.4	19.0	7.7	32.7	8.4	33.3
5-12	50.4	61.1	59.7	54.8	18.6	49.3
13-24	6.5	18.2	26.5	11.4	10.7	9.7
25+	0.3	1.5	4.4	0.9	1.3	0.7
Unknown	0	0.2	1.7	0.3	5.0	0.9
0	0	0	0	0	55.9	6.0
Total No.	13401	4058	298	343	2194	20294
% of Grand Total	66.0	20.0	1.5	1.7	10.8	100.0

<sup>1</sup>Over half the Caesarean sections were elective, i.e. no labour, and others were done as an emergency after labour had commenced.

Note:

The shortest deliveries were unassisted vertex, and the longest were failed instrumental deliveries.

Over 20% of deliveries were instrumental and 10.8% were by Caesarean section.

TABLE 12

SINGLETON BIRTHS BY MODE OF DELIVERY AND HOSPITAL TYPE

Hospital Type	Mode of Delivery						Total No.
	Unassisted Cephalic % of row	Instrumental % of row	C-section % of row	Breech %	Failed		
					Vag. %	C Sec. %	
Teaching	62.2	20.6	13.4	2.4	1.1	0.3	4935
Midwifery Teaching	49.6	37.0	9.8	1.9	1.4	0.3	2131
Metropolitan departmental	66.4	19.9	10.5	1.6	1.4	0.2	5184
Metropolitan private	62.4	21.1	12.8	1.7	1.6	0.4	2309
Country Regional	72.3	12.6	13.1	0.9	0.9	0.3	2509
Country Private	69.5	16.2	11.4	1.8	1.2	0	334
Country other	80.4	13.1	4.2	1.2	1.1	0.1	2784
Home	100.0	0	0	0	0	0	108
TOTAL N :	13401	4058	2194	343	245	53	20294
% of all LB	66.0	20.0	10.8	1.7	1.2	0.3	100

Note:

Overall, 66% of all singleton livebirths were unassisted vertex vaginal deliveries, 20% instrumental (forceps or vacuum extraction) and 11% by caesarean section.

There was evidence of referral of high risk mothers for delivery from country regional and other country hospitals to metropolitan hospitals, as the former had higher proportions of "normal" deliveries and fewer instrumental deliveries than the latter.

The reasons for the higher rate of instrumental delivery in metropolitan midwifery teaching hospitals is of interest

A higher rate of caesarean section in country regional hospitals was also apparent. Perhaps doctors in rural areas are more likely to perform a caesarean section for certain situations, e.g. breech presentation, than metropolitan doctors who are closer to specialist facilities.

TABLE 13

SUMMARY OF COMPLICATIONS OF PREGNANCY IN SINGLETON  
BIRTHS

1980

Complication of Pregnancy	No.	% <sup>1</sup>	Rate <sup>2</sup>
Threatened Abortion	540	9.7	26.6
Urinary Tract Infection	774	13.9	38.1
Pre Eclampsia	1572	28.1	77.5
APH	662	11.9	32.6
Premature Rupture of Membranes	651	11.7	32.1
Other	2344	42.0	115.5
TOTAL:	6543		322.4

<sup>1</sup>% of all complications.

<sup>2</sup>per 1,000 livebirths

Note:

5,585 women had the 6,543 recorded complications  
(27.5% of women confined for single births).

More than one quarter of women confined for single births  
had some pregnancy complication recorded. Some had more than one.

TABLE 14

COMPLICATIONS OF LABOUR IN SINGLETON BIRTHS

1980

Complication of Labour	No.	% <sup>1</sup>	Rate <sup>2</sup>
Precipitate Delivery	1126	13.4	55.5
Fetal Distress	1641	19.6	80.9
Prolapsed Cord	45	0.5	2.2
Cord Tight Around Neck	1383	16.5	68.1
Cephalopelvic Disproportion	1005	12.0	49.5
Other	5026	60.0	247.7
TOTAL:	10226		503.9

<sup>1</sup>% of all complications.

<sup>2</sup>per 1,000 livebirths.

Note:

Complications of labour were recorded in 41.3% of women, and multiple labour complications were more commonly recorded than multiple pregnancy complications.

The 'other' group in Table 14 included prolonged labour, post-partum haemorrhage, manual removal of the placenta, maternal distress, obstructed labour, and many less common conditions.

III. THE BABY.

TABLE 15

FIVE MINUTE APGAR SCORES AND TIME TO SPONTANEOUS  
RESPIRATIONS (TSR) IN SINGLETON BIRTHS

1980

Apgar Score at 5 minutes	Time of Spontaneous Respirations (TSR)											
	1-2		3-5		6-60		0		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
9-10	17032	(89.8)	294	(38.2)	44	(14.7)	18	(7.9)	1	(3.2)	17389	(85.7)
3-8	1883	(9.9)	471	(61.2)	227	(75.7)	18	(7.9)	25	(80.6)	2624	(12.9)
1-2	29	(0.1)	5	(0.6)	27	(9.0)	9	(3.9)	5	(16.1)	75	(0.4)
0	0		0	0	0	0	169 <sup>1</sup>	(74.1)	0	0	169	(0.8)
Unknown	24	(0.1)	0	0	2	(0.7)	14	(6.1)	0	0	40	(0.2)
TOTAL:	18968		770		300		228		31		20297	
(% of all births)		(93.5)		(3.8)		(1.5)		(1.1)		(0.2)		

<sup>1</sup>Stillbirths

Note:

The distributions of 5 minute Apgar scores and TSRs are as expected with the majority of infants breathing within 2 minutes and having 5 minute Apgar scores above 8. A few babies were misclassified, possibly because of unfamiliarity with the TSR or by other errors, e.g. the 29 babies with an Apgar of 1 and 2 who breathed within 2 minutes, and the 44 babies with Apgars of 9 or 10, who took longer than 6 minutes to breathe.

Unknown TSR usually was recorded in infants intubated from birth and who left labour ward on a ventilator.

Improved accuracy of the recording of TSR should improve this Table even further next year.

TABLE 16a

PERCENTAGE OF SINGLETON LIVEBIRTHS WHO WERE INTUBATED  
BY APGAR SCORE

1980

	Apgar Score				Total N %
	1-2	3-6	7-10	Unknown	
Intubation	42.7	48.0	2.4	12.5	714 (3.5)
Singleton Livebirths	75	427	19586	40	20128
%	0.4	2.1	97.3	0.2	100.0

Note:

Overall 3.5% of liveborn infants were intubated. Nearly 50% of those with 5 minute Apgar scores of less than 7 were intubated, although only 2.5% of infants had such low scores.

TABLE 16b

PERCENTAGE OF SINGLETON LIVEBIRTHS WHO WERE INTUBATED BY TIME  
TO SPONTANEOUS RESPIRATIONS

1980

	0	1-2	3-5	6+	Unknown	Total N %
Intubation	25.4	1.3	33.1	54.0	90.3	714 (3.5)
Singleton N	59	18968	770	300	31	20128
Livebirths %	0.3	94.2	3.8	1.5	0.2	100.0

Note:

Over 90% of livebirths breathed within 2 minutes and few of these were intubated. A large proportion of those taking longer to breathe were intubated. Of those 59 livebirths with a TSR of 0 (usually reserved for stillbirths), 25.4% were intubated. Improved recording of TSR will enable a better interpretation of the need for resuscitation.



FIGURE 4a

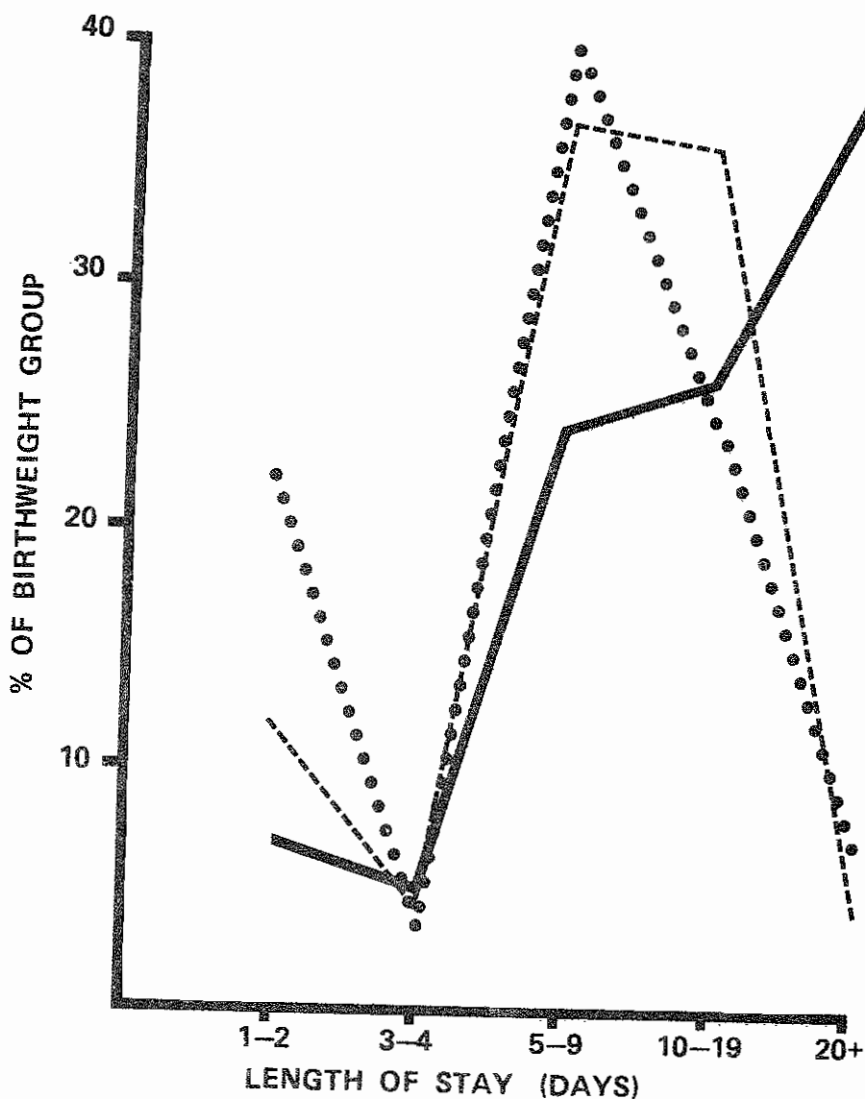


Figure 4a

Length of Stay (days) in low birthweight<sup>1</sup> singleton livebirths by hospital of delivery.

<sup>1</sup> Low birthweight is less than 2500g.

Note:

Low birthweight babies stayed longer in teaching hospitals than in other metropolitan or country hospitals. The fall in the percentage of low birthweight infants staying between 3-4 days was due to transfers of sick babies, particularly from other metropolitan and country hospitals, and to neonatal deaths.

The distribution of length of stay was similar in non-teaching metropolitan hospitals and country hospitals, neither having neonatal intensive care units. It is obvious that sick lowbirth babies are transferred out of these hospitals early in the first week.

FIGURE 4b

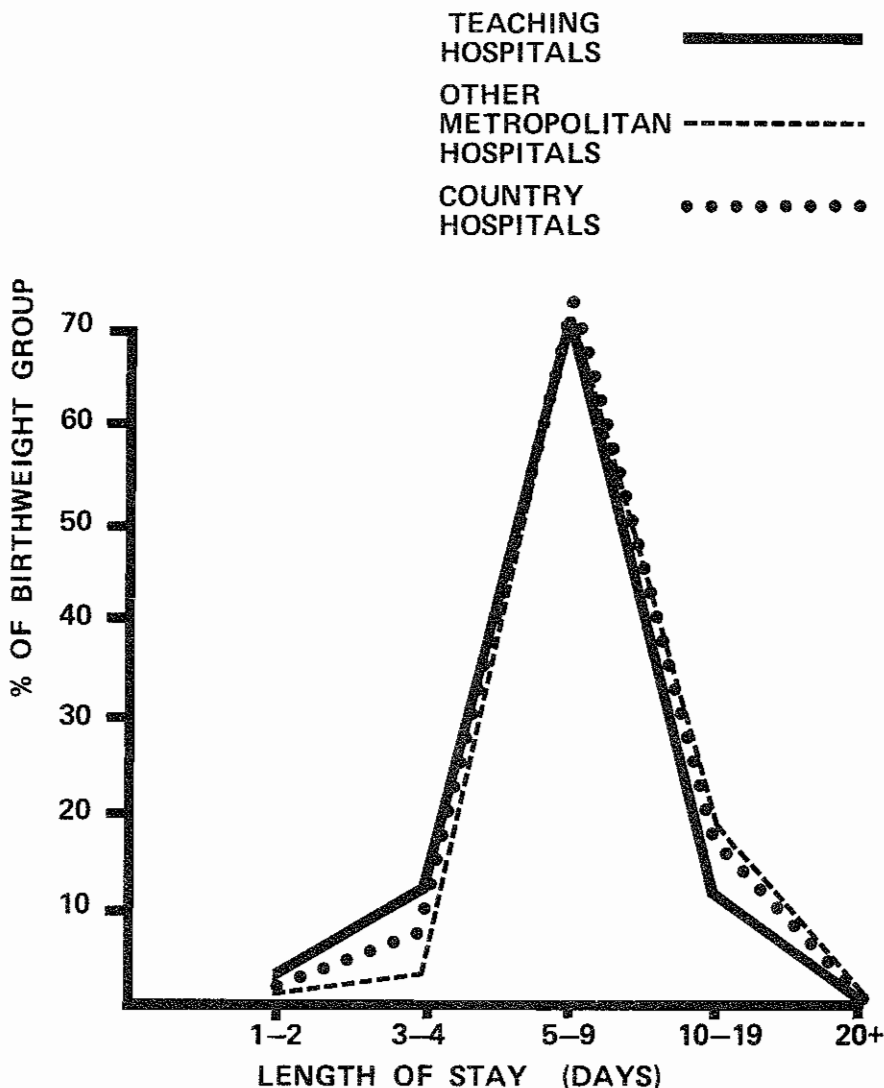


Figure 4b

Length of Stay (days) in singleton livebirths of normal<sup>1</sup> birthweight by hospital of delivery.

<sup>1</sup> Normal birthweight is over 2500g.

The length of stay for babies of normal birthweight was very similar for all hospitals. There was a tendency for teaching hospitals to have lower lengths of stay than the others. This may be due to the greater turnover and need for obstetric beds in the teaching hospitals.

ACKNOWLEDGMENTS AND FINAL NOTE

Western Australian Midwives are to be congratulated on providing data of such high quality. The new Midwives' form has been adopted with minimal fuss, and we are most grateful for your considerable effort.

Midwives must remember that more tabulations can be made available to them. This report has summarised only some aspects of the data. If there are further aspects of the data, or areas of particular concern to you, please contact the Statistics Branch of the Public Health Department with your request.

Thanks go to the officers of the Statistics Branch, Public Health Department for their work in coding, classifying and computer work with the data.

Fig. 1

NUMBER OF BIRTHS - W.A.  
1960-1980

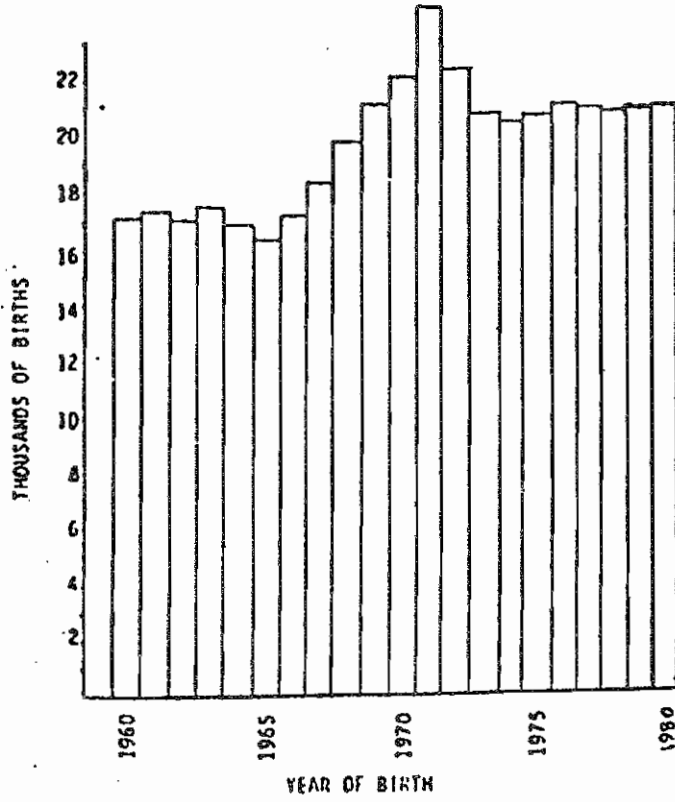
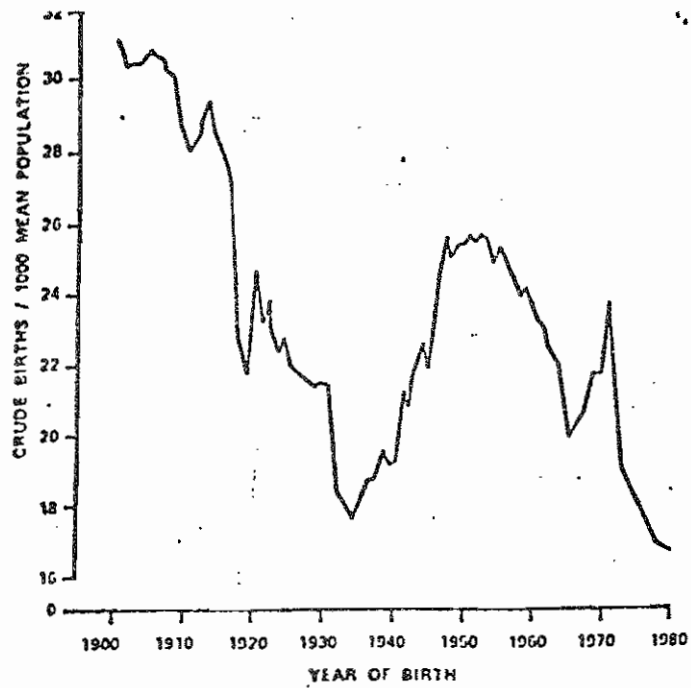


Fig. 2

W.A. CRUDE BIRTH RATE  
1900-1980



MAP OF WESTERN AUSTRALIA

